The Economist

Stopping sexual harassment

The vacuum after Islamic State

AlphaGo goes it alone

Walter Bagehot on Brexit

OCTOBER 21ST–27TH 2017

Left behind

How to help places hurt by globalisation

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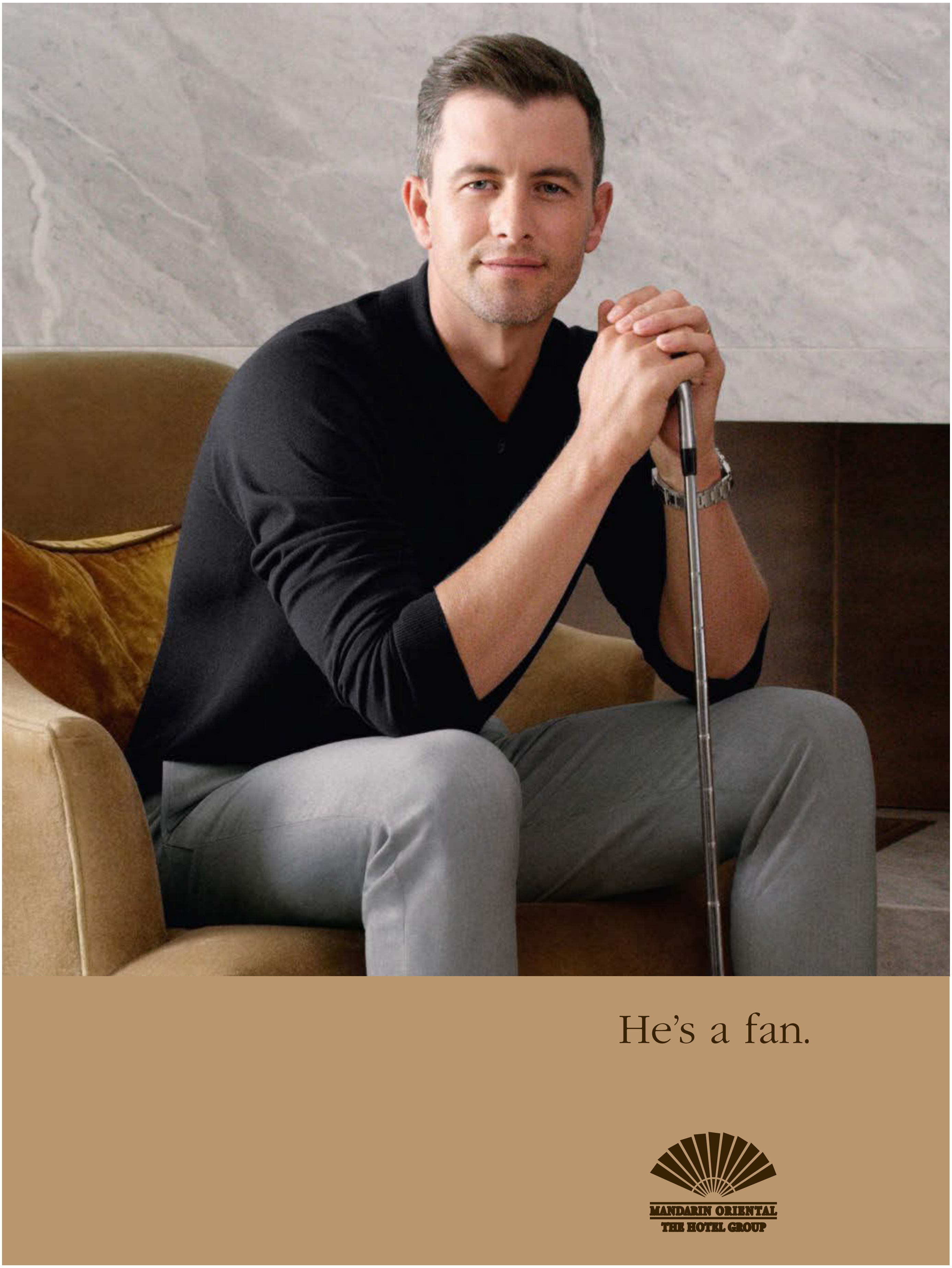
He's a fan.
MANDARIN ORIENTAL
THE HOTEL GROUP

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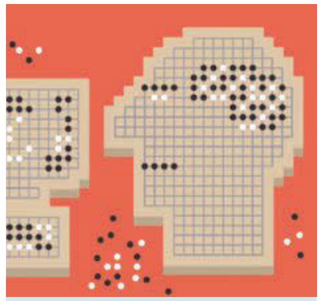

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Politics

Iraqi government forces seized the oil-rich city of Kirkuk from the **Kurds**, their supposed allies in the war against Islamic State (IS). The lightning attack followed a referendum last month in which Kurds voted to secede from Iraq. Without Kirkuk's oil, an independent Kurdistan would be broke. IS's so-called caliphate is now all but destroyed: the Syrian Democratic Forces, an American-backed rebel group made up mainly of Syrian Kurds, captured Raqqa, IS's Syrian capital. But many fear that its demise will spark new clashes.

In the **Philippines**, the government said that the city of Marawi had been liberated from IS-linked jihadists, who had captured it in May. The battle to root them out was bloody.

A lorry bomb exploded in the centre of Mogadishu, the capital of **Somalia**, killing at least 300 people. The attack has been blamed on al-Shabab, a jihadist group.

Decision day

Spain said it would begin the process of suspending **Catalonia's** autonomy, deepening the constitutional crisis. Earlier, the president of the Catalan regional government, Carles Puigdemont, had threatened to declare independence unless Spain negotiates with him. Spain insists that a recent independence referendum was illegal.

Daphne Caruana Galizia, an anti-corruption blogger, was assassinated with a car bomb near her home in **Malta**. She had accused senior politicians of receiving kickbacks through offshore companies that were revealed in the Panama Papers. The Maltese government asked America's FBI to help investigate her murder.

Austria's centre-right People's Party won an election, making its leader, Sebastian Kurz, the country's youngest-ever chancellor. (He is 31.) The party may enter a coalition with the anti-immigrant Freedom Party.

More than 40 people were killed in the latest outbreak of forest fires in **Portugal**, prompting criticism of the government's lacklustre response. After the president called for the cabinet to be reshuffled, the minister of internal affairs resigned.

In a rare public statement, Andrew Parker, the head of MI5, **Britain's** domestic-intelligence service, warned that the country was "contending with an intense" terrorist threat from Islamic extremists that was evolving rapidly and becoming harder to detect. Mr Parker said the threats were increasing "at the highest tempo I've seen in my 34-year career". Despite foiling 20 plots in the past four years, five terrorist attacks have succeeded in Britain so far this year, murdering dozens of people.

A man with a plan

President Xi Jinping spoke of a "new era" unfolding in **China** that would result, by 2050, in the country becoming "prosperous, strong, democratic, culturally advanced, harmonious and beautiful". (He was using the word "democratic" in a way not found in any dictionary.) Mr Xi was speaking at the start of a five-yearly congress of the ruling Communist Party that will result in sweeping changes to the leadership, while leaving Mr Xi firmly in charge. China's economy grew by 6.8% in the third quarter, year on year, in line with the government's target and providing a boost to Mr Xi.

Sooronbay Jeenbekov confounded expectations by securing enough votes to win **Kyrgyzstan's** presidential election in the first round, beating Omurbek Babanov. It was the first competitive presidential election in Central Asia, a region run by strongmen.

In **Afghanistan**, the Taliban claimed responsibility for a series of attacks that mostly targeted the police and killed at least 74 people, including one police chief. The worst ambush was in Gardez, where people queuing for passports were caught in the attack.

New Zealand has a new government. Following last month's elections, the Labour Party will form a coalition with New Zealand First, a populist party, with support from the Greens. The prime minister will be 37-year-old Jacinda Ardern.

Legal dues

Mexico's attorney-general, Raúl Cervantes, resigned amid accusations of shielding corrupt politicians from prosecution and failing to curb a surging murder rate. There have been calls in Mexico to create a chief prosecutor who is not appointed by the president.

Police in **Argentina** found what may be the remains of Santiago Maldonado, an activist whose disappearance during a protest two months ago has embarrassed President Mauricio Macri's government on the eve of legislative elections on October 22nd.

Colombia's constitutional court ruled that a peace deal signed last year with FARC rebels cannot be modified for 12 years. That prevents the next three governments from cancelling or changing the agreement, including its controversial provisions under which guerrillas who confess to crimes are treated leniently.

The improbable victory of President Nicolás Maduro's United Socialist Party in 18 out of 23 governors' elections in **Venezuela** divided the opposition. Some winning opposition candidates accepted the results. Mr Maduro, who has defied protests and sanctions by concentrating power in a sham parliament, said the elections sent a "strong message to imperialism".

The nuclear option

Donald Trump backed off from his promise to scrap the deal that freezes **Iran's** nuclear programme. Mr Trump stopped short of the most drastic step: declaring Iran in breach of the multinational agreement. Instead he declined to certify to Congress, as American law demands, that the risks and benefits of sanctions relief are proportionate. That passes the buck to Congress to decide whether to impose new penalties on Iran.

Two federal judges issued a temporary block on the Trump administration's third attempt at a **travel ban** on citizens from some Muslim countries.

Already criticised for dawdling in offering condolences to the families of four American troops killed in Niger, Mr Trump became embroiled in a quarrel centred on one of the **grieving widows**. A Democratic congresswoman who was with the widow when Mr Trump made his phone call said that the president remarked that her husband "knew what he was signing up for, but I guess it still hurt". Mr Trump said this was a lie, and that he had proof.

Business

In a surprise announcement, **Airbus** agreed to take a majority stake in **Bombardier's** business in C-series narrow-bodied jets, which are subject to punitive tariffs from America for allegedly benefiting from illegal state aid. Airbus will take control of the C series next year; the primary assembly line will remain in Quebec and some additional production will take place at Airbus's American factory, in Alabama. The deal presents a challenge in the burgeoning market for smaller single-aisle aircraft to Boeing, which started the trade dispute with Bombardier.

A turbulent industry

Seven airlines submitted bids for parts of **Alitalia**, Italy's loss-making national carrier. Lufthansa was one of them. The German airline recently bought parts of Air Berlin's business after it, too, failed, in Europe's fiercely competitive market. The Italian government has delayed the sale of Alitalia to next April, blaming the delay on the changing "strategic dynamics" in the industry.

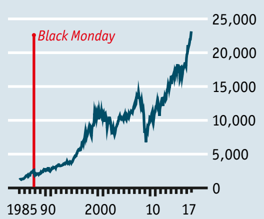
Hochtief, a German construction company, launched a €18.6bn ($22bn) counter-bid for **Abertis**, a toll-road operator based in Spain with contracts in a dozen other countries. In May Abertis received an unsolicited takeover offer from Atlantia, an Italian rival. Hochtief's majority owner is ACS, a Spanish group.

Saudi Arabia's oil minister insisted that **Saudi Aramco's** IPO was still on track for next year. The stockmarket debut of the world's biggest oil firm has been beset by indecision; some reports suggest the Saudis are considering selling a stake to a Chinese company rather than proceeding with a flotation.

America's Securities and Exchange Commission charged **Rio Tinto** and two former senior executives, including Tom Albanese, a former chief executive, with fraud. The SEC alleges that the mining company tried to hide the rapid decline in the value of its coal assets in Mozambique, which it bought for $3.7bn and sold a few years later for $50m. Rio was fined £27m ($36m) by Britain's Financial Conduct Authority this week in relation to the same case. The company and both of the former executives deny the SEC's charges.

Happy anniversary

Dow Jones Industrial Average



Source: Thomson Reuters

The **Dow Jones Industrial Average** pierced the 23,000 mark for the first time, on the eve of the 30th anniversary of Black Monday. On October 19th 1987 the Dow plunged by 22.6%, its biggest daily fall to date. Back then IBM and other blue chips lost a quarter of their value. This week, IBM drove the rally in the Dow, after reporting slightly better earnings than expected.

The **London Stock Exchange** announced that Xavier Rolet is to step down as its chief executive by the end of next year. Since starting the job in 2009, Mr Rolet has expanded the LSE's business in a broad range of financial services. In 2013 it took a majority stake in LCH.Clearnet.

Britain's consumer-price index rose by 3% in the year to September, the highest it has been in five years. The upward trend in **inflation** has increased the likelihood that the Bank of England will raise interest rates at its meeting next month.

A White House official said that Donald Trump had narrowed his list of candidates for **Federal Reserve** chairman to five people. The present term ends in January. The five are, Janet Yellen, seeking to renew her role as the central bank's chairwoman; Jerome Powell, a governor at the Fed; Kevin Warsh, a former governor at the bank; Gary Cohn, who heads the president's National Economic Council; and John Taylor, an economist at Stanford University.

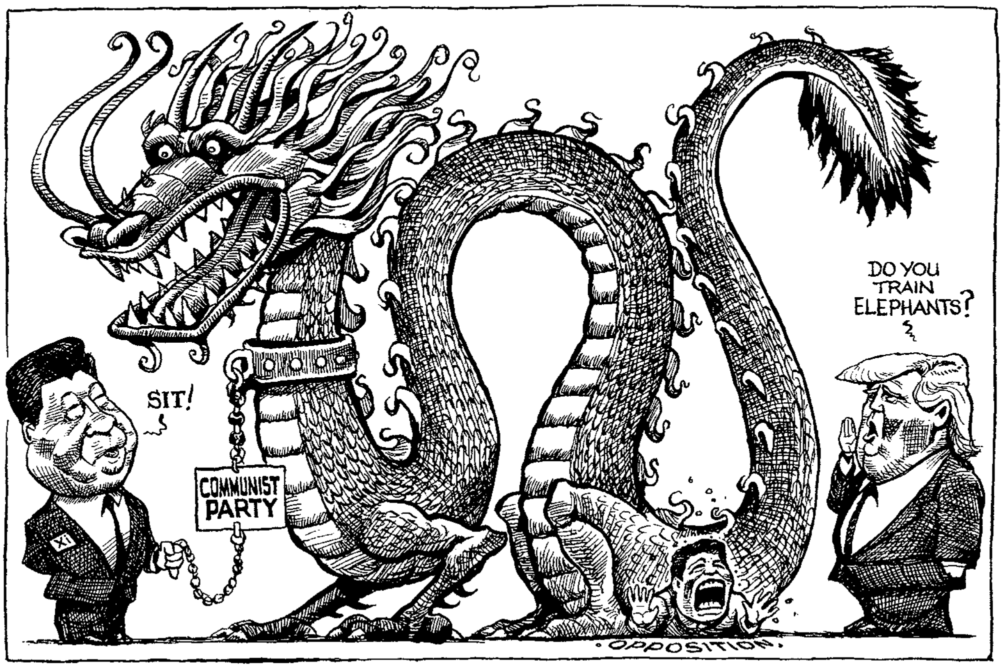
In what has been a busy year for activist investors, RBR Capital Advisors, a Swiss hedge fund, launched a campaign to split **Credit Suisse** into three parts: an investment bank, an asset-management firm and a wealth-management group. But with only a tiny stake in the Swiss bank, RBR will find it a hard task trying to persuade enough shareholders about the merits of its plan.

General Motors announced that it would begin testing a fleet of **autonomous cars** on the streets of lower Manhattan, making it the first carmaker to do so in New York. The city's busy streets will present the most complex trial yet of the technology.

Urbane centres

Dozens of cities rushed to beat a deadline for bids to house **Amazon's** second headquarters. With the e-commerce company investing $5bn in the project, and the knock-on benefits worth much more, some places are offering huge sweeteners. They include Newark, which is tempting Amazon with $7bn in tax breaks. A ranking by Moody's Analytics that assesses what Amazon wants for its offices puts Austin out front, followed by Atlanta and Philadelphia.

Other economic data and news can be found on pages 80-81



Left behind

The right way to help places hurt by globalisation

POPULISM'S wave has yet to crest. That is the sobering lesson of recent elections in Germany and Austria, where the success of anti-immigrant, anti-globalisation parties showed that a message of hostility to elites and outsiders resonates as strongly as ever among those fed up with the status quo. It is also the lesson from America, where Donald Trump is doubling down on gestures to his angry base, most recently by adopting a negotiating position on NAFTA that is more likely to wreck than remake the trade agreement (see page 65).

These remedies will not work. The demise of NAFTA will disproportionately hurt the blue-collar workers who back Mr Trump. Getting tough on immigrants will do nothing to improve economic conditions in eastern Germany, where 20% of voters backed the far-right Alternative for Germany. But the self-defeating nature of populist policies will not blunt their appeal. Mainstream parties must offer voters who feel left behind a better vision of the future, one that takes greater account of the geographical reality behind the politics of anger.

Location, location, vocation

Economic theory suggests that regional inequalities should diminish as poorer (and cheaper) places attract investment and grow faster than richer ones. The 20th century bore that theory out: income gaps narrowed across American states and European regions. No longer. Affluent places are now pulling away from poorer ones (see page 19). This geographical divergence has dramatic consequences. A child born in the bottom 20% in wealthy San Francisco has twice as much chance as a similar child in Detroit of ending up in the top 20% as an adult. Boys born in London's Chelsea can expect to live nearly nine years longer than those born in Blackpool. Opportunities are limited for those stuck in the wrong place, and the wider economy suffers. If all its citizens had lived in places of high productivity over the past 50 years, America's economy could have grown twice as fast as it did.

Divergence is the result of big forces. In the modern economy scale is increasingly important. The companies with the biggest hoards of data can train their machines most effectively; the social network that everyone else is on is most attractive to new users; the stock exchange with the deepest pool of investors is best for raising capital. These returns to scale create fewer, superstar firms clustered in fewer, superstar places. Everywhere else is left behind.

Even as regional disparities widen, people are becoming less mobile. The percentage of Americans who move across state lines each year has fallen by half since the 1990s. The typical American is more footloose than the average European, yet lives less than 30 kilometres from his parents. Demographic shifts help explain this, including the rise in two-earner households and the need to care for ageing family members. But the bigger culprit is poor policies. Soaring housing costs in prosperous cities keep newcomers out. In Europe a scarcity of social housing leads people to hang on to cheap flats. In America the spread of state-specific occupational licensing and government benefits punishes those who move. The pension of a teacher who stays in the same state could be twice as big as that of a teacher who moves mid-career.

Perversely, policies to help the poor unintentionally exacerbate the plight of left-behind places. Unemployment and health benefits enable the least employable people to survive in struggling places when once they would have had no choice but to move. Welfare makes capitalism less brutal for individuals, but it perpetuates the problems where they live.

Welcome to the place age

What to do? One answer is to help people move. Thriving places could do more to build the housing and infrastructure to accommodate newcomers. Accelerating the reciprocal recognition of credentials across state or national borders would help people move to where they can be most productive. But greater mobility also has a perverse side-effect. By draining moribund places of talented workers, it exacerbates their troubles. The local tax-base erodes as productive workers leave, even as welfare and pension obligations mount.

To avoid these outcomes, politicians have long tried to bolster left-behind places with subsidies. But such "regional policies" have a patchy record, at best. South Carolina lured BMW to the state in 1992 and from it built a thriving automotive cluster. But the EU's structural funds raise output and reduce unemployment only so long as funding continues. California has 42 enterprise zones. None has raised employment. Better for politicians to focus on speeding up the diffusion of technology and business practices from high-performing places. A beefed-up competition policy could reduce industrial concentration, which saps the economy of dynamism while focusing the gains from growth in fewer firms and places. Fostering clusters by encouraging the creation of private investment funds targeted on particular regions might help.

Bolder still would be to expand the mission of local colleges. In the 19th century America created lots of public technical universities. They were supposed to teach best practice to farmers and factory managers in small towns and rural areas. They could play that role again today for new technologies, much as Germany already has a network of applied-research institutions. Politicians might even learn from Amazon, whose search for a home for a second headquarters has set off a scramble among cities hoping to lure the giant etailer. Governments could award public research centres—in the mould of America's National Institutes of Health or Europe's CERN—to cities which prepare the best plans for policy reform and public investment. This would aid the diffusion of new ideas and create an incentive for struggling places to help themselves.

Perhaps most of all, politicians need a different mindset. For progressives, alleviating poverty has demanded welfare; for libertarians, freeing up the economy. Both have focused on people. But the complex interaction of demography, welfare and globalisation means that is insufficient. Assuaging the anger of the left-behind means realising that places matter, too. ■

Argentina

Breaking Peronism's spell

Mauricio Macri's government deserves to do well in the mid-term congressional election

WHEN Mauricio Macri won Argentina's presidential election in November 2015, his victory appeared to signal the turning of Latin America's "pink tide" of left-wing government. The election ended eight years of rule under Cristina Fernández de Kirchner, a political heir of Juan Perón, an irresponsible populist president of the mid-20th century. In other countries, setbacks for the left followed. Venezuela's opposition won control of the legislature from the ruling socialist party in December 2015. Brazil's left-wing president, Dilma Rousseff, was impeached last year; her successor, Michel Temer, is a pro-business centrist. Better economic policies ensued in both Argentina and Brazil, though not in Venezuela, where the autocratic government squashed the legislature.

On October 22nd Argentina's voters will render a judgment on Mr Macri in a mid-term congressional election (see page 39). For the sake of Argentina, and of Latin America more broadly, it is important that he do well. A strong showing by his Cambiemos (Let's Change) coalition would help his government continue economic reforms. It would improve the odds that Mr Macri will win re-election in 2019, a feat achieved by no recent democratic president outside the Peronist tradition.

Mid-term success for Mr Macri would bode well for Chile, Colombia, Brazil and Mexico. All are due to hold elections by the end of 2018 and moderate candidates are likely to face challenges from populists. Gains by Cambiemos would give centrists heart. Venezuela, which is scheduled to hold a presidential election, is an exception. Its ruling party has just won a regional election unfairly and is unlikely to yield power next year no matter what voters want (see page 40).

Dismantling populism is not an easy way to win elections. Mr Macri started his presidency by lifting exchange controls, which led to a devaluation of the peso, a spike in inflation and a fall in living standards. His government has trimmed subsidies for electricity, transport and other services to reduce the budget deficit. To end Argentina's isolation from the international credit markets, he struck a deal with foreign creditors who had refused to take part in a restructuring of debt on which Argentina had defaulted. He cleaned up the national statistics agency, which under Ms Fernández had been publishing fake data on inflation and GDP.

Mr Macri has made mistakes. He dealt ineptly with allegations that, thanks to his influence, his father got a sweetheart deal to repay a debt to the government. But the economic medicine is beginning to work. After a recession last year, growth has recovered and inflation has fallen by nearly 15 percentage points from its peak of almost 40%. The poverty rate has dropped from 32% last year to 29%.

Let's not change

In primaries held in August, a guide to parties' popularity, Cambiemos soundly beat parties allied to Ms Fernández. If it repeats that performance it will gain seats in both houses of congress, though it will have a majority in neither. Mr Macri will then be better able to strike deals with Peronists who are more moderate than Ms Fernández. This would be a result worth celebrating. It would show that voters will back tough decisions if they deliver results. That would help Mr Macri proceed with plans to cut the budget deficit, liberalise labour laws and clean up the courts. It would break the spell of Ms Fernández's ruinous Peronism. That may be the biggest prize of all. ■

Battle for Kirkuk

The next war in Iraq

As Donald Trump blusters, Iran is reshaping the Arab world

THIS should be a time for rejoicing. The jihadists of Islamic State (IS), driven out of Mosul in Iraq in July, were defeated this week in their Syrian capital, Raqqa. Little remains of the "caliphate" but a few pockets and a bankrupt ideology.

Alarmingly, the scramble for spoils is bringing forth old rivalries and new conflicts across the Fertile Crescent. One clash has come in Kirkuk, where explorers struck Iraq's first oil gusher in 1927. The city is home to many groups, among them Kurds, Arabs and Turkomans. It lies outside the Kurds' official autonomous enclave but had been held by them. On September 25th Kurdish leaders held a referendum on independence that included voters in Kirkuk. The affronted Iraqi government, led by Shia Arabs, ordered its forces to retake the city and other disputed lands on October 16th. They did so swiftly. Even with Kirkuk's oil the Kurdish enclave is broke; without it, dreams of independence have been dashed (see page 43).

It is worrying enough that two American allies—the Kurdish Peshmerga and Iraqi forces—should turn their guns on each other. It is even more worrying that President Donald Trump has done little to stop them, declaring that: "We're not taking sides." Unless America fills the vacuum left by the demise of IS, Iran will do so instead.

The Kurds deserve much sympathy. Denied a state in the carve-up of the Middle East, and massacred with poison gas by Saddam Hussein, they consolidated their autonomous region after America toppled Saddam in 2003. When the Iraqi ▸▸

army collapsed before the IS onslaught in 2014, the Kurds fought back valiantly with Western help, and occupied Kirkuk.

Of late, though, Masoud Barzani, the Kurdish leader, has proved to be contemptuous of democracy (his mandate expired two years ago), and the fall in oil prices has bankrupted his government. His referendum was a reckless gamble to fend off dissatisfaction with his Kurdistan Democratic Party. Many Kurds, particularly in the other big faction, the Patriotic Union of Kurdistan, were wary. Iraq's prime minister, Haider al-Abadi, demanded that the referendum result be reversed. Iran and Turkey joined him in squeezing the Kurds. America, the Kurds' protector, opposed the referendum, and American-trained units helped recapture Kirkuk—to the fury of congressmen who believe the operation was orchestrated by Iran.

America has to step in to stop a new conflict in Iraq, between Shia Arabs and Kurds, taking root amid the rubble of the old one between Shia and Sunni Arabs. It will need great skill to help resolve the dispute over lands claimed by the governments in Erbil and Baghdad, and more broadly, to settle the question about how Iraq should be run. This will set a precedent for ending the war in Syria, determine the chances of jihadists returning and affect the regional power balance.

To a degree, America needs Mr Abadi to be a strong Iraqi nationalist, the better to resist Iranian influence. But an overmighty government in Baghdad would risk repeating the oppression of the Saddam era. Iraq needs a decentralised state that gives its minorities safety, and a fair share of power and resources. A thriving Kurdistan is the first step.

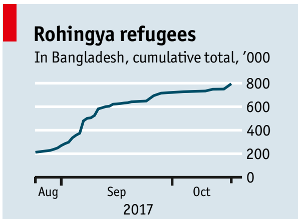
America stands back

Mr Trump's preference for bluster over complex diplomacy or, worse, "nation-building", adds to the perils. On October 13th he pledged to confront "the rogue regime in Iran", blaming Barack Obama's nuclear deal for strengthening it. In fact, Iran derives its power mostly from the region's chaos. Granted, confronting Iran on the ground is risky; it knows how to use proxy militias to bleed American troops. But Mr Trump's blowhard talk risks provoking Iranian hardliners anyway. Right now, having done much to crush the jihadists in Iraq and Syria, America is letting Iran reshape the Arab world to its liking. ■

Rohingya refugees

No respite

Ever more Rohingyas are fleeing from Myanmar to Bangladesh—and not nearly enough is being done for them



TO UNDERSTAND how grim things are for Myanmar's Rohingyas, consider what passes for good news amid the Burmese army's two-month pogrom in northern Rakhine state, where most of them live. The flood of refugees to neighbouring Bangladesh must soon dwindle, charity workers say, because the Burmese army is running out of Rohingya villages to burn. For the moment, however, terrified Rohingyas continue to pour across the border. In the week to October 14th some 18,000 arrived. In less than two months a total of at least 582,000 of them have taken refuge in Bangladesh. That makes the current crisis one of the most rapid international movements of people in modern history, eclipsing in its intensity, for example, Syrians' flight from civil war over the past six years.

Bangladesh has permitted the hungry, exhausted and traumatised Rohingyas to enter, and has set aside land for vast refugee camps. But aid agencies, by their own admission, are swamped. A third of the refugees are not receiving a full ration of food; fewer than half of the 130,000-odd small children and pregnant or nursing mothers are getting enough to eat. The unsanitary conditions in the camps, many of which are not accessible by road, make outbreaks of disease likely. Health workers are rushing to vaccinate all the new arrivals against cholera. They are only halfway there. Longer-term needs are barely being met at all. Fewer than one school-age refugee in ten, for instance, is receiving any type of schooling. Those overseeing the relief effort reckon 2,300 classrooms are needed; 20 were erected in the past week.

The government of Myanmar has said that the Rohingyas will be allowed to return home and has promised to help them rebuild. But that is a meaningless pledge when the army is still burning their villages. Admittedly, Aung San Suu Kyi, Myanmar's leader and a past winner of the Nobel peace prize, does not have the authority to rein in the army, which is a law unto itself. But she has failed even to criticise its blatant ethnic cleansing. Even if the army were under civilian control, her government's attitude does not inspire confidence. A few days ago the minister charged with bringing the Rohingyas back suggested that they had ethnically cleansed themselves, to make the government look bad.

And even supposing that the government is sincere in its offer to bring the Rohingyas home, and that the army allows it to do so, the process will clearly take some time. Bangladesh and Myanmar are already arguing about whether the UN should be involved. After a bout of violence sent hundreds of thousands of Rohingyas to Bangladesh in 1991-92, it took five years to repatriate even a portion of those who wished to return.

Myanmar's shame

All this suggests that there will be huge numbers of Rohingyas in Bangladesh for a long time to come. Outsiders should exert whatever pressure they can on the Burmese army and government to stop the atrocities and allow the Rohingyas home. So far, the rebukes have been absurdly mild. This week, for example, the EU ruled out future visits to Europe by senior Burmese officers, and delayed a trade mission.

Meanwhile, a concerted effort to make the refugees' lives more bearable will also be needed. Donors should funnel more money and aid workers to the camps. The government of Bangladesh should give Rohingyas more freedom to make a better life for themselves in exile. They should be allowed to take formal work, for example, and to study at local schools and universities. It would be heaping one injustice on another to ignore the refugees' long-term needs in the almost certainly forlorn hope that they will soon be back where they belong. ■

Workplace harassment

Sex and power

Harvey Weinstein and Hollywood are extreme. But other workplaces need to rid themselves of sex pests, too

"I CAME of age in the 60s and 70s, when all the rules about behaviour and workplaces were different," said Harvey Weinstein in response to allegations of sexual harassment, by now dozens of them since the *New Yorker* and *New York Times* published the first this month. The film producer is an "old dinosaur learning new ways", said a spokeswoman. Mr Weinstein is reported to be seeking treatment for "sex addiction".

A throwback who loves women too much, then; a sly old rogue who doubtless holds doors open for women, too? Nonsense. What Mr Weinstein is accused of was never acceptable. It has never been good form to greet a woman arriving for a business meeting while wearing nothing but an open bathrobe. His accusers say he made it clear that rebuffing his overtures would harm their careers. Some accuse him of rape. American and British police are investigating. Mr Weinstein has apologised for his behaviour in broad terms. He denies engaging in non-consensual sex.

Not Safe For Women

Mr Weinstein is right, though, that workplace norms have changed over the course of his career. When he turned 18, in 1970, many offices were a "Mad Men"-style ordeal of leering eyes and roaming hands. When the *Harvard Business Review* surveyed its readers in 1980 about workplace sexual harassment, two-thirds of the men said it was "greatly exaggerated"—as one had it, a non-issue whipped up by "paranoid women and sensational journalists". In a case brought in 1989 an American judge ruled that being made to fish for quarters in her boss's pocket, though unpleasant, would not cause undue distress to any "reasonable woman".

Such dismissiveness is rarer now (see page 56). Most men and women agree that demanding sexual favours in return for a job or promotion is harassment; likewise groping and other physical assaults. But disturbingly many men are still blind to the way that personal remarks, lewd jokes and the like can make a workplace hostile. Though most rich countries ban sexual harassment at work, half of all women and a tenth of men say they have suffered it at some point; hardly any make formal complaints. In poor countries, the rate is surely higher, since women whose children are hungry cannot plausibly quit a job with an abusive boss. No industry is immune.

The key elements are power, misused by predatory men; impunity, as those who could call a halt do not; and silence, as witnesses look away and victims fear that speaking up will harm their careers. If firms are serious about stopping harassment, they will need to tackle all three.

The allegations against Mr Weinstein are unusual only in degree, not kind. Power in Hollywood is held by big-name producers and directors; their ability to turn a script into a blockbuster buys the complicity of their entourage. The unknowns desperate for their big break are easy prey. In Silicon Valley investors and boards have a huge incentive to overlook bad behaviour by men whose ideas can be worth billions. Star professors attract research funding and help universities rise in global rankings; graduate students rely on their references when scrambling for a job. The internships and staff jobs that can launch a career in Washington or Westminster are in the gift of politicians. Their only check is voters, who may neither know nor care how badly they act behind closed doors.

Women in manual jobs are also vulnerable. When a hotel cleaner or waitress is grabbed by a customer, her boss may look away rather than lose a client. Multinationals that require their suppliers to keep premises safe and root out slave labour are generally silent on sexual harassment.

The victims often suffer depression, anger and humiliation. Firms where harassment happens are eventually harmed, too. Mr Weinstein's studio may be sued (see page 62). The company could even be destroyed by the scandal. Even if one leaves aside all moral arguments—which one should not—failing to deal with harassment is usually bad for business. Firms that tolerate it will lose female talent to rivals that do not, and the market will punish them. The costs of decency are trivial; the rewards to shareholders are large.

Granted, there will always be star employees who wish to abuse their power. But that power need not go unchecked. Firms should ask about harassment in anonymous "climate surveys" to ensure that they get early notice of problems. Making a complaint should be straightforward. It should be handled quickly and proportionately. A first complaint about unwelcome remarks or a creepily tactile style merits a warning. A man who meant no harm will be mortified, and stop.

For the most serious cases, the law will be needed. Some are not fit for purpose. British employment tribunals take a dim view of a woman who waits more than three months to complain, and regard cordial communications with her alleged harasser as undermining her case. But neither delay nor politeness at work mean she is lying: it is rational to worry about retaliation, and anyone who wants to keep her job cannot sulk. Such obstacles to justice should be removed.

Firms need to take care that, in their zeal, they do not make matters worse. The no-dating policies common in America are intrusive, useless and have perverse consequences. People sometimes fall in love with colleagues. When firms require one half of an office couple to quit, it is usually the woman, who is typically younger and earns less. That is unfair. Likewise, an atmosphere in which senior men are wary of mentoring young women for fear of being misunderstood hurts women's careers. Perfunctory anti-harassment training, which is also common, can put employees' backs up and, if it uses absurd examples, can even make them less sympathetic towards victims and less likely to see borderline cases as wrong.

Dinosaur-free zone

Until surprisingly recently, racist and homophobic remarks were rife in the workplace. Now they are rare, and likely to be challenged by anyone who hears them. If sexual harassment is to be stopped, it needs to be called out in the same way—not just by the victims, but by all those who witness it. ■

Italy's role in foreign wars

You put forward a couple of reasonable explanations for why Italy has not yet been struck by a serious terrorist attack ("Safe so far", September 30th). But one unmentioned factor is Italy's low profile during the recent wars in the Middle East. We never bombed the Syrians the way France did. The terrorist blowback, the number of Italian foreign jihadists and the resentment against Italy in the Middle East are, therefore, much more limited.

Moreover, you aired the view that the Mafia may have deterred the jihadists. There is no evidence to support this. Today's Mafia lacks both the strength and the will to care about terrorism, because it is too busy searching for ways to survive in a largely hostile environment.

What is true is that the instruments we used to defeat Cosa Nostra turned out to be very effective in tracing and neutralising, so far, a significant number of terrorist cells.

PINO ARLACCHI
Former UN undersecretary-general
Rome

Repairing competition

I enjoyed your piece on digital ownership and the "right to repair" ("If it's broken, you can't fix it", September 30th). One counterbalance to both issues is the free and open-source software movement (FOSS). When a piece of software is released under a FOSS licence, the author still holds the copyright, but generally you have the right to modify and distribute the software. The right to repair is explicitly built into the agreement. The term "free" means free as in freedom, not price; many firms profit from FOSS. Red Hat, for example, sells versions of the open-source Linux operating system. FOSS may not entirely supplant the licences you described, but it provides choices to consumers and firms.

ERIK PAULSON
Portland, Oregon

In 2012, the Auto Care Association, representing the independent vehicle-repair industry, won a right-to-repair ballot initiative in Massachusetts with 86% of the vote. This showed that the public wants to control where the cars they have purchased are repaired, and by whom. But carmakers have looked to other means to gain the upper hand. This includes using the Digital Millennium Copyright Act (DMCA) to prevent the independent car-repair industry from accessing embedded software found in a growing number of component systems for vehicles.

The ability to access this software is critical to independent repairers in order to compete with their larger rivals. We have applied for exemptions from the DMCA for car repairs, but these exemptions are very limited and only last three years. Congress must step in to ensure that the law does not continue to be abused and prevent competition.

BILL HANVEY
President and CEO
Auto Care Association
Bethesda, Maryland

Slowing innovation

In "Does China play fair?" (September 23rd) you state that competition from China is intense but legal, and the best response is to welcome it. You go on to argue that consumers will gain from lower costs and faster innovation. Unfortunately for the United States, such competition from China may slow innovation instead.

Recent research by David Autor, Pian Shu and Gary Pisano suggests that American companies facing strong competition from China lower their R&D and patenting activity in response. This means less, not more, innovation, at least in the United States. Indeed, while China is targeting higher value-added goods and services rather than the low-end manufacturing of the past, it still has an advantage in trade with America in terms of lower wages. This low-wage competition helps discourage investment in new capital and technology, stifling innovation. Since the "China Shock" of the early 2000s productivity growth in the United States has been unsurprisingly low and disappointing.

WILLIAM MILES
Department of Economics
Wichita State University
Wichita, Kansas

Declining racism in America

Protesters are fired up by their notion of America as a country riven by hatred and overrun with murdering cops and white supremacists (Lexington, September 30th). They hope no one will notice that it isn't true. Membership in the Ku Klux Klan has plummeted from 4m in the 1920s to today's 3,000. Supremacists are a dying breed.

Why the reckless dismissal of the underlying trend? No one would argue that there is nothing left to be done in the pursuit of equal justice. The question is why so many resist acknowledging the distance we've come. Do they not understand that their pessimism is corrosive and sows distrust in exactly the places where we have nurtured a spirit of hope we feel we can rely on to move forward?

MARGARET MCGIRR
Greenwich, Connecticut

Punctuation point

I enjoyed Johnson's column on the use of commas ("September 23rd). I've found that using commas is a delicate balance between making a sentence clearly understood and trying not to sound like William, Shatner, and his infamous, cadence.

ALISA KEMNITZ
Madison, Wisconsin

In the Anglican communion ritual, it is said: "Drink ye all, of this." Read aloud without the comma it has a very different meaning from what is intended.

FRANK GUE
Burlington, Canada

To avoid potential ambiguity, there is a case to be made for the use of the serial comma, as evidenced by the following (apocryphal) book dedication that omits it: "To my parents, Ayn Rand and God".

AXEL BIEHL
Vancouver

An interesting absence of the comma is found in Ian Fleming's novel "From Russia, with Love", published in 1957. The film version dropped the comma in 1963 and its disappearance continues in the Penguin classics version. Might SMERSH be responsible?

P.J. CREGG
Dunmore East, Ireland

An insider's view on Hefner

Thank you for remembering Hef. In the late 1960s I worked as a Bunny (not Bunny Girl, as stated in your obituary of Hugh Hefner in the October 7th issue) and lived in the Playboy Mansion in Chicago. Those of us who stayed there called it The House. At a time when the sexual harassment of female employees was considered the norm, Hef was alone in treating women with respect. The dormitory we lived in had a "no men allowed" policy and that included Hef and the rest of his staff. We were paid well and many of us went on to other careers: Deborah Harry founded Blondie, Lauren Hutton graced the covers of fashion magazines and I became a librarian.

KELLY PUCCI
Colon, Michigan ■

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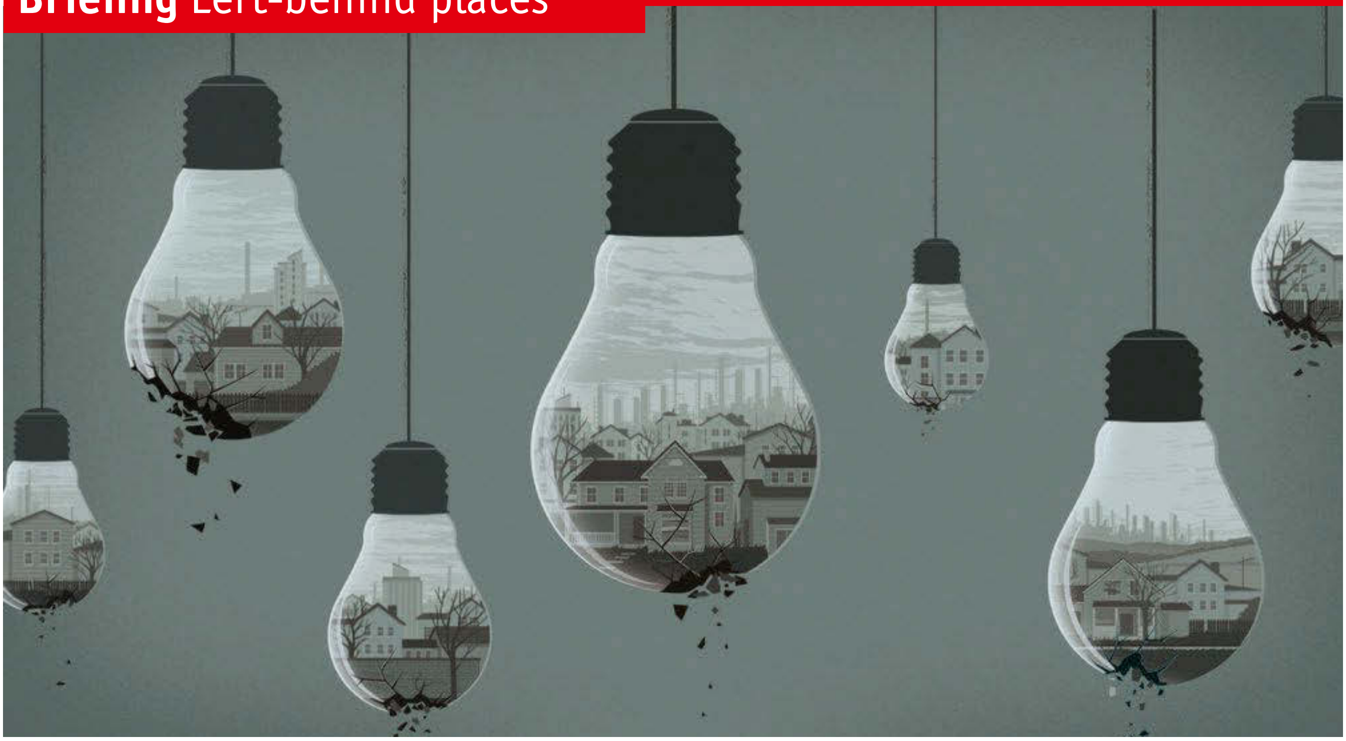


In the lurch

GREENVILLE, SOUTH CAROLINA AND SCRANTON, PENNSYLVANIA

Many places have lost out to globalisation. What can be done to help them?

EVEN before the disaster, Scranton had been having a poor century. In 1902 the Lackawanna Steel Company left north-east Pennsylvania in search of better access to transport and a less assertive labour force. The area still had coal, and enough spark to start new industries: in the 1920s a local button-maker became the country's leading presser of 78rpm records. But after the second world war demand for coal fell. Then, in 1959, miners working coal seams broke through the bed of the Susquehanna river, which flowed into the caverns below like bathwater swirling down a plughole. The mines never recovered.

The damage is in plain sight. The valley through which the Susquehanna runs is lined with shuttered factories. The city of Scranton faced near-bankruptcy in 2012. Yet despite almost a century of economic blows, more than half a million people remain in the area. It is a similar story in a host of other once-proud parts of the industrialised world. They have not found ways to thrive in a digitised, globalised economy. But they have not disappeared.

Politicians have tried to help. State and local governments have spent hundreds of millions of dollars over the past decade on infrastructure and redevelopment projects in the Scranton area, just as they have in Britain's Teesside, and France's Pas-de-Calais. By one estimate Pennsylvania spent over $6bn between 2007 and 2016 on corporate subsidies, more than any other state. Much of that was dished out in its depressed north-east. But throwing money around is not enough. To improve the lot of left-behind places, policymakers need more determination and greater consensus on what works.

Playing catch-up

Do better they must. The forces that drive regional disparities are built into the mechanisms of globalisation, which makes them hard to resist. It is true that globalisation could stall or go into reverse. Indeed the desire that it should do so was part of the reason that voters in north-east Pennsylvania swung heavily to Donald Trump in 2016, delivering him the state. It was in a similar spirit that areas of alienation in Britain, like Teesside, voted for Brexit and France's economically battered north offered strong support to the Front National of Marine le Pen. But even if globalisation were to stop in its tracks, the regions it has weakened would not magically improve.

Economists once thought that, over time, inequalities between both regions and countries would naturally even out. Rich places with more money than investment opportunities would sink money into poorer ones with untapped potential; technological know-how would spread through economies. For much of the 20th century there was evidence to back this up.

Lagging industrialised countries grew much faster than the richest ones in the decades after the second world war. In 1950, for example, real output per person in Italy was 33% of that in America; by 1973 it was 62%. From 1880 to 1980, income gaps across American states closed at an average annual rate of 1.8%: real personal income per person in Florida rose from 33% of that in Connecticut to 82%. Similar convergence occurred across Japanese prefectures and European regions.

At the same time, as geographical differences dwindled within and between industrialised economies, the gap between those economies and the rest of the world widened. American incomes, adjusted for living costs, were a bit less than nine times those in the world's poorest countries in 1870, but nearly 50 times larger by 1990.

As the 1980s gave way to the 1990s, both trends changed. Regional inequality within rich countries increased. Poorer economies began catching up with richer ones.

Between 1990 and 2010 the rate of economic convergence across American states slowed to less than half what it had been between 1880 and 1980. It has since fallen close to zero. Rich cities started pulling away from less well-off counterparts (see chart 1 on next page). According to the Brookings Institution, a think-tank, in the decade to 2015 productivity growth in American metropolitan areas was highest in the top 10% and the bottom 20% (where, by definition, the baseline was low). Struggling middle-income cities like Scranton fell further behind. A recent report by the OECD found that, in its mostly-rich members, the average productivity gap between the most productive 10% of regions and the bottom 75% widened by nearly 60% over the past 20 years.

It is no coincidence that fissures opened within the rich world's economies as poor countries began catching up. It was a predictable result of political and technological change—one that governments in the rich world largely ignored and that their advisers, and economists in general, made too little effort to point out.

When countries with lots of low-wage workers begin trading with richer economies, pay for similarly skilled workers converges. Those in poor economies grow richer while in rich countries workers get poorer. The effects are felt more in some places than others, and not only because the sort of people who lose out to trade tend to live in similar places. Globalisation did direct damage to many local and regional economies because of the way those regions work.

Not going global

Firms—particularly manufacturers—often do better when they are close together. A maker of industrial machinery saves on costs when it is near the firms that provide it with raw materials or components, as well as to its customers. A cluster of manufacturers attracts workers. Where there are a lot of firms and workers, new ideas are spawned and spread.

Similar dynamics apply in other industries. Financial firms do well in New York because they are close to the banks that finance them and clients that hire them, and there is a vast pool of specialised talent. Startups in Silicon Valley have access to financing, customers and new ideas they will not easily find elsewhere, not to mention competitors' employees to filch.

The size of such clusters depends on the size of the economy. Open a national economy to a world's worth of trade and the scale changes. Firms can sell to customers in other countries as well as in their own, and those in the most productive clusters see their existing advantages pay off. More sophisticated financial firms in London outcompete those in Frankfurt; California's internet firms overwhelm competitors in Paris. Producers in less fortunate regions either have to up their game, specialise, move or go under.

Increasing returns of this sort do not imply that trade is a zero-sum game. A larger, more integrated market enables production at more efficient scale and increased global output. Consumers gain access to cheaper and better goods and services (including new foreign varieties). They do imply, however, that production will become more geographically concentrated. Cities with long-standing industrial traditions that could get by in a smaller economy find themselves bleeding talent and jobs.

The past few decades have been good for the richest firms and places. They are as productive as ever; America's slowing productivity is the result of increasingly poor performance by firms below the upper ranks. Across a wide range of industries the share of output generated by America's top four metropolitan areas for each industry has risen, often substantially. In the financial industry their share of output rose from 18% to 29%, and in retail, wholesale and logistics from 15% to 21% between 2001 and 2014 (see chart 2 on next page).

Since 2013, the share of high-salary tech jobs found in America's eight largest technology hubs has risen, according to a recent analysis by Jed Kolko, an economist at Indeed, an online jobs site. Similarly, from 1997 to 2015 London's share of Britain's gross value added rose from 19% to 23%.

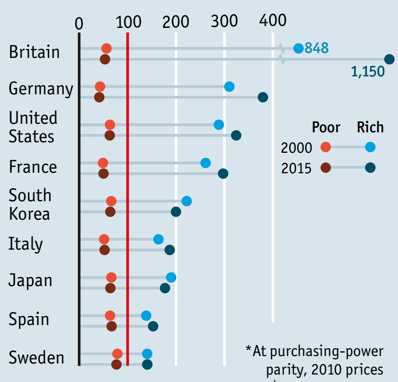
There are several reasons why the poorer regions of rich economies did not adjust as well to the winners-take-more geography of globalisation. One is that technology seems to be moving from place to place less easily than it used to. An OECD study published in 2015 looked at the way in which productivity gains spread from "frontier" firms operating at the highest productivity levels. Since 2001 new technologies have percolated from leading firms in one country to equivalent firms in other countries more quickly. Globally competitive firms have got better at mastering complex new technologies. And fending off global rivals seems to sharpen the incentives of managers at these firms to copy other successful ones.

But it is a different story within borders. Diffusion of technology from top firms in one country to laggard firms in the same country has slowed down. The authors of the study reckon that a lack of interest in adapting technologies to local circumstances may account for part of this, suggesting that the more the best firms focus on a global (rather than domestic) market, the slower productivity-improving techniques and technologies spread locally. The rise of superstar firms means that fewer places are home to businesses operating at the productivity frontier and that domestic investment is lower than it should be. In less dynamic local markets, non-superstars seem neither willing nor able to adopt the best technology.

The rich get richer 1

GDP per person* of poorest and richest regions†

National average =100



Sources: OECD; *The Economist*

*At purchasing-power parity, 2010 prices
†OECD lower-level regions and US states

Mobile moans

The rational response to such divergent economic fortunes is to up sticks. In the most successful developing countries people move to new centres of progress with alacrity, as they did in America and Europe in the 19th and early 20th centuries. The population of Shanghai doubled from 1980 to 2010, just as Manchester's did from 1811 to 1841.

But people in the rich world are less able and willing to move to thriving places than in the past. America, once inveterately itinerant, has settled down a lot (see chart 3 on next page). Even so, it is still more footloose than Europe. Each year just over 2% of Americans move across state lines, whereas only 1.5% of Europeans move between regions within their home country. Despite the freedom of movement created by the EU's single market, only 0.37% move from one country to another. But mobility in America is on the decline.

The pull exerted by successful places is offset by policies that restrict population growth and that were not imposed a century ago. Stringent planning rules, and homeowners who prefer low-density living, limit new building in rich cities. That makes housing hard to afford. Though the wages available in rich American cities are higher than in poorer ones, even for those without many qualifications, high housing costs more than offset the pay increase.

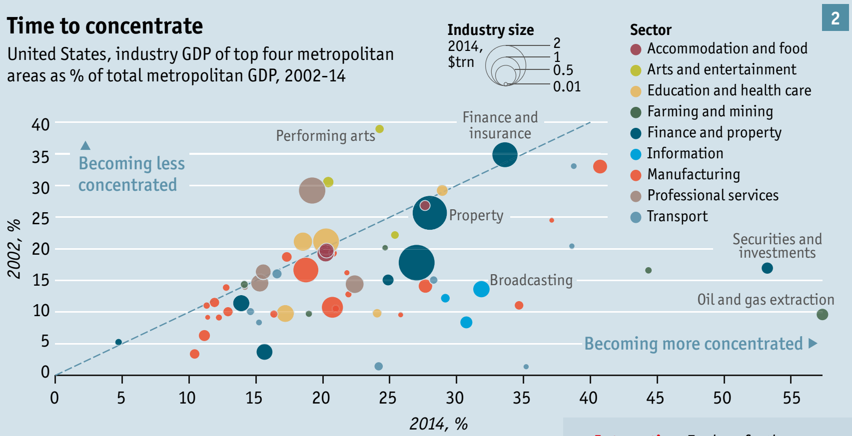
At the same time, the push to leave failing places has weakened. The growth of the welfare state limits the chances that declining cities will disappear. In the 19th century, mining towns like Bodie, California—which once boasted several thousand people, a newspaper and a railway station—emptied out entirely when local mines closed. Today government benefits and pension payments spare people the horrible choice between moving or penury. Indeed, they can encourage people who would otherwise move to stay put, because meagre fixed incomes go further in places where living costs have tumbled.

Recent work by David Schleicher, of Yale University, recounts the ways that state and local benefits also impede movement. Public employees face strong incentives to stay put; according to one estimate, the pension of a teacher who spends 30 years in one school system is about twice that of a teacher who splits her career between two. Some benefits are tied to stay-

2

Time to concentrate

United States, industry GDP of top four metropolitan areas as % of total metropolitan GDP, 2002-14



Sources: Bureau of Economic Analysis; *The Economist*

Interactive: Explore further at Economist.com/concentration17

ing put, precisely because the authorities fear a brain drain. A new affordable college programme in New York, for example, requires beneficiaries to stay in the state after graduation for as many years as they received assistance.

A diminished tendency to leave places that are not doing well is not just a matter of welfare policy and the size of the state. People do not just change jobs if they move home. They also sever social ties, from churches to hunting clubs. Lighting out for new territories means leaving behind family and friends, something that today's ageing populations may find harder than the younger populations of the past. Ageing populations have other effects. Grown-up children may need to care for ailing parents; grandparents may provide a crucial source of child care. For these and other reasons, many working-age adults are finding it harder to move far from their parents than previous generations.

Finding your place

Help—either to make it easier to set up in a successful place, or to leave a failing one—would be a boon to many, especially the young, skilled and ambitious. By making them more productive, it would probably boost GDP. But it could make life harder still for the least mobile members of society. Were New York more accessible to young Pennsylvanians, Scranton's problems would not disappear; they would just be concentrated in a smaller, older and poorer population. Hence the attraction of policies that help people by helping the places where they find themselves.

The subsidies and tax incentives showered on north-eastern Pennsylvania are hardly unique; the rich world abounds in efforts to jump-start the economies of benighted places. Economists are generally sniffy about them, with some justification. In January, for example, American Paper Bag moved its corporate headquarters near to Scranton, thanks in part to employment tax credits, funding for workforce training and a $1.4m subsidised government loan. But the firm's arrival is expected to create only 38 jobs.

"Enterprise zones", which typically use tax incentives and hiring subsidies to encourage businesses into areas of concentrated poverty and joblessness, do little good. California's 42 enterprise zones have failed to raise employment in targeted areas, according to analysis by Mr Kolko and David Neumark, of the University of California at Irvine.

Other studies find increases in employment and wages that are modest at best. In the *zones franches urbaines* with which France started to experiment in the 1990s, small businesses are temporarily exempted from taxes and some social-security contributions. Most of the employment these zones have created appears to be due to firms from elsewhere moving in, which may explain why surrounding neighbourhoods typically experienced employment falls roughly on a par with the zones' gains.

Analysis of the effects of EU structural funds—money invested in poorer regions to promote convergence—finds that such spending appears to boost local output and reduce unemployment, but not necessarily in a sustainable way. A recent study of Cornwall and South Yorkshire showed that the funds improved the economic outlook of those British regions, with unemployment rates in the two declining towards the national average. In 2006, though, South Yorkshire lost access to the funds, and its gains fell away.

Some interventions do seem to produce lasting change. Just over 1,000km south-west of Scranton sits the city of Greenville. It is the largest population centre in the north-west of South Carolina, which was once a thriving centre of textile manufacturing; its fast-flowing rivers powered scores of mills, which remained long after the waterwheels were replaced by other sources of power. In the second half of the 20th century, however, foreign competition gutted the industry and employment collapsed.

In the early 1990s South Carolina's leaders learned that BMW had plans to open an American factory. Hundreds of cities offered the Bavarians all manner of appetising inducements. South Carolina's winning offering included more than $100m in tax incentives and a $1-per-year lease for the four square kilometres on which the plant would sit. State and local governments promised meaty investments in infrastructure. Clemson University and local community colleges were helped to develop training programmes that could be co-ordinated with the carmaker and its suppliers. A centre for automotive research in Greenville gave the offer an appetising touch of high-tech *umami*.

The plant BMW has built there is now the firm's largest in the world. But the state's dowry bought more than a dashing groom. The network of firms that supplies BMW has attracted other companies to the region, as have improved transport links to cities in North Carolina and Georgia. Recently Volvo, a Swedish carmaker owned by Geely, a Chinese firm, announced plans to build a factory close to Charleston, a city on South Carolina's coast. Volvo will buy many parts for its vehicles from suppliers which first came to the state to serve BMW.

South Carolina has not become an all-purpose manufacturing powerhouse. In fact, manufacturing employment is lower in the region than it was when BMW set up shop. But real incomes are growing and the population is booming. Greenville is 70% bigger than it was in 1990.

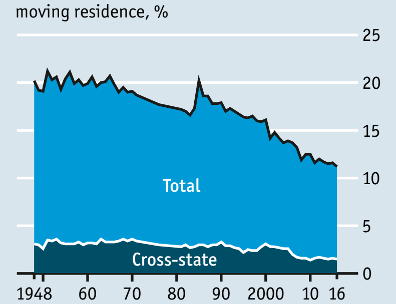
Its success shows the value of co-ordination. There is a chicken-and-egg problem in establishing a cluster. Firms would like to be where there are workers, suppliers and infrastructure; workers want places where firms are already offering good new jobs. Neither will go where the other isn't. But action on a number of fronts can, under the right circumstances, attract both at once, creating a kernel round which a cluster can grow large enough to become self-sustaining. After that, it may well invigorate other areas of the local economy.

Strategies which build clusters through ▸▸

3

Born to stay put

United States, share of population* moving residence, %



Sources: US Census Bureau

*Aged one and over

such two-way seduction are hard to assess. Work by Michael Greenstone and Richard Hornbeck of the University of Chicago and Enrico Moretti of the University of California, Berkeley compares places that lose out in competitions for big plants to those that win. They find that the arrival of a new plant raises productivity in existing factories—those that were there before the arrival of the big fish. This suggests that within clusters spillovers of technological and organisational know-how are genuine; attracting successful firms is a way to channel knowledge into lagging regions.

Although a new plant can promote the diffusion of technical knowledge and provide jobs that pay well in other companies nearby, not every place can nurture a manufacturing cluster. The success of South Carolina has come about because BMW chose to put its plant there rather than somewhere else.

So rather than attempting to seed clusters, governments could instead focus on spreading know-how in order to increase the attractiveness of laggard regions to productive firms. Improving the investment climate in struggling areas could help. In 2015 the Economic Innovation Group, an American think-tank, published a report by two economists—Jared Bernstein, a Democrat, and Kevin Hassett, a Republican, who now heads Mr Trump's Council of Economic Advisers—which proposed a way of doing just this.

The idea was to use tax incentives to create new financial vehicles, not unlike venture-capital firms, with a place-specific investment mission. The intention would be to provide access for investors to regional-investment opportunities, turning struggling parts of rich countries into domestic versions of emerging markets. Because a "Cleveland Fund", say, would be run by a single manager or management team, its investments could be co-ordinated. Investment aimed at enticing businesses and attracting workers could be designed with each other in mind. Legislation based on the idea has been introduced in Congress, with bipartisan support.

The public sector might also play a more direct role. In the late-19th century, America's federal government set up what are now known as land-grant universities. The legislation gave federal land to states, which were meant to sell it to raise money to create agricultural and mechanical colleges. Those colleges were initially intended to provide a solid technical education for young farmers and engineers across the great American expanse.

They were fairly soon given additional missions: first, to carry out agricultural and engineering research, and second, what was termed "extension"—connecting with working farmers and mechanics in order to spread knowledge of new techniques and best practices. Today, many of those institutions have become fully-fledged research universities, which often co-operate with local firms to commercialise research findings, develop curriculums and place students in new occupations.

Germany has its own, more recent version of this model, called the *Fraunhofer Gesellschaft*. Started in 1949, the system now consists of a network of 69 applied research institutions, which receive 30% of their funding from national and local government, with a mission to develop and improve technologies in partnership with German firms.

Governments could invest in an effort to expand the reach and remit of such institutions (or to create new ones). These could be given resources to expand training for working adults. And they could prioritise extension once again by helping local firms to master new technologies such as machine learning, augmented reality, additive manufacturing and so on. The better understood a new technology is, the less important it is for those wishing to use it to be near the people and firms where it originates. Post-secondary education could expand its focus from equipping individuals with skills to speeding the flow of knowledge from those who generate it to everyone else, companies included.

If there is a particular reason to favour dispersion of technological know-how and economic activity, it is that the concentration of such things also corresponds to a concentration of power. Since the late 1990s, as you would expect given the logic of globalisation, American industry has become more concentrated and more profitable. Superstar firms can draw on their financial and political capital to quash or take over would-be rivals, leaving fewer high-growth companies with the potential to anchor local economies. Not all these superstar perks are necessarily invidious, but looked at in the context of regional economies they can have striking effects.

The announcement in June that Amazon would purchase Whole Foods, a grocer, led to a sharp drop in the share prices of companies like Walmart (headquartered in Bentonville, Arkansas), Target (Minneapolis, Minnesota) and Kroger (Cincinnati, Ohio). Amazon has since asked America's cities what they would be willing to offer to get its planned second headquarters, equal in status to the original in Seattle. Scores of cities responded with detailed investment plans and juicy incentives: a testament to the power wielded by America's corporate superstars. But Amazon's demands—which include a large, skilled workforce, lots of big-city amenities and extensive transport links—suggest that the prize will go to somewhere already thriving, rather than a place in need of the lift a firm like Amazon could provide.

Concentrated politics

It is much harder for a new communications technology to take root in an unpromising place than it was when Scranton rose to dominate the creation of newfangled shellac records. Efforts to accelerate technological diffusion—which might include the more rigorous application of antitrust rules—could raise competitive pressures in the national economy in a way that favoured regional competitors.

But the segregation of cities into a small set of haves and a much larger set of have-lesses tends to mean that elites (in business and politics) rub elbows only with each other. That makes them ever less sensitive to the costs of regional inequality. The growing concentration of corporate offices in the vicinity of Washington, DC is a particularly obvious example of this.

Votes for Brexit and for Mr Trump were often cast as an expression of anger at a system that seems rigged. Unless policymakers grapple seriously with the problem of regional inequality, the fury of those voters will only increase. ■

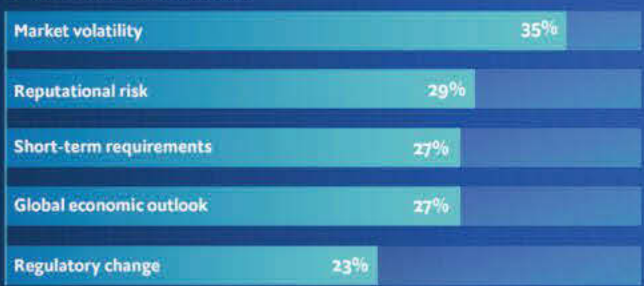

Imagine...
that there is enough healthy food for everyone.
Can you see it in your mind's eye?
Imagine…
that we can produce more food without overtaxing the earth. That we revive agricultural land and waste fewer resources.
Imagine…
that no one has to leave their home to flee famine. And that there are fewer conflicts.
Now imagine…
that it is a bank working towards this vision. A bank founded by and for farmers, that understands you can achieve more together, and knows all about food and how to grow it.
Imagine…
that we help kick-start the smartest innovations by our customers and partners on a global scale. And jointly address the biggest food issues on six continents.
Imagine…
that we can solve the world food problem together. And you can count on us.
Growing a better world together
Rabobank

The Economist | Intelligence Unit

IS SHORT-TERM THINKING ON THE RISE?

In Asia-Pacific's prolonged low-yield and regulated environment, institutional investors are increasingly taking on greater portfolio risk in their search for returns, and the risks are plentiful. So how are Asia-Pacific investors striking a balance between finding opportunities and mitigating risks?

What is the biggest impediment to lengthening the investment horizon?
% respondents, top five responses



Financial stability risk is the number one concern of institutional investors in Asia-Pacific

A new study from The Economist Intelligence Unit, sponsored by Franklin Templeton Investments, finds that many institutional investors are reacting to current market conditions with significant shifts in their short-term investment strategies. In Asia-Pacific, 52% of investors say they are increasing their portfolio turnover to find yield, despite the increased risk such action entails. Meanwhile, 45% have reallocated asset classes due to regulations, and four in ten are shortening holding periods.

These trends show little sign of reversing in the near future, as Asia-Pacific investors remain focused on market volatility as the number one barrier to lengthening their investment horizon (see chart).

However, Asia-Pacific's institutional investors' increased willingness to hunt for short-term returns stands in seeming contradiction to their approach towards their return targets. Only 27% say immediate pressures have prompted them to adopt a short-term approach to setting return targets, while 39% say these pressures have actually made them more focused on long-term objectives. Many of the respondents are insurance companies and pension funds, investors with lengthening liabilities that highlight the difficulty of achieving future targets.

40%
of Asia-Pacific investors are shortening their holding periods

For more insights from the research, visit institutionalinvestmenthorizon.eiu.com

All investments involve risks, including possible loss of principal. Source: Survey of 200 institutional investors in APAC conducted by The Economist Intelligence Unit (EIU) in June-July 2017. The EIU had final editorial control of the survey, and, for avoidance of doubt, was not obliged to comply with any input from Franklin Templeton Investments, which sponsored the survey.

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28 Witch-hunts in India

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The Rohingyas

Life in limbo

KUTUPALONG

The half-million refugees in sordid camps in Bangladesh will not leave soon

THE Kutupalong refugee camp in Bangladesh does not seem temporary. It consists of thousands of tents made of plastic and bamboo spread across undulating terrain. Groups of male refugees carry long poles on their shoulders to erect even more. Fish, vegetables and fruit are for sale in a market. Half-naked children squat outside stalls selling sweets and biscuits; others splash in a muddy lake to escape the sweltering heat. Long wooden bridges connect parts of the camps divided by water; steps have been carefully carved into the hillsides to ease access to the shelters perched on them. In late August the camp housed around 100,000 Rohingyas, a Muslim minority group from Rakhine state in nearby Myanmar. Now four times as many live there.

More than half a million Rohingyas have crossed the border to Bangladesh since August, joining hundreds of thousands who had already fled there from earlier pogroms (see chart on next page). The exodus started after attacks by the Arakan Rohingya Salvation Army, a Rohingya extremist group, prompted the army to go on the rampage. The army's violent campaign of retribution has been described by the UN's top human-rights official as a "textbook example of ethnic cleansing".

On October 16th the European Union severed ties with the army and barred senior officers from travelling to Europe. It also postponed a trade mission to Myanmar. Despite international indignation, however, Rohingyas continue to cross the border in large numbers, with tales of recent horrors: 12,000 arrived on October 16th alone.

Those who have made it to Bangladesh are still in precarious circumstances. Ibrahim, a slight 10-year-old in the Nayapara camp, describes how his father was killed by the army; when he went to look for the body, he says, he saw Buddhist extremists decapitating corpses. Now he, his mother and his younger brother live in a camp where the walkways are lined with rubbish. They are hungry. "It would have been better if we had died there," he says, with a blank expression on his face.

Number of Rohingya refugees* '000, October 17th 2017 ▲ Makeshift settlements/ refugee camps

Source: Inter Sector Co-ordination Group *Includes 212,000 refugees already in Myanmar before latest influx, excludes 103,000 not living in camps

Existing camps, such as Nayapara and Kutupalong, the largest, have swelled to accommodate the new arrivals. Half a dozen new ones have also sprung up at the edges of paddy fields or on the outskirts of existing settlements (see map). They are often miserable places, with little access to clean water, health care or food. Refugees queue for hours to get rations. When it rains, the camps become mud-baths. Malnourished children stagger between tents; health workers talk of scabies and diarrhoea and warn of potential outbreaks of cholera. "Every third woman is pregnant," says Harmeet Singh, a doctor with United Sikhs, an NGO.

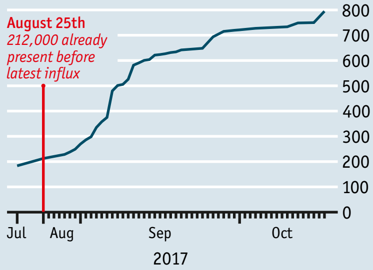
Part of the problem is geography, explains Rob Onus, the head emergency co-ordinator for Médecins Sans Frontières, a medical charity which now has around 1,000 people working in southern Bangladesh. Unlike in Iraq or Syria, flat desert countries, it is hard to build a warehouse in southern Bangladesh: the best land has already been built on, and what little there is left is likely to be uneven, flood-prone or full of trees. Once a warehouse is built, medical supplies or food from it have somehow to be transported to the camps themselves, which are mostly inaccessible by car. Aid workers must navigate muddy paths, wooden bridges and steep slopes. The sheer size of the camps presents problems too. Refugees who live near the road may be able to get treatment; those farther in may not only get it, but not even know that it is there.

Bangladeshi bureaucracy, which restricts what NGOs can and cannot do in the camps, does not help. Although it has been remarkably generous in allowing half a million people to cross its border, the government is sending "mixed signals" about how it intends to treat the refugees in the ▸▸

Still fleeing

Bangladesh, number of Rohingya refugees

Cumulative total, '000



Source: Inter Sector Co-ordination Group

long run, says Chowdhury Abrar, a specialist in migration at Dhaka University. It appears committed to ensuring the Rohingyas go back to Myanmar. In early October the governments of Bangladesh and Myanmar ostensibly agreed to draw up a plan for repatriation, although they are unlikely to agree on the terms of it any time soon. But it has also talked of creating a "mega camp" in Kutupalong, where aid workers fear that disease would spread even more readily, or of shipping the Rohingyas off to a flood-prone island.

Past precedent is worrying. Previous influxes of Rohingyas, in 1978 and then 1991, involved repatriation which some NGOs feared was forced rather than voluntary. Bangladesh abetted this by allowing conditions in the camps to deteriorate. According to a paper published in 1979 by Alan Lindquist, then head of the UN's refugee arm in southern Bangladesh, "the objective of the Bangladesh Government from the beginning was that the refugees should go back to Burma [Myanmar] as quickly as possible, whatever they might feel about it." In that instance, some 11,900 died in camps after the Rohingyas' movement was restricted and food rations failed to arrive. Camps to house the internally displaced in Myanmar, which were meant to be temporary, have become permanent and squalid human sinkholes.

In Bangladesh, at least, things have improved. Refugees who have lived in the Nayapara camp since the 1990s say that in 2006, when the government allowed international NGOs to operate more freely, their lives improved dramatically. Many left the camps too: some to become Bangladeshi citizens or to travel to Saudi Arabia, Malaysia or Nepal with false documents. Some luckier ones were resettled as refugees in Britain, America and elsewhere.

As well as catching the attention of the international media, the current crisis has also become an issue of domestic Bangladesh politics. Posters along the roadsides proclaim Sheikh Hasina, the prime minister, to be the "mother of humanity", while others declare her to be the "hope" of the Rohingyas. Yet despite this the government still refuses to use the term "refugees", points out Mr Abrar, preferring to call them "forcibly displaced Myanmar nationals". Rohingyas in the camps complain that they cannot take formal work or attend local schools and universities. One teacher in Nayapara complains that the certificate refugee children get is useless outside the camp. Local Bangladeshis, meanwhile, complain about rising food prices and the spread of methamphetamines manufactured in Myanmar.

Most Rohingyas want to go back to their homeland. They talk of the houses they lived in, the acres of land they owned, the shrimp farms they tended. Yet with that prospect seeming as elusive as ever, says Kim Jolliffe, a Myanmar-watcher in neighbouring Thailand, the parallel to their situation that most readily springs to mind is that of the Palestinians. That is not an encouraging analogy. ■

Muslim militants in the Philippines

At last

MANILA

The army finally recaptures a city seized by insurgents five months ago

THE city of Marawi, President Rodrigo Duterte declared on October 17th, has been liberated from the jihadists who had seized control of it. Mr Duterte was speaking in Marawi a day after Philippine forces had killed Isnilon Hapilon, a leader of Abu Sayyaf, a local militant group, who had declared allegiance to Islamic State (IS). That, in effect, puts an end to the attempt by IS to establish a South-East Asian outpost of its collapsing caliphate. But it took five months of fighting for the army to regain control of the city. And there is a risk that disaffected Filipino Muslims will redirect their aggression into terrorism and extortion, which have racked the southern island of Mindanao, in particular, for decades.

The day after Mr Hapilon's death, the government said the battle for Marawi had killed 847 IS fighters, 163 soldiers or policemen and 47 civilians. It has emptied the city and surrounding areas, displacing nearly 1.1m people. The fighting has left few buildings in the city centre undamaged and many destroyed. And the lawlessness it suggested has alarmed allies and neighbours.

IS made a determined effort to take Marawi, the biggest city with a Muslim majority in the Philippines, which is largely Catholic. Fighters belonging to Mr Hapilon's branch of Abu Sayyaf and to another band of Muslim militants, called the Maute group, showed themselves in the city in May. The Filipino fighters were reinforced by armed foreigners and financed by IS.

The attackers infiltrated Marawi in strength and stealthily stockpiled munitions before a single shot was fired. But the security forces detected the presence of Mr Hapilon and tried to arrest him, flushing his fighters from cover. The jihadists quickly fell back to the city centre, allowing most of the population of 200,000 to flee. Mr Hapilon may have assumed that Mr Duterte's frequent vituperation of America would mean that American forces would not support their Filipino allies. If so, he was wrong.

Mr Duterte imposed martial law on Mindanao and poured troops into Marawi. His soldiers fought slowly from house to house, impeded by snipers and booby traps. The air force bombed buildings thought to harbour jihadists, causing much destruction. American forces provided discreet surveillance.

The government and Mindanao's main armed Muslim movement, the Moro Islamic Liberation Front, have struck a peace agreement entailing greater autonomy for some Muslim-majority areas. The deal is meant to end the decades-old Muslim rebellion in Mindanao and reduce the attraction of *jihad*. The ranks of insurgents opposed to this agreement have been thinned by the fighting in Marawi. Yet many Muslims, embittered by conflict and poverty, remain hostile to the Philippine authorities. It may be hard to recruit them for another futile attempt to capture and hold territory—but the more rewarding and safer pursuits of kidnapping, extortion and bombing may not have lost their appeal.

Recaptured but ruined

Kyrgyzstan's presidential election

Apparatchik ascendant

BISHKEK

A country in Central Asia holds a vote that was not a foregone conclusion

AS THE young man hesitated, golden autumn leaves drifted down onto the streets of Bishkek, the relaxed capital of Kyrgyzstan. "It's a choice between old and new. I can't decide," he explained, as he hovered outside the polling station. The choice was as unusual as it was difficult. Kyrgyzstan—a mountainous post-Soviet country of 6m people bordering China—was holding the first genuinely competitive presidential election in Central Asia, a region ruled by strongmen who typically romp home with close to 100% of the vote.

In the end a majority of Kyrgyzstan's voters plumped for old over new, or at least continuity over change, electing Sooronbay Jeyenbekov, a former prime minister anointed by outgoing president Almazbek Atambayev. Mr Jeyenbekov, a dour 58-year-old with all the panache of a Soviet apparatchik, beat his more dynamic rival, Omurbek Babanov, a 47-year-old businessman (and also a former prime minister) with 55% of the vote. That may seem like a comfortable victory by Western standards, but it is a far cry from the 89% Uzbekistan's president racked up last year, or the 98% polled by the rulers of Kazakhstan and Turkmenistan in their most recent re-elections.

Mr Babanov, who came second in a field of 11 candidates with 34%, conceded defeat gracefully, defusing fears that the election could spark political turmoil in a country where two presidents have been overthrown in the past 12 years. As Mr Babanov said: "The people have spoken." Yet in the same breath he complained of electoral misconduct that he believes robbed him, if not of victory, then of a fair fight. Kyrgyzstan has a biometric voting system that precludes the blatant election-rigging that prevails elsewhere in Central Asia, but international observers listed flaws ranging from vote-buying to media bias and the harnessing of the state to back Mr Jeyenbekov. A deputy prime minister, for example, was caught on film instructing a group of civil servants to vote for him.

Mr Babanov's rivals also deployed ugly dog-whistle politics, smearing him as unfit to be president because he is half-Turkish and has a Kazakh wife. They also misleadingly edited footage of one of his rallies to portray him as trying to rile members of the Uzbek minority in southern Kyrgyzstan—incendiary tactics in a country where clashes in 2010 between Kyrgyz people and Uzbeks led to hundreds of deaths.

Jeyenbekov at his most expressive

Mr Atambayev likes to portray himself as a devoted democrat—but to get his handpicked successor elected, he resorted to tricks straight out of the authoritarian playbook. The opposition leader, Omurbek Tekebayev, was jailed ahead of the vote on suspiciously conveniently timed corruption charges. During the campaign some of Mr Babanov's supporters were arrested, improbably enough, for plotting the violent overthrow of the state.

The defeated candidate fears he may be next to land in prison, after Mr Jeyenbekov promised during a heated television debate to start fighting corruption—a constant blight in Kyrgyzstan—by imprisoning Mr Babanov. Mr Atambayev, for his part, pledged on election day to keep jailing anyone who "pulls stunts". These tensions may get worse. The ruling party, led by Mr Jeyenbekov, will have to work with the opposition in parliament, including Mr Babanov's faction, the second largest in the legislature.

By stepping down, Mr Atambayev has broken the mould by giving up power after one term, as the constitution dictates, in a region where leaders tend to die in office and the longest-serving president—Kazakhstan's Nursultan Nazarbayev—has ruled for over a quarter of a century. But the government's blatant bias during the campaign was at odds with this apparent diffidence. That has prompted speculation that Mr Atambayev wants to remain the power behind the throne.

By staging the region's first ever competitive election, Kyrgyzstan has marked itself out as a democracy of sorts. But the true test lies ahead: will the outgoing and incoming presidents allow democracy to flourish, or nip it in the bud? ■

Japan's election campaign

Abandoning hope

TOKYO

A new opposition party fails to impress

THE candidate of the Constitutional Democratic Party (CDP), Akira Nagatsuma, spoke from the top of a *gaisensha*, a van adorned with banners and loudspeakers of the sort favoured by campaigning Japanese politicians. Later on, down the road, the hopeful from the Liberal Democratic Party (LDP), Fumiaki Matsumoto, also addressed passers-by from atop a campaign vehicle, as an aide held an umbrella over his head. But Akihiro Araki, the candidate of the Party of Hope in Tokyo's seventh district, is "driving around waving" rather than speaking, "because of the rain", a press officer says.

That seems an apt metaphor for the rapidly diminishing expectations for the Party of Hope, a new national force founded with fanfare by Yuriko Koike, the governor of Tokyo, hours before the prime minister, Shinzo Abe, called a general election for October 22nd. Aiko Kida, a 39-year-old housewife who voted for Ms Koike as governor, says she would like to vote for the Party of Hope too, but does not feel it is ready to tackle the country's big problems.

Ms Kida is not alone. Little more than a fortnight ago pundits were predicting that the Party of Hope would deprive the LDP's ruling coalition of its supermajority in the 465-seat lower house, and easily become the second-biggest party. It is now projected to win as few as 42 seats, a drop from the 57 it had going into the elections (thanks to defections from other parties). The Party of Hope may not win any of the 23 constituencies in Tokyo, its supposed stronghold. Instead, most of its MPs seem likely to come from the 176 seats allocated by proportional representation. Wits in Tokyo are calling it the Party of Hopelessness.

The Party of Hope's fortunes have changed not because of a surge of enthusiasm for the LDP. True, at a time when North Korea is testing missiles, Mr Abe seems to make the Japanese feel safe. But even loyal LDP voters dislike some of its habits, such as treating seats as hereditary. They are also troubled by allegations that Mr Abe helped two friends get permits to open schools—something he denies. *Nikkei*, a newspaper, found that 48% of Japanese do not support the cabinet, compared with 37% who do.

So why has the Party of Hope not attracted as much support as analysts had expected? Many voters (Japan is not a model of feminism) may be uncomfortable with Ms Koike's obvious ambition—the flipside of her appealingly strong personality. ▸▸

Some disapprove of her decision to set up a national party while running the capital city. Her refusal to run for a seat in the Diet, which precludes her becoming prime minister, suggests that she herself lacks confidence in the party's prospects.

The messy founding of the party has also impeded its progress. After persuading Seiji Maehara, the head of the Democratic Party (DP), previously the main opposition, to fold his party into hers, Ms Koike then said its members must be vetted before joining. They had to agree with certain policies, such as changing the constitution, that in effect excluded left-wingers. Most of them are now running for the CDP, a new party started by Yukio Edano, a former DP bigwig.

This was a mistake, says Yasunori Sone of Keio University. He argues that female voters, in particular, like Ms Koike because of her desire to change the Japanese lifestyle, "but instead she emphasised her right-wing ideological side". The party has released a strange manifesto of "Twelve Zeroes"—blights that it promises to eliminate. These range from the popular (zero waiting lists for nurseries) to the Utopian (zero hay fever). Some are punchy (zero tolerance for corporate cover-ups); others fluffy (zero putting down of unwanted pets).

But apart from another zero (zero nuclear power) and a pledge to defer a rise in the consumption tax scheduled for 2019, there is little to distinguish the Party of Hope from the LDP. "They said they would establish a strong opposition party but then changed to have a manifesto like the LDP's," says Eri, a 23-year-old student. To make matters worse, says Jun Iio of the National Graduate Institute for Policy Studies, in Tokyo, Ms Koike has sent mixed messages about Mr Abe, roundly criticising him but not ruling out going into coalition with him.

The CDP has benefited from the kaleidoscopic changes in the political spectrum. After his speech from the *gaisensha*, the party's candidate in Tokyo's seventh district, Mr Nagatsuma, climbs down from the van to shake hands with onlookers huddled under umbrellas. "Voters like us because we have clear, consistent, opposition policies," he says. *Hogan biiki*, a tendency to root for the underdog, may also play a part. The CDP is forecast to win three times the 15 seats it held before the election. It, rather than the Party of Hope, may end up the second-largest party.

CDP candidates grumble that they would do even better but if Ms Koike was not splitting the anti-LDP vote. But in one way the Party of Hope may have done the CDP, and the Japanese political system, a favour. The DP's broad range of members, from nationalist LDP-types to communist sympathisers, consigned it to infighting and woolly policies. Now, at least, the lines are more clearly drawn. ■

Murderous superstition in India

Witch?

BHILWARA

Laws to punish false accusations of sorcery are having no effect

AT LEAST Ramkanya Sen is alive. The grandmother spent three weeks locked in a windowless storeroom in the searing heat, refusing to eat, until a tip-off alerted a journalist to her predicament. The rescue came just in time, say doctors who revived Ms Sen (pictured) at a government hospital in Bhilwara, a small city in southern Rajasthan. Sent home in August, she is still weak, shaken and disoriented, but safe for now.

Indian police records suggest that on average more than 150 less lucky women die every year for the same reason that Ms Sen was locked away: being fingered as a *dayan* (witch). They are burned, hacked or bludgeoned to death, typically by mobs made up of their neighbours and, sometimes, their own relatives. Ritual humiliation often precedes death. A suspected witch may expect to be stripped naked, smeared with filth, dragged by her hair and forced to eat excrement. Kanya Devi, from a village 120km north of Bhilwara, had all those things done to her on August 2nd. The 40-year-old mother of two was also blinded with red-hot coals and severely beaten. She did not survive.

Tara Ahluwalia, the head of an NGO in Bhilwara that defends women from violence, says that of the 86 witch-hunts she has documented in the past two decades in the surrounding district, which has a population of 2m, only three have led to death. Yet nearly all the cases have ended with severe and lasting ostracism, or forced banishment. "The worst thing is the social stigma," she says. Whole families suffer, she explains: no one will marry into them and they often end up feuding with one another when it turns out that a close relative was after the supposed *dayan*'s land.

To own a property that someone else covets is one of several risk factors. Being a Dalit (formerly known as untouchable), or belonging to a caste that happens to be both lowly and uncommon in the area, does not help. The family of Ms Sen, for instance, belongs to a "helper" class. Her husband is a barber, a profession considered unclean. They were the sole Dalits among 60 households of Jats, a poor but proud landowning community.

The trouble started when Pooja, a 16-year-old Jat girl, developed pains in her belly. Her family took her to a *bhopa*, or shaman, who quickly detected witchery. Either Pooja herself or someone else suggested the source might be Ms Sen, who sometimes sits on a doorstep close to Pooja's school, and had acted a bit oddly since accidentally banging her head a few years ago.

Witch murders are concentrated across the centre of India, in the largely rural states of Andhra Pradesh, Jharkhand, Madhya Pradesh and Odisha. All have large populations of tribal peoples, among whom illiteracy is common.

Five Indian states have passed laws that explicitly penalise accusations of witchcraft, and in some cases can punish entire communities. But the example of Rajasthan, which passed one of the most comprehensive such laws in 2015, is dispiriting. Despite the filing of 50 cases since then—seven by Ms Ahluwalia herself—not one has been prosecuted. "Now that we have one, why aren't they using the law?" she asks. "Because the police have no will to act." That said, she notes that the problem is often better dealt with by reconciliation.

Ms Sen, for her part, does not seem to want the police to get involved. It is all too confusing. The Jats had first warned her family to banish her or keep her out of sight. Then they came in a mob, beat her husband and threatened to burn down the house, until her three sons calmed them with a promise that they would imprison their own mother. So who is the criminal? Besides, says Ms Sen, "I am old and my children and grandchildren have to live here."

Not much to show for her guile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Politics

Xi's thought, unveiled

BEIJING

China's leader has declared the start of a "new era". It sounds rather familiar

IN THE days before the opening on October 18th of the Chinese Communist Party's quinquennial congress, the country's security officials put their surveillance efforts into overdrive. On Chang'an Avenue, the boulevard that passes by the venue in Tiananmen Square, naked flames were banned. Tough luck for restaurants, family dinners and smokers. Out-of-towners driving to the capital were stopped at checkpoints and made to sign papers promising not to get into trouble during the week of the congress. Foreigners were barred from travelling to Tibet. The region is well over 1,000 miles from the capital, but the party fears that even a lone banner-waving separatist sympathiser that far away could spoil the event in Beijing.

Such paranoia reflects the importance attached by the party to such congresses. They are convened to add a veneer of intra-party democracy to decisions made beforehand in secret, but those decisions are crucial. The congress, the 19th since the party's founding in 1921, will revise the party's constitution, reshuffle the leadership and set the tone for policymaking in the next five years. This one matters more than most: it is the first presided over by President Xi Jinping, who is the party's chief and will undoubtedly remain so.

The congress will consolidate Mr Xi's already enormous power with the help of the largest turnover within the ruling elite since 1969, the height of the Cultural Revolution. About 70% of the nearly 400-strong Central Committee—the body from which the highest leaders are drawn—have reached retirement age or have been purged for corruption. "Electing" replacements (the more than 2,300 delegates at the Great Hall of the People will have few choices to play with) will result in yet more plum jobs for the party leader's allies.

Mr Xi's opening speech to the congress has been made out to be the product of consensus. During previous congresses, state media reported on the months-long process of drafting such documents, involving consultations with thousands of people. But this one, more than previous such speeches since Mao's day, bore the personal stamp of the orator.

Zero hour, Xi time

Mr Xi stuck to a formulaic style, repeating oft-used phraseology. But there were significant differences, such as in the unlovely title of one section: "Thoughts on Socialism with Chinese Characteristics for a New Era". Deng Xiaoping coined the clunky term "socialism with Chinese characteristics" in the 1980s. Mr Xi's contribution is the catchier bit, "new era".

China, he said, was at a "new historic juncture". The coming era would see it "moving closer to centre stage and making greater contributions to mankind". But achieving what he called the "Chinese dream"—another of his catchphrases—would be "no walk in the park". He said it would "take more than drum- beating and gong-clanging to get there".

Mr Xi talked in some detail about a "two-stage development plan" that will make China a "great modern socialist country" in the era between now and 2050. According to this, China will become a global leader in innovation by 2035, with "rule of law" in place and much greater "soft power" globally. In the 15 years after that, it will become "prosperous, strong, democratic, culturally advanced, harmonious and beautiful". (Mr Xi does not mean democratic in the normal sense: he gave no hint that there would be any erosion whatever of the party's control.)

It is clear that Mr Xi wants to be seen as the founder of this new era. He mentioned the term 36 times in his speech. Even if it is not entirely clear what the new era will entail, the phrase has a better chance of taking off than the now largely forgotten contributions made by Mr Xi's two immediate predecessors to the party's ideological lexicon: the "scientific outlook on development" of Hu Jintao, and the oddly named "Three Represents" of Jiang Zemin.

Mr Xi described his new-era thoughts as "a compass for the party and people". *People's Daily*, the party's main mouthpiece, hailed them as "the latest achievement in adapting Marxism to the Chinese context". This implies that the term will be written into the party's constitution during the congress. There is much speculation that Mr Xi's name will be attached to it, making him the first leader since Deng to be named in the document.

Should the revised charter refer to "Xi Jinping Thought", then Mr Xi will become an ideologue on a par with Mao. The party ▸▸

has a hierarchy of words describing systems of ideas, with "thought" (*sixiang*) nearly at the top, "theory" (*lilun*) in the middle and "view" or "perspective" (*guan*) at the bottom. Which word is used depends on how important the originator of the idea is considered to be. Mr Hu's scientific development is a view. Even Deng's Chinese characteristics are just a theory. Only Mao, so far, has achieved thought.

Messrs Hu and Jiang were sitting on either side of Mr Xi in the hall, applauding. But Mr Xi's new-era idea clearly eclipses any musings of theirs. The words for new era, *xin shidai*, come first when joined together with Deng's formulation.

Old whine in new waffle

Though Mr Xi talked about a new era, the next five years sound, from his speech, to be much like the past five—only more so. To loud applause, he declared that the momentum behind his anti-corruption campaign was unstoppable. He talked about "strengthening the party's long-term governance capacity" (ie, involving it in more decisions) and boosting party organisations in companies, schools and villages. He stressed the need to "correct and resist various erroneous viewpoints". It does not sound as if his persistent efforts to crush civil society will ease.

As he has done in the past, he sent mixed signals on the economy. He talked about ensuring the "market-based allocation" of resources and "business survival determined by competition". He spoke in similar terms in 2013, a year after he came to power. This time he also promised to "support state capital in becoming stronger", just as he has been doing since then.

Perhaps most important, he suggested there would be no let-up in his more assertive foreign policy. In his speech to the previous congress in 2012, Mr Hu had said the army's job was "to win a local war in an information age". Mr Xi dropped the word local. He toughened up the language on Taiwan. Where Mr Hu had talked of opposing Taiwanese independence, Mr Xi threatened to destroy it. If he is under pressure to concentrate more on domestic matters, he has resisted it in his rhetoric.

Attention now will focus on the people Mr Xi will put in place at the end of the congress to help him lead China into the new era he envisages. But whereas, after previous congresses, observers tried to work out the balance between reformers and conservatives in the new line-ups that emerged, few will be wasting much effort on such calculations this time. The central message of this event will be that Mr Xi is in absolute command; the new era will be his. That is a risky assertion in a country where many are prospering but many feel left out. In effect, Mr Xi has assumed responsibility for the way the coming era turns out. ■

Recycling

Quick and dirty

BEIJING

Food delivery is a booming business. Waste is piling up, too

THREE couriers in hard helmets cram into an office lift in Beijing—one clad in red, one in yellow and one in blue. The trio are dispatching food that was purchased online through China's most popular meal-ordering firms, which fill urban roads every midday with their colourful delivery people on electric bicycles. Delivery fees as low as three yuan ($0.46) have helped to transform urban lunch-hours. But the booming business is also fuelling concerns about everything from waste to the abuse of workers.

Such services—which enable users of a single site to order food from a swathe of local restaurants—are expanding around the world. But in China the industry is on a tear. By the end of June, the number of registered users had risen to 295m, 40% more than at the end of last year, according to government analysts. The value of meals bought online was about $25bn in 2016 and could rise to around $36bn by the end of next year, says iiMedia, a research firm. The market leaders are Meituan and Ele.me. Both still make losses in food delivery, but they have backing from Tencent and Alibaba respectively—tech giants eager to find ways of pushing customers to their duelling online payment systems.

Such businesses first began to take off in student dormitories. These days young office-workers are by far the biggest market.

Fast food, with plenty of extras

But there is much hand-wringing about the consequences of their popularity. Officials say the couriers threaten road safety. They ride electric bikes which are cheap, need no licence and are handy in cities like Beijing that restrict the use of motorcycles. Delivery people often mount pavements or drive against the flow of traffic to maximise earnings during the lunchtime rush. Last month officials in Nanjing said meal-delivery bikes in the eastern city had been involved in more than 3,000 accidents in the first six months of the year. In one district of Shanghai police have introduced a penalty-points system. They order those who acquire a certain number of points to perform community service. The police can ask couriers' employers to fire them.

Another worry is the welfare of delivery people, many of whom are migrants from the countryside. In several ways they have it easier than other types of courier: food boxes are easier to handle than bulky parcels, and the recipients are always there. But China Labour Bulletin, an NGO in Hong Kong, says meal deliverers have been staging growing numbers of protests about poor treatment by their employers (usually subcontractors), including wages paid late. Linking their pay to customer ratings has also made it easy for customers to demand more of them than they should: the purchase of groceries en route to their destinations, for example, or the disposal of household rubbish.

Most hotly debated of late is the impact the business is having on the environment. Each day about 65m meal-containers are discarded, by one estimate. Campaigners object to the unwanted cutlery, napkins and chopsticks that restaurants selling through online platforms habitually bundle with orders. The Green Volunteer League of Chongqing, a Chinese NGO, says that food-delivery sites have not made it easy enough for customers to refuse such sundries (the big companies deny this). In September a court in Beijing agreed to examine whether they have violated consumers' rights.

There would be much less reason to worry about the mountains of waste if households and local governments did a better job of keeping recyclables separate from gunk. This year the central government ordered 46 cities to come up with new systems for sorting rubbish, which it talks of making mandatory by 2020. That is progress, but only if it is unwavering: over the years officials have found several similar campaigns all too easy to throw out. ■

Banyan | Occupying minds

If you think protest is finished in Hong Kong, think again

WHATEVER became of Hong Kong's Occupy movement? Three years ago thousands of people, most of them young, staged 79 remarkable days of sit-ins in some of the Chinese territory's busiest districts. They were calling for the genuinely universal suffrage that China had seemed to promise Hong Kong when Britain handed it back in 1997. It was an unprecedented display of civil disobedience, a challenge not just to the local government but to the Communist Party itself in distant Beijing.

"Occupy Central with Love and Peace" was conceived by a Hong Kong priest and two academics as a protest against stunted proposals for political reform that had recently been unveiled. The three had organised an unofficial "civic referendum" to gauge public opinion in favour of Hong Kongers being able, in 2017, directly to nominate candidates for the chief executive of the territory and to choose the winner. They had then threatened to block streets if the authorities ignored the result. It was enthusiastic students who turned the idea into a mass campaign, starting with class boycotts and leading to the occupation of streets around the government's offices and farther afield. Young protesters, camping out with their homework stations and yellow umbrellas, drew admiration. Despite some initial heavy-handed behaviour by the police, which only generated more popular support for the students, the protests were generally peaceful.

But what is there to show for them now? By the time the protests sputtered out (amid grumbling by some Hong Kongers that they were disrupting business), Hong Kong's then chief executive, "C.Y." Leung Chun-ying, had conceded nothing. This year, Carrie Lam, formerly the head of the civil service, replaced Mr Leung, after a selection process that remained tightly choreographed by the party in Beijing. Ms Lam insists this is no time for another debate about expanding democracy. Meanwhile, the central government's representative in the territory, the Liaison Office, has abandoned all pretence at staying behind the scenes. It is a parallel government (as well as a source of business patronage), further undermining Hong Kong's promised autonomy.

Nothing, apparently, to show for all that youthful energy, then. Three of Occupy's student organisers are serving prison terms of six to eight months for unlawful assembly. The three who conceived of Occupy face charges too. Half a dozen pro-democracy legislators have been turfed out of office on trumped-up technicalities. And the pan-democratic camp is riven between traditional democrats calling for the autonomy promised in the Basic Law, China's mini-constitution for Hong Kong, and more radical "localists", some of whom espouse outright independence.

Many Hong Kongers with democratic leanings think that, by antagonising the party, the protests harmed Hong Kong's interests. A return to the street gridlock of three years ago would certainly anger many ordinary people trying to go about their daily lives. There is considerable public disdain for the growing stridency of some pro-democracy campaigners. Before he went to jail, even one of the student organisers, Joshua Wong, told *The Economist* that Hong Kong was suffering from protest fatigue.

Yet this is not the end of the matter. For one thing, the central government appears blind to the effect its hard line is having in Hong Kong. The growth in pro-independence feeling appears to be a reaction to Hong Kong's constricted political space, and to a sense that the territory's own uniqueness is being undermined. The authorities should worry that the generation of Hong Kongers with the strongest sense of "localism" is the one that has grown up only under Chinese rule. The polling is thin, but suggests that perhaps more than half of university students believe that democracy is impossible under "one country, two systems", China's formula for Hong Kong. They see independence as the solution. Banners calling for it appeared on campuses at the start of the university term in September. Football fans boo when the national anthem is played at matches in Hong Kong.

It is therefore only a matter of time before there is another clash of wills between the party and Hong Kong's people. Already there are rumblings of one: when the pro-independence banners were removed from campuses, many students complained about infringement of their right to free speech. Ms Lam, perhaps sensibly, steered clear of sensitive political issues in her first policy address on October 11th.

Ominously, parts of the mainland's state-run media are calling for Hong Kong to enact anti-sedition laws, as the territory's government is required to under Article 23 of the post-colonial constitution. When it tried to do so in 2003, hundreds of thousands took to the streets in protest, leading to the laws being shelved and to the early departure of the then chief executive. Then, the laws' opponents were branded in Beijing as pesky democrats. Were Ms Lam to revive such attempts, opponents would be condemned not simply as democrats but as dangerous separatists. The scene would be set for an ugly stand-off. During the Occupy unrest China's leader, Xi Jinping, declared the protests "illegal", but left Hong Kong to deal with them. Next time, with the stakes higher, he may take a more aggressive approach.

The golden thread

Chinese officials urge Hong Kong to return to being an "economic" city. Whatever that means: the idea of an apathetic populace interested only in material gain is fanciful. A long and admirable history shows Hong Kongers persistently demanding more say in their affairs—starting under colonial rule in the 1960s and 1970s when they organised against poor living conditions, inferior education and rampant corruption. Stephen Vines, a local commentator, speaks of a "golden thread" that runs through these early protests to the more recent ones. Mr Xi hasn't heard the last of Hong Kong. Those who were politically baptised during the Occupy movement will be around longer than he will. ■

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Health care

Unsurance

OKLAHOMA CITY AND WASHINGTON, DC

The president's vacillations on health care are driving up costs for middle-earners

INSURANCE is supposed to be about the careful management of risk. Recently, for America's health insurers, it has had a lot to do with keeping track of President Donald Trump's Twitter feed. On October 12th the White House announced that it would cut off payments to insurers that underpin parts of the Affordable Care Act (ACA), better known as "Obamacare". The move will knock already wobbly markets, a prospect that seems to delight Mr Trump. Yet on October 17th Senators Lamar Alexander, a Republican, and Patty Murray, a Democrat, launched a bipartisan proposal to shore up Obamacare, in part by guaranteeing the payments for two years. At first, Mr Trump seemed to be encouraging the deal. Then, on October 18th, he declared his opposition to reinstating the payments.

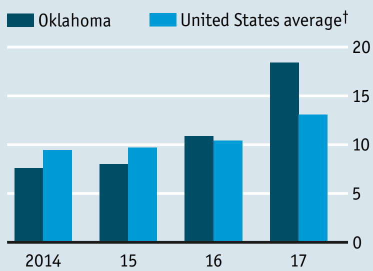
The money in question compensates insurers for lowering deductibles and out-of-pocket costs (the slice of medical bills not covered by insurance) for poor buyers on Obamacare's insurance marketplaces, or "exchanges". When the payments stop, insurers must still provide the discounts, but without recompense. The result will be higher premiums as insurers seek to recoup their costs. That could affect 18m Americans who buy health insurance in the so-called "individual market", which serves those who do not get coverage from another source, such as an employer.

Republicans regularly claim the individual market is imploding; Democrats say it needs only minor reform. In reality, its strength varies greatly by state. In urban, densely populated states, such as New York and Massachusetts, consumers have a wealth of choices and comparatively low premiums. In several rural states—which have tended to resist Obamacare—matters are much worse.

Take Oklahoma. In 2014, the first year of Obamacare, a family of four Oklahomans paid a little over $7,500 a year for a benchmark plan. That turned out to be far too little for a market in which nobody can be turned away on account of ill health. Facing losses, insurers either raised premiums or left the exchanges. Today, just one insurer remains, and charges nearly $18,500 annually for a comparable plan (see chart).

Not OK

Health-insurance premiums for a family of four*
Benchmark ACA marketplace plan, $'000



Source: HHS
*Before tax credits
†States for which data available

Such prices are nearly impossible to pay for those who earn just too much to qualify for a helping hand in the form of tax credits. These tax credits, which Mr Trump cannot stop, disappear abruptly at 400% of the poverty line (that is, at an income of about $48,000 for an individual, or about $98,000 for a family of four).

One of those affected is Brandon Smith, a 25-year-old field engineer for a small Oklahoman oil firm. Mr Smith would be covered by his father's insurance had the elder Mr Smith not cancelled his plan because the premiums were too high. So at the start of 2017 Mr Smith bought coverage of his own. His plan cost $400 a month, yet came with a $9,000 deductible. Deeming that too expensive, he too has now dropped out of the market, one of 30,000 Oklahomans to have done so in 2017.

It is people like Mr Smith, who work for or run small businesses, whom Republicans say they want to help. But Mr Trump's new strategy hurts them, at least in the short term. The Congressional Budget Office estimated in August that ending the payments to insurers would push up premiums by 20% in 2018. This effect has, in many cases, already been incorporated into prices for next year, because insurers anticipated an end to the payments. (In 2016, a federal court ruled that payments could not continue without a congressional authorisation, though the ruling never came into effect.) Nonetheless, Mr Trump's announcement sent some states scrambling to adjust premiums before enrolment for 2018 begins in November.

For Oklahomans, the effect is minor compared with that of another, still more curious decision by the Trump administration. Earlier this year, after encouragement by Tom Price, then health secretary, Oklahoma proposed a "reinsurance" programme. The state wanted to assume ▸▸

enough of insurers' risks to reduce premiums by about 30%, mainly funded by recycling the money the federal government would save when premiums fell. Similar proposals have been approved for Alaska and Minnesota. Yet Oklahoma's green light did not arrive in time. This was despite close co-ordination with Mr Trump's health department in advance of the deadline, according to Mike Rhoads of the Oklahoma Insurance Department. Mr Rhoads says the state was even sent a draft letter of approval from Seema Verma, the relevant Trump appointee, before being disappointed. (The health department did not confirm this version of events to *The Economist*, saying only that it had received "substantive comments" on the waiver that "needed to be addressed".)

Waiving sense

It is unclear what Mr Trump's strategy is. Pushing premiums up to force Democrats to support Republican ideas for health reform, which stalled in Congress earlier this year, is risky. For a start, Democrats have never shown much concern about high costs for people who are otherwise financially comfortable.

Yet Mr Trump evidently thinks that he will escape the blame for the disruption. He may be right. Mr Smith, a registered Republican, says he is "not the biggest Trump fan", but holds Obamacare responsible for high premiums. As for Oklahoma's failed waiver, it hardly made a splash, even on the local news. Compared with the huge increase in premiums that has already occurred, what is happening now looks insignificant, says Trent England of the Oklahoma Council of Public Affairs, a conservative think-tank. (Oklahoma's premiums will rise by about 8% next year.)

If sabotage is indeed the strategy, Mr Trump is unlikely to sign a bipartisan bill to shore up the market. The concessions to Republicans in the Alexander-Murray bill allow states more flexibility to experiment with Obamacare's rules. But, given what happened to Oklahoma's waiver, and the uncertain fate of a wider proposal in Iowa, the administration does not seem completely committed to this principle, either.

For now, Mr Trump seems content to argue that he has stopped filling insurers' pockets with taxpayer cash. But in reality, ending the payments is probably even bad for taxpayers, because when premiums rise, tax credits must go up, too. In any case, insurers were promised the money, and so may be able to recoup it in court. Two firms have already won similar cases brought after Republicans defunded a different aspect of the law in 2014.

It is hard to see who would lose if the Alexander-Murray bill becomes law. If it does not, insurance markets will continue to be plagued by Washington's confusion, and premiums will continue to rise. ■

Puerto Rico

Be PREPA-ed

SALINAS

Puerto Rico's decrepit power authority has increased the island's suffering

IN A room beneath the smokestacks of the Aguirre steam plant in south-eastern Puerto Rico, an engineer points to a colourful poster entitled "How Electricity Arrives at Your Home". In normal circumstances, explains Alexis Torres, burning oil turns water to steam, which spins mechanical turbines and sends energy out through power lines that criss-cross the island territory. Hurricane Maria made landfall 30 miles from the Aguirre steam plant. The south-east, where coal and oil plants generate much of the island's electricity, suffered the worst damage.

A month later, 82% of Puerto Ricans still lack power. The island operates a centralised electricity grid: the plants in the south-east provide power to beach resorts in the north-west and metropolitan San Juan; 80% of the power lines were destroyed by the storm. Restoring them is a finicky process. By October 10th 16% of the island's power had been restored. Later that day it dropped back down to 8% when a plant partially shut down, leaving the airport, police headquarters and several hospitals in the dark. "I was in the middle of open-heart surgery," one surgeon said. A back-up generator saved his patient. Thousands of the diesel-fuelled contraptions are powering food refrigeration, water purification and other vital needs. But closed schools and shuttered businesses are the new norm. Tens of thousands of Puerto Ricans have left the island.

Elon, where are you?

Maria's fury would have battered any grid, but the scope of the damage, the sluggish pace of repairs and the suffering from weeks without power have almost as much to do with mismanagement as they do with wind and rain. Last year Synapse Energy, a consultancy based in Massachusetts, carried out the first-ever audit of the Puerto Rico Electric Power Authority (PREPA) and found that the power lines were "cracking, corroding and collapsing". The utility had been operating for decades without regulation or oversight. Imprudent spending was accelerating a decade-old debt crisis. "The results are grim," the authors wrote. "PREPA's system appears to be running on fumes."

The story of PREPA is the story of Puerto Rico. The utility, created by a New Deal governor in 1941, powered rapid industrialisation in the 1970s as American pharmaceutical and other firms flocked to the island to take advantage of federal tax benefits. By offering stable, well-paid jobs to electrical workers, PREPA helped create a Puerto Rican middle class, says José Caraballo Cueto, an economist at the University of Puerto Rico. The boom was short-lived. When the federal government peeled back the tax perks in 1996, factories started leaving and PREPA began losing customers.

Declining revenues were exacerbated by political patronage, corruption and inefficiency. Municipalities and government agencies do not pay for electricity in Puerto Rico. Successive governments spent tens of millions of dollars evaluating solar and natural-gas projects in order to wean PREPA off its dependence on oil, but did next to nothing. Less than 3% of the island's energy came from renewables.

PREPA is responsible for $9bn of Puerto Rico's $73bn of debt. As PREPA and other agencies borrowed billions of dollars from international creditors (and from each other, a practice some have compared to a Ponzi scheme), the utility started skimping on maintenance. In 2014 an austerity law prompted hundreds of experienced employees to retire and claim their pensions before cuts took effect. They were never replaced. The result, according to Synapse's report, was generator failures, blackout rates four times higher than other American utilities, rising consumer costs, environmental violations and an increasing numbers of worker injuries and fatalities. A three-day blackout in 2016 caused by a fire at the Aguirre plant foreshadowed the darkness and economic standstill Hurricane Maria would bring. "We took the risk and we are paying the price," says Mr Torres, peering at his poster.

In the aftermath of the hurricane, debate is swirling about how to fix the electrical system and who should pay. "We must rebuild better," Governor Ricardo Rosselló has said, voicing enthusiasm for a proposal ▸▸

from Elon Musk, founder of Tesla, to deploy solar panels and batteries throughout the island to decrease dependence on the weak grid. This is a fine idea, but also an expensive one. Besides, federal emergency aid—the House of Representatives approved a $36.5bn package on October 12th, though only a fraction will go to Puerto Rico—can typically be used only to reconstruct what existed before the disaster.

The reconstruction has begun in an unusual fashion. Puerto Rico has hired a tiny Montana-based contracting company called Whitefish Energy to oversee grid restoration. Normally, states and municipalities contact a "mutual aid network" that can quickly mobilise thousands of repairmen. "But Puerto Rico never said 'Hey, we need crews'," says Mike Hyland of the American Public Power Association (APPA), which represents 1,100 utilities. Mr Rosselló originally claimed he could not get in touch with the APPA, and then later explained that he began negotiating with Whitefish before Hurricane Maria. The company had responded to a request for repair work after Hurricane Irma, and it appeared to be Puerto Rico's cheapest option. José Roman of the Puerto Rican Energy Commission, an independent body created in 2014 to regulate and monitor PREPA, confirmed that no official bidding process took place. "The government was in emergency mode," he said.

"It wasn't like all the big guys were jumping up and down to go to a bankrupt island," said Ken Luce, a spokesman hired by Whitefish a week ago. The company, which has two full-time employees, began as a joint-venture in 2015 with a Brazilian company called Comtrafo to build a transformer plant in Montana, a project that has since sputtered out. The Puerto Rican government declined to provide details on the contract, but Mr Luce said that Whitefish demanded only a $2m deposit for supplies and crews. It has 220 men on the island, though it plans to increase these to around 1,000 in order to meet the government's goal of 95% power restoration by Christmas. Until several days ago, Whitefish's website consisted of a single page with a photo of a helicopter and the contact information for a spokesman.

Puerto Rico's ability to get the lights back on—and get them to stay on—may determine the island's future. People will not wait indefinitely for schools without electricity to reopen if they can afford flights to mainland America. Yarimar Bonilla, a Puerto Rican anthropologist at Rutgers University, asked thousands of residents how they felt about Puerto Rico's territorial status. They told her that, historically, reliable government services like electricity, water and communications made them feel superior to their non-American neighbours like Dominicans and Cubans. The blackouts made people wonder. ■

Disaster relief

But who did they vote for?

SEATTLE

The federal aid sent to Puerto Rico fits a longstanding pattern

"NOBODY could have done what I've done for Puerto Rico with so little appreciation," President Donald Trump announced on October 8th. Boricuas, as denizens of the island are known, have yet to display the gratitude their president seeks. The islanders have been particularly galled by the contrast between his perceived slights to Puerto Rico and his all-hands-on-deck rhetoric during Hurricanes Harvey and Irma, which pummelled Texas and Florida. Explaining the difference, Rick Wilson, a Republican consultant critical of the president, has suggested Mr Trump thinks of Puerto Ricans not as American citizens, but rather as "sea Mexicans".

Even in an era when polls show record levels of partisan division, a few things, such as disaster relief for those lacking food and water, ought to transcend political calculation. In fact, electoral considerations appear to have been a big factor in how the government allocates aid ever since Congress expanded the president's discretion over disaster declarations in 1988. A government motivated solely by the desire to help victims would decide when and where to declare a disaster—a step that turns on federal funding for services like debris removal—purely on the basis of need. If that were the case, areas hit by bigger catastrophes would be more likely to be officially classified as disasters than places which absorbed only glancing blows. Two regions that suffered similar misfortunes should have equal chances of receiving such a designation, regardless of their political leanings.

According to a study conducted in 2011 by Andrew Reeves of Washington University, given two natural disasters that inflict the same amount of damage, presidents have been twice as likely to declare a disaster when one occurs in a swing state like Ohio or Florida, with a roughly equal number of Republican and Democratic voters, as when one happens in a politically uncompetitive place. Presidents of both parties have been equally guilty of this, and it has continued during the six years since Mr Reeves's work was published.

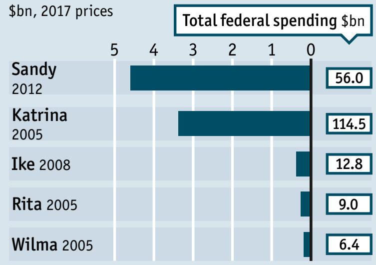
A similar pattern can be found in spending figures. In 2009, researchers at Loyola Marymount and Stanford found that for any given level of damage from a disaster, a one point increase in the vote share for the president's party in the most recent election was associated with a 1% increase in federal aid. For hurricanes in particular, the data suggest that this effect may be even stronger, and is apparent even for areas separated by a few miles. Using that study plus data from the University of Illinois, we built a model to predict hurricane relief funding received by every county in America from 1985 to 2004, based on each jurisdiction's typical exposure to disasters and the wind speed of each storm. For every one point increase in the incumbent president's vote share, federal aid per resident rose by 1% during the next four years.

The evidence also shows that voters reward officials for showering their regions with federal largesse, though their support does not come cheap. According to research by Neil Malhotra of Stanford Business School, it takes about $27,000 of relief spending to "buy" just one extra vote for an incumbent party. It would be far more efficient to invest that money in disaster preparation, since each dollar governments spend on preventing harm from nature's wrath is thought to yield some $15 in savings on future relief costs. Unfortunately, the electorate seems to reward only politicians who open up the public purse after damage is done. Officials who reduce the losses caused by disasters in the first place receive no credit at the ballot box. ■

The price of loyalty

United States, hurricane aid, minimum predicted decrease in federal spending under a president of the opposite party to the one affected areas voted for

$bn, 2017 prices



Sources: *"The Fiscal Cost of Hurricanes"* by T. Deryugina; *"Myopic Voters and Natural Disaster Policy"* by A. Healy and N. Malhotra; Congressional Research Service

Innovative justice

Oxy-courting

BUFFALO, NEW YORK

The country's first opioid court is working well so far

"YOU got to be selfish. You got to do what's best for you," says Craig Hannah, a judge in Buffalo, New York, to the young man standing before the bench. "Yeah, I know," replies Patrick Bruno, "It's so hard." Mr Hannah runs the country's first opioid court. Mr Bruno, who has appeared before him regularly since the court opened in May, is struggling to stay away from friends who are still getting high. "They're not helping," the judge says. "I want you to show me you're serious."

Buffalo's experiment began after Jeffrey Smith, who heads the district's treatment courts, noticed that many of those arrested while high on opiates did not live long enough to make their court dates. The city has a history of developing such specialist courts. In the 1990s it was an early adopter of drug courts, which try to mentor defendants through rehabilitation rather than sending them to prison. Later it introduced mental-health courts. It created the first specialised court to try troubled military veterans, which has since been copied all over the country. It also launched the first human-trafficking court. Such specialist courts often arise when a judge tires of seeing the same defendants cycle endlessly through courts and prison.

Defendants appear before Mr Hannah in court within a day of their arrest and are then sent to residential rehabilitation clinics. After a month of treatment, they must appear in front of Mr Hannah for 30 consecutive days, be drug-tested regularly, agree to 8pm curfews, call in their whereabouts every evening and continue outpatient care. Many fall off the wagon, but second, third and fourth chances are given. Cases are put on hold until defendants complete the programme. The goal is to keep everyone alive, rather than to fill jails with addicts and morgues with corpses.

"I look at it as parenting," says Mr Hannah. He dishes out compliments and praises defendants for staying clean. He notices when one gets a haircut and is delighted to learn that another has dumped her unsupportive boyfriend. He knows when he is being spun a line: Mr Hannah threatens to send people who do not show up to court, or who fail to ring in, to jail and issues arrest warrants for those who disappear. This mixture of kindness and toughness is informed by the judge's own problems with cocaine addiction when he was young. His court has seen 143 defendants so far. Not one has fatally overdosed.

Replicating the conditions that produced Buffalo's opioid court elsewhere will be hard. The co-operation between police, judges, district attorneys, as well as public and private defenders, that such a court needs to get going is rare. Mr Smith reckons Buffalo's success has something to do with snow. The city gets about 8 feet of it every winter, he points out, and everyone pitches in to shovel and plough.

Meanwhile, the federal government is flailing around. President Donald Trump created an opioid commission, which found that in 2015 enough opioids were prescribed to medicate every American for three weeks. In July the commission recommended declaring a national emergency, which would free up money for the problem, but that has not happened yet. The president nominated Tom Marino, a Pennsylvania congressman, to be his director of drug-control policy. Then a report by the *Washington Post* and "60 Minutes" showed that he had sponsored a bill backed by distributors of pain pills that made it harder for the Drug Enforcement Agency to prosecute them. Mr Marino has withdrawn his name from consideration for the job. ■

Campaign adverts

MS-13 ways to leave your values

WASHINGTON, DC

Two former moderates make race-baiting appeals to woo the Trumpist base

EVER since Donald Trump's victory emboldened the Republican Party's nativist wing, the dirtiest words with which a Republican can be tarred have not four letters, but 8 and 13: "moderate" and "establishment". Unfortunately, those accurately describe the two Republican candidates for governors' mansions this year.

In New Jersey, Kim Guadagno has spent two terms as lieutenant-governor. Mrs Guadagno is pro-choice, believes that greenhouse gases contribute to climate change and has addressed her state's LGBT Chamber of Commerce. Before Ed Gillespie decided to run for governor of Virginia he was a lobbyist, political strategist, head of the Republican National Committee, adviser to George W. Bush and Mitt Romney and, in college, a Senate car-park attendant—hardly the outsider that the Republican base seems to crave.

But recent commercials suggest both candidates have turned Trumpian, meaning nativist, race-baiting and unconcerned with accuracy. Mrs Guadagno's advert stars Jose Carranza, an "illegal alien and child rapist". The ad warns that Phil Murphy, the Democratic candidate, "will have the backs of deranged murderers like Carranza".

Mr Gillespie's ads both play on voters' fears of MS-13, a notoriously violent Salvadoran street gang linked to several crimes in northern Virginia. One shows a hooded figure holding a baseball bat in a dark alley while the words "Kill, rape, control" appear on screen; another shows heavily tattooed dark-skinned men behind those words, while an announcer warns, "MS-13 is a menace." (In fact, those men were members of a different gang, photographed in a Salvadoran prison.) Mr Northam "increase[s] the threat of MS-13", the ad warns, because he "voted in favour of sanctuary cities."

Virginia has no sanctuary cities. And Mr Murphy gave an uninspired, rambling answer in support of undocumented immigrants brought to America as children that Mrs Guadagno took out of context. But both Mrs Guadagno and Mr Gillespie trail mainstream Democrats in states that Hillary Clinton won easily. The Democratic base appears motivated by its hatred for Mr Trump, while the Republican base seems depressed by his lacklustre record. Though Democrats have lost four special congressional elections this year, they outperformed expectations in staunch Republican districts. To rally the base, both candidates have repudiated their past comity, and turned to the same anti-immigrant sentiment that vaulted Mr Trump into the Oval Office.

The rise of rich governors

The yacht primary

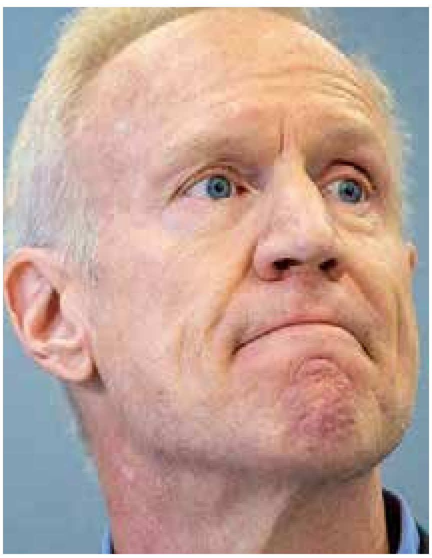
People for Pritzker

CHICAGO

The 0.1% are pushing aside other gubernatorial hopefuls

THOUGH the primary is not until next March, the election to be the next governor of Illinois is already on track to become the most expensive in state political history, overtaking the $280m fight for the governorship of California in 2010 between Jerry Brown and Meg Whitman, a billionaire businesswoman. Election spending in Illinois has increased by 741% this year compared with the same period in the previous election, according to the Illinois Campaign for Political Reform, an NGO. The candidates burned through $15.6m in the past three months, led by J.B. Pritzker, a self-funded billionaire businessman running for the Democrats, who splashed out $11.1m, mostly on television advertising, followed by Bruce Rauner, the self-funding Republican incumbent, who spent $2.6m, even though he has not confirmed yet that he is running for re-election. Mr Rauner and Mr Pritzker have so far raised just under $100m between them. In the sort of twist that seems straight from a plot by Armando Iannucci, the lion's share ($50m) was given by Governor Rauner to a group called Citizens for Rauner. Mr Pritzker gave his campaign a modest $28m.

Though an extreme example, Illinois is no outlier. More and more very wealthy men are running for and winning office as state governors. Tennessee's Bill Haslam, West Virginia's Jim Justice, Florida's Rick Scott, Kentucky's Matt Bevin, Minnesota's Mark Dayton, Nebraska's Peter Ricketts, Pennsylvania's Tom Wolf, Michigan's Rick Snyder, North Dakota's Doug Burgum and Arizona's Doug Ducey all have a net worth measured in the tens, and in some cases hundreds, of millions. The richest is Mr Haslam, a multibillionaire whose father founded Pilot Flying J, a chain of petrol stations and convenience stores. Mr Justice, a coal billionaire, is the richest man in the state he governs.



Citizens for Rauner

America has had wealthy governors before—think of Nelson Rockefeller and Franklin Roosevelt, both of whom governed New York. But their proliferation is new. In part this simply reflects increasing income disparity in the country, says John Geer of Vanderbilt University in Tennessee. Candidates with little money are disadvantaged by having to spend more time raising funds from donors to whom they are then beholden. One of President Donald Trump's most popular campaign lines—that he was too rich to be bought by special interests—works in state elections too. Given the opacity of money in politics, perhaps voters find self-funding campaigns to be refreshingly transparent.

Whatever the reason, the result is that in many states there is now a wealth primary before the electoral primary, says Kent Redfield of the University of Illinois. Big money tends not only to limit the field, but to catapult candidates who have never run for anything before to the front of the race. Florida's Rick Scott would probably not have won his Republican primary against Bill McCollum, a candidate with a proven track record, had he not spent $50m of his own dosh. The same is true of Mr Rauner, another political neophyte, who defeated Pat Quinn, the incumbent Democratic governor, and personally contributed $28m to the $65.3m, or $36 a vote, that his campaign cost.

How good are self-funding governors at governing? Such candidates often promise to run their states like a business, but their success can depend more on whether they have previous political experience. The pragmatic Mr Haslam is well-liked in Tennessee even by Democrats, and boasts an approval rating of around 60%. He was a two-term mayor of Knoxville before he ran for governor.

Michigan's Mr Snyder and Illinois's Mr Rauner, on the other hand, are among the least popular governors. Mr Snyder has not recovered from the public-health crisis caused by lead-contaminated water in Flint. Mr Rauner has been unable to govern effectively with the Democrat-controlled legislature. As a result, the state of Illinois's finances have gone from critical to catastrophic, with unpaid bills amounting to $15bn and the state paying as much as 10% interest on some of its debt.

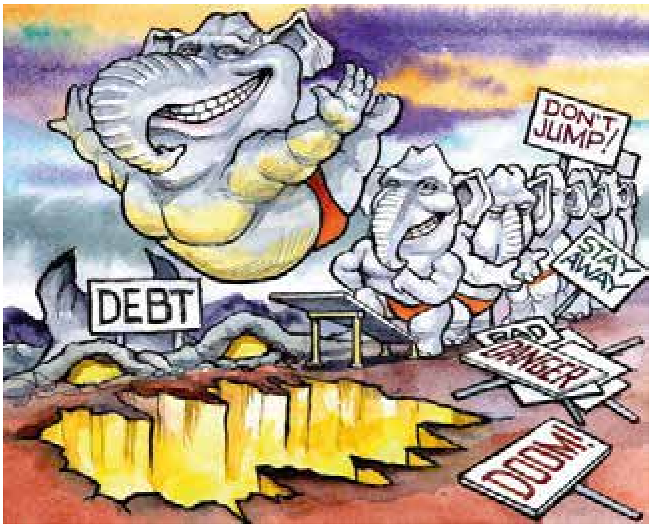
In Florida, Mr Scott has not managed to do much of what he promised, such as expanding the state's economic-development agencies or securing big tax cuts, says Aubrey Jewett of the University of Central Florida. The Republican-controlled legislature still considers him an amateur. He is uncomfortable giving speeches or presiding over public ceremonies. Some newly minted governors have found their first encounters with a hard-nosed political press corps to be a shock. In some cases this makes them less willing to talk, which in turn leads to even less favourable coverage—a lesson Mr Rauner, who is now more talkative, learned the hard way in Illinois. Private wealth will not be enough to win him re-election next year, especially as Mr Pritzker is much richer.

Anchors away

One candidate who flunked the yacht primary in Illinois was Ameya Pawar, an alderman who said on October 12th that he was dropping out of the race for the Democratic nomination because he could not compete with his rich rivals. "We raised $830,000 in ten months, which would be a competitive number in any other race," says Mr Pawar, the 37-year-old son of Indian immigrants, who was re-elected in his ward with 83% of the vote. "But our politics today is about wealthy people funding wealthy candidates." Other aspirants to the governor's mansion should not completely despair, though, for there remains another route to the front of the line. Chris Kennedy, a scion of the country's most famous political dynasty, is a contender in Illinois too. ■

Lexington | The elephant forgets

Republicans have become addicted to borrowing



TO BE shocked by the Republicans' latest enthusiasm for deficit spending, you would have to have taken seriously their former disdain—nay, horror!—for it. Back when Barack Obama was in charge, Mitch McConnell said the deficit was America's "most serious long-term problem". The Republican National Committee (RNC) warned darkly that the Democratic president's profligacy was putting "America's future in the balance". But this was a charade, of course. Republican congressmen have long preached the virtues of prudence in opposition, then let borrowing rip in power. This week Mr McConnell duly corralled support among his fellow Republican senators for a budget bill designed to facilitate a tax cut that, if passed, might add over $2trn to America's $20trn national debt. The RNC has said it considers this an opportunity for hardworking Americans to "get their time and money back". The deficit is "a great talking point when you have an administration that's Democrat-led," Mark Walker, a Republican congressman from North Carolina, conceded to the *New York Times*, "It's a little different now that Republicans have both houses and the administration."

The key to understanding this dismal cycle is that not many Republicans voters do take the public finances, or their party's professed concern for them, seriously. Most want balanced budgets. But they are more concerned about terrorism, security and the economy, all potential reasons to postpone deficit reduction. And that suits Republican politicians well, because the same voters who worry about the national debt also tend to be unwilling to lose access to entitlements—including health care and pensions for seniors—that are primarily responsible for it. Both parties have capitulated to these voters, but the one ostensibly dedicated to fiscal conservatism has been the most profligate. Between 1960 and 2010, according to Nicholas Eberstadt of the American Enterprise Institute, entitlement spending grew 8% faster under Republican presidents than Democrats.

Unlike the Democrats, the Republicans are also beholden to another enemy of fiscal temperance: donors that demand tax cuts in any circumstance. And on the rare occasions, as currently, when Republicans control Congress and the White House, they oblige. The result is a party whose claimed commitment to fiscal restraint is, at least at the national level, incredible. Ronald Reagan promised to balance the budget but, by slashing taxes and splurging on defence, raised the debt from a third of GDP to half. George W. Bush promised to clear the debt but, by the same means, increased it by 22 percentage points. When Donald Trump vowed to eliminate the national debt in eight years, without cutting entitlements, he was respecting his adopted party's tradition. Yet the risk of becoming inured to this farce constitutes a separate danger.

Most obviously, that is because with each profligate cycle, the debt burden has risen. When George W. Bush's tax cuts were introduced—despite opposition from more Republican congressmen than have dared speak against Mr Trump's more spendthrift proposals—it was half its current level. It is also because the Republicans' capacity for delusion on this issue is also mounting, which is leading to wider institutional damage: including to the credibility of the already dysfunctional budget process and to trust in the independent experts whose advice Republicans increasingly decry.

To appreciate this, consider what became of conservatives' rage against Mr Obama's borrowing. The epicentre of the fury was the Tea Party movement, which was founded in 2009 and set the tone for Republicans' opposition to Mr Obama and their own leadership, thereby preparing the way for Mr Trump's insurgency. And to what end? A serious bid to deal with the deficit would involve entitlement reform, moderated defence spending or tax rises; probably all three. This would require bipartisan agreement. By contrast, the demands of the Tea Party's champions, a group of 40-odd congressmen known as the House Freedom Caucus, were trifling and self-defeating. Under Mr Obama, they demanded selective, highly partisan cuts and, in 2013, shut down the federal government after they were unforthcoming. That stunt was estimated to have cost $24bn in lost output.

One reason for this, as became clear when Mr Trump swept Tea Party country, was that its supporters' hostility to public spending was often a proxy for other things—including antipathy to redistribution and to immigration, which are only obliquely related to the deficit. Most of those disgruntled Republicans, as Mr Trump appreciated, also favoured more defence spending and no cuts to Social Security. This is a set of attitudes inimical to the smaller government they claimed to want.

How to make a debt crisis

The Freedom Caucus is now the profligate Mr Trump's biggest fan on the Hill. One of its former members, Mick Mulvaney, is employing its brawling tactics as the president's budget director. He is a proponent of the serially debunked fallacy on which Mr Trump's case for tax cuts rests—that they will drive compensatory growth to cover for the lost tax revenue. He is also a bullying critic of any independent expert who dares question such guff, including the bipartisan Congressional Budget Office. Thus has Republican fiscal delusion graduated from being merely a threat to America's long-term economic stability to a broader assault on what were widely respected institutions.

The tax cuts may yet be foiled. There are still one or two real fiscal conservatives in the Senate, including Bob Corker of Tennessee and Jeff Flake of Arizona, both of whom Mr Trump has riled. Yet that would hardly be a triumph. America badly needs a serious centre-right party, committed to fiscal restraint, prudently and without rancour, not just to cutting taxes. The Republicans were at their best an approximation of that party. They are currently nothing of the kind. ■

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Argentina

Ready for his close-up

BUENOS AIRES

Mauricio Macri faces a test in mid-term elections. If he does well, Argentina's odds of prosperity will improve

IF THE polls are right, Mauricio Macri, who narrowly won Argentina's presidency against the odds two years ago, will strengthen his hand in mid-term elections on October 22nd. A good result in the ballot, in which a third of senate seats and half of those in the lower house of congress are being contested, would help him to complete economic and institutional reforms already begun. If that happens, Argentina may at last begin to recover the prosperity for which it was long ago fabled.

Success for the pragmatic, business-minded Mr Macri may also mark the political demise of Cristina Fernández de Kirchner and the ruinously populist brand of Peronism that she espoused for eight years as president until 2015. Ms Fernández, who succeeded her husband, Néstor Kirchner, as president, is expected to win one of three senate seats in Buenos Aires province, by far the most populous. But if, as pollsters predict, her party fails to win the most votes in what was traditionally a Peronist stronghold, the movement, already rent with division, may look for another leader.

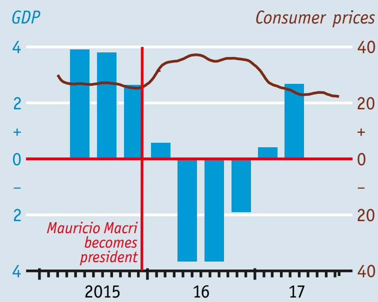
Her fall and Mr Macri's rise are helping to bring about "a realignment of the entire political system", says Sergio Berensztein, a political scientist. Mr Macri looks likely to become the first democratically elected non-Peronist president to finish his term in office. Business people hope that the result on October 22nd may even presage eight years with Mr Macri in charge, to give him time fully to rebuild the economy.

Even so, he will not have a free hand. His Cambiemos (Let's Change) coalition will remain a minority in both legislative chambers, though probably with a larger share of the seats. As a result, he will continue the non-confrontational approach he has taken during his first two years in office. He has tried to persuade moderate trade-union leaders and Peronist politicians, many of whom loathe Ms Fernández, to accept reforms, painful as they will be in the short run. "Gradualism is now [Mr Macri's] religion," says Mr Berensztein.

Not that he has marked time. In the past two years he has dismantled exchange controls, dropped most export taxes, devalued the peso, settled a dispute with foreign bondholders, opened up to foreign investors and—most riskily—started to remove Ms Fernández's massive subsidies of electricity, gas, water and transport. "Only 10% of those costs were covered" by user charges, says Marcos Peña, chief of the cabinet of ministers . "Now we're covering 50%."

Here comes the sun

Argentina, % change on a year earlier



Sources: State Street; Thomson Reuters

Thanks to such measures, Mr Macri's first year in office was painful. The economy shrank, wages fell in real terms, inflation shot up to almost 40% and the unemployment rate (hard to measure because a third of workers are off the books) rose above 9% (see chart). This year most signs have pointed the right way, though wages and jobs are recovering slowly and foreign investors are still biding their time. Inflation is down to 22% and falling; growth is back up to nearly 3% and is set to increase next year.

If Cambiemos does well in the poll, the pace of reform should quicken. Transport fares and tariffs for other services are likely to rise again. That makes it unlikely that inflation will fall this year to 17%, the target set by the central bank. But subsidy cuts will squeeze the budget deficit, which should help lower inflation in the longer run. The government hopes to slash inflation from its average of more than 20% of GDP under the Kirchners to 8-12% by the end of next year and to 5-8% before the next presidential election, in late 2019.

Ideally, Mr Macri would also like to cut labour costs, loosen labour laws, close failing state companies and reduce the unproductive public sector that swelled mightily under the Kirchners. He would like, too, to reform pensions, which Ms Fernández rashly bestowed in full on more than 3m people outside the formal economy who ▸▸

had never made contributions. And he is keen to make the courts more independent. Yet he may still be wary of embarking on such controversial ventures.

The slide in Ms Fernández's reputation with the middle class, and infighting in the Peronist movement, which has always contained a wide range of ideology, are for the moment Mr Macri's greatest political assets. Accusations of corruption and criminal malfeasance against Ms Fernández and her closest associates, several of whom could face lengthy jail sentences, continue to mount. A judge reopened an investigation into allegations that her government had tried to cover up Iran's involvement in the bombing of a Jewish community centre in 1994. Three years ago the chief investigator into the case was found dead with a bullet wound in the head hours before he was due to explain his findings to parliament. His death has never been explained.

All the same, Ms Fernández has a rock-solid base among the Peronist poor, especially in the southern *barrios* of Buenos Aires, who still revere her for providing them with jobs, welfare and cheap housing and who tend to dismiss the allegations of corruption against her as politically motivated. *Kirchneristas* routinely castigate Mr Macri as the spoilt son of a rich man; his father, an Italian immigrant, made a fortune as a government contractor. Ms Fernández, now 64, remains a determined and resourceful fighter.

Mr Macri could yet fall down in several ways, says Alejandro Catterberg, who heads Poliarquía Consultores, a polling firm. A global or Latin American recession could knock his economic plans askew. Infighting could undermine his coalition. Elisa Carrió, a maverick anti-corruption campaigner and Macri ally with a seat in the lower house of congress, will be quick to flag up signs of skulduggery by any of the president's less angelic business friends. Mr Macri has been on occasion maladroit. His initial response to the disappearance two months ago of Santiago Maldonado, a young activist who was campaigning for a group of disaffected Mapuche Indians and whose body may have been found on October 17th, was seen by many Argentines as frostily insensitive; Mr Maldonado was reportedly last seen alive in the company of gendarmes.

A bigger risk, though, is that Mr Macri's gradualism will concede too much to Peronism, leaving the state unreformed, its finances shaky and inflation still much too high. Overall, however, the omens have rarely been so promising. "Now is the best moment in the past 20 years for Argentina to change direction," says Rosendo Fraga, a veteran pundit. That view is widely shared outside Peronist circles. But few who have witnessed Argentina's roller-coaster history are yet ready to bet on it. ■

Venezuela

Divide and rule

CARACAS

After another flawed election, the opposition is demoralised

"THIS only happens in Venezuela," boasted Nicolás Maduro as the electoral commission declared the results of a long-delayed regional election on October 15th. For once, the country's president (pictured, with moustache) may have been right. In the midst of an economic calamity largely of his own making, with opinion polls showing support among Venezuelans for his government at less than 30%, his United Socialist Party (PSUV) won 18 out of 23 governorships and more than half the national vote.

"Neither Venezuelans nor the world will swallow this fiction," declared Gerardo Blyde, the campaign director of the opposition Democratic Unity coalition (MUD). The electoral commission, which takes its orders from Mr Maduro's regime, has published fiction before, most recently in July, when it claimed that more than 8m people voted to select members of a "constituent assembly", a sham parliament designed to bypass the opposition-controlled national assembly. The commission exaggerated the turnout by at least 1m people.

The MUD, a coalition of parties formed in 2008 to oppose *chavismo*, the movement founded by Mr Maduro's late predecessor, Hugo Chávez, boycotted that vote. The fraudulent exercise provoked widespread international condemnation and the imposition of sanctions by the United States on Mr Maduro and other officials.

Few people outside the regime think that this month's gubernatorial vote was fair. Outright rigging may have contributed to the unexpected result, but it is unclear how much of that there was. Other factors also played a part. They include divisions within the MUD and exhaustion among ordinary people after months of protests this year in which at least 125 people died. The government also capitalised on its superior get-out-the-vote operation. The outcome has put a spring in Mr Maduro's step and leaves the opposition feeling directionless and demoralised.

The MUD was uncertain whether to take part in the election, which should have been held last year. Smaller parties argued against, saying the vote would legitimise Mr Maduro's dictatorial rule. They were overruled by the majority, which reckoned that they would either win a lot of governorships or have further grounds for attacking the regime as undemocratic.

But the opposition won neither a real victory nor a clear-cut moral one. It had a hard time rallying its supporters. "There was a low enthusiasm inside the opposition grass-roots for these elections," says Félix Seijas, a statistician at the Central University of Venezuela. Depressed after four months of fruitless protest, they "never saw the link between the regional elections and the bigger game".

The regime did all it could to keep them home. It shifted the locations of polling stations in anti-government strongholds days before the election. It sowed confusion by leaving on the ballots the names of some opposition candidates who had lost in primary contests. At the same time, the government bullied people to back the PSUV. It sent text messages to state workers telling them where to vote and for whom. In a least one state, Vargas, subsidised food parcels were placed outside a polling station on election day. At a time of food shortages and inflation of 700%, these would have been hard to resist, especially for poorer voters, who are more likely to support the government.

Turnout was just over 61%; PSUV candidates got 54% of the votes. To achieve that result without ballot stuffing, nearly all of the government's supporters would have had to vote, says Mr Seijas. That, he thinks, is "improbable".

The MUD is rattled. While Mr Maduro celebrated Venezuela's "record-breaking" democracy, confusion reigned at opposition headquarters in Caracas. Leaders at first responded to the results with stunned silence, then conferred for more than an hour. They emerged to say that the MUD would not recognise the results; they did not make specific allegations of fraud. Their wobbly reaction is "dumbfounding", says David Smilde of the Washington Of-

fice on Latin America, a think-tank. "How is it possible they didn't consider various scenarios and have a plan?"

Splits within the MUD have widened. Successful candidates, including the governors-elect of Táchira and oil-producing Zulia, regions on the border with Colombia, recognised their own results, though they refused to be sworn in before the constituent assembly. So did Henri Falcón, the governor of Lara, who lost his seat. "We lost and we have to accept it," he said.

Encouraged by the regional vote, Mr Maduro may go ahead with a presidential election, which is due by the end of 2018. Some analysts think the *chavistas* will find a more popular candidate to replace him, lessening the need for electoral thievery. Hector Rodríguez, a youthful confidant of the president who won the governorship of Miranda state, is one possibility.

Whoever it is, the *chavista* candidate may run unopposed. The MUD has suggested that it will not participate in another election unless the electoral commission is made independent. It would have trouble choosing a standard-bearer. The most popular opposition leader, Leopoldo López, is under house arrest after spending more than three years in prison. Henrique Capriles, the former governor of Miranda, who almost defeated Mr Maduro in the presidential election of 2013, has been charged with obscure budget-related misdemeanours and barred from seeking office for 15 years.

Many Venezuelans are fed up with politics. Emigration by the middle class has soared. Colombia says that monthly net migration from Venezuela more than doubled to 56,000 from June to August. Sabine Rodríguez, a medical student, queued for hours to vote in the election but with little sense that it had much point. "I think this country is lost," she said. ■

Bello | The virtue of equatorial Leninism

Ecuador shows that presidents from populist parties do not always mess things up

IN FEBRUARY Rafael Correa, Ecuador's then-president, compared the country's run-off election to the battle of Stalingrad. "We are going to fight the worldwide right wing," he said. His man, Lenín Moreno, duly scored a narrow victory against Guillermo Lasso, a conservative banker. Yet with Mr Moreno in office for less than five months, Mr Correa has now turned his rhetorical fire against his former ally, calling him "a hypocrite" and a "compulsive liar" who has achieved "what the opposition didn't manage in ten years, to discredit our revolution".

Mr Correa is alarmed because, to the surprise of many, Mr Moreno has turned out to be his own man with his own ideas. And that has implications beyond Ecuador, a country of 17m people that was notorious for political instability before Mr Correa took charge in 2007 as part of a wave of populist leftist leaders in South America. Benefiting from an oil windfall, he ruled as a paternalist autocrat. In what he called a "citizens' revolution", he invested in schools, hospitals and motorways. He was intolerant of criticism, persecuting opponents and imposing restrictions on the media.

When the oil price fell in 2014, the economy weakened and opposition to Mr Correa grew. He pushed through a constitutional change abolishing presidential term limits, but only from 2021, opting to step back rather than risk defeat. Trusting in his grip on the ruling Alianza PAIS (AP) party and in Jorge Glas, a close collaborator who was Mr Moreno's running-mate, Mr Correa moved to Belgium, his wife's country.

In Mr Moreno, his vice-president in 2007-13, Mr Correa chose an electorally effective successor—but not a pliant placeholder. "Correa knew that on many things I disagreed with him," Mr Moreno

told the BBC recently. By acting on those differences, Mr Moreno, who has used a wheelchair since he was shot in an attempted robbery in 1998, has swiftly established his own leadership.

Where Mr Correa was a tub-thumping polariser, Mr Moreno is a soft-spoken consensus-maker. He has built bridges with the opposition, businessmen and civic groups. He has turned Ecuadoreans' anger over corruption to his political advantage. He stripped Mr Glas of most of his powers and authorised prosecutors to proceed against him. This month Mr Glas was detained on suspicion of taking bribes from Odebrecht, a Brazilian construction firm (which he denies). In all, two dozen officials who had served in Mr Correa's governments face corruption charges.

All this has made Mr Moreno wildly popular. His approval rating is 77%, according to Cedatos, a pollster. That, in turn, has allowed him to start to wrest control of the AP party, which holds a majority in congress. Mr Moreno is seeking to press his advantage with a referendum on constitutional changes to be held early next year. One would restrict presidents to two terms, thus barring Mr Correa from running again. Another would replace the seven members of a body set up by Mr Correa's constitution, which controls appointments to the judiciary, the electoral authority and the prosecutor's office. Eventually, they would be elected by popular vote. Much rides on the result.

Contrary to Mr Correa's claims, Mr Moreno is not leading a counter-revolution or a right-wing government. He has kept several left-wingers and Correa allies in his cabinet. He has moved cautiously on the economy and in foreign policy: Ecuador remains, nominally at least, a member of ALBA, an alliance led by Venezuela and Cuba; Julian Assange, the fugitive founder of WikiLeaks, still lives in the Ecuadorean embassy in London. Things may change after the referendum. Mr Moreno faces a big fiscal deficit, low growth and the dollarised economy's lack of competitiveness. To deal with them, he may need different policies and allies.

Ecuador shows that transitions from populist rule can potentially be constructive and consensual. In that, it is a counterpoint to Venezuela, where Nicolás Maduro took Hugo Chávez's populist *caudillo* socialism and turned it into dictatorship. Perhaps nobody will be watching Ecuador more closely than Evo Morales, Bolivia's president since 2006. Mr Morales is an autocratic socialist who both leads and is constrained by powerful social movements. His rule has been more similar to Mr Correa's than to that of Venezuela's *chavistas*. In 2016 he lost a referendum that would have abolished term limits. Now his supporters are seeking to achieve the same goal through the courts.

The longer populists remain in power, the more likely they are to mess up. But as Mr Moreno shows, a country can pull back from the brink.

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After the caliphate

Dashed Kurdish dreams

KIRKUK AND ERBIL

With Islamic State nearly defeated, Iraq's army has turned on the Kurds

WHEN a leader loses half his realm and his government's main source of revenue and shatters his people's dreams of independence, all in a couple of days, an apology might seem in order. But Masoud Barzani, the president of Iraq's Kurdistan region, is not offering one. In the face of a lightning Iraqi advance, Kurdish forces retreated this week from territory they had occupied since the fall of Saddam Hussein in 2003. Mr Barzani blamed "traitors" and said he would fight another day.

The sudden collapse of Kurdish Peshmerga fighters, and with them the Kurds' cherished dream of statehood, contrasts awkwardly with the inflated promises Mr Barzani made before the rout. Last month he insisted on staging a referendum on Kurdish independence, not just within the Kurdistan region's original borders, but also in areas his forces had captured in the war against the so-called Islamic State (IS) since 2014. These included the oil-rich city of Kirkuk, which would have been the cash cow of a Kurdish state.

Western allies, neighbours and many fellow Kurds had begged him to desist. Mr Barzani upped his brinkmanship. At the funeral of Jalal Talabani, Iraq's former president and Mr Barzani's erstwhile Kurdish rival, the following week, he draped Mr Talabani's coffin in a Kurdish flag, played the Kurdish anthem and derisively seated Iraqi dignitaries from Baghdad towards the back. When Turkey, Iran and Iraq all sent their tanks to his borders to press him to back down, he dismissed the moves as posturing. What was won in blood would be defended in blood, he averred. Even if hundreds of thousands died, added his officials, the Kurdish state would be born.

It was puff. After midnight on October 16th Iraqi government forces began marching on Kirkuk. By breakfast they had taken the city's airport, its main military base and its largest oilfields. They lunched in the governor's office in the heart of the city, together with the newly appointed interim governor, an Arab. On the second day they ploughed past more Kurdish trenches and wrested back some 36,000 sq km (14,000 sq miles). By October 18th Iraqi forces controlled most of the Kurds' southern flank, from the town of Rabia on the Syrian border, via the strategic heights of Sinjar and Mosul's dam across the Tigris to Khanaqin on Iran's border (see map).

Casualties were remarkably light. A few Kurds took up arms in Kirkuk, vainly shooting their rifles. But most Peshmerga fled for the hills, together with some 60,000 civilians, past the unseeing eyes of a 21-metre-high statue of a Kurdish fighter that was recently erected on Kirkuk's northern edge. With them went the prospects of statehood. The Kurdish region was already broke. Without Kirkuk's 300,000 barrels of oil per day (providing roughly half of the Kurdish government's revenues), it cannot hope to be viable. Militarily, the Kurds look a shambles. And politically their institutions are hollow. When his term in office expired in 2015, Mr Barzani suspended parliament and ruled like an autocrat. In the wake of the rout, Mr Barzani's men put elections on hold, indefinitely.

With no democratic means of replacing Mr Barzani, the Kurdish enclave is at risk of dissolving once more into competing fiefs, as it did during a civil war in the 1990s. Rival clan leaders accuse each other of betrayal. The Barzanis "fought for oil; we fought for soil," says Lahur Talabani, the head of one of the enclave's two intelligence agencies and a contender to succeed his uncle as leader of the eastern fief. The Talabanis committed "a great and historic treason against Kurdistan", retorts Nechirvan Barzani, Masoud Barzani's nephew and the Kurdish prime minister. A plague on both your houses, say many Kurds.

Whereas the Kurdish government is in tatters, Iraq's Shia-led one has revived. In quick succession it has crushed one group of separatists (the barbaric IS) and hobbled another (the Kurds). Its army is battle-hardened. The northern oilfields it now controls will allow it to boost production and raise more cash. Thanks to the military victories, Haider al-Abadi, the Iraqi prime minister, looks well-placed to win a second term in 2018. His American backers ►►

hope that he will build a pluralist, non-sectarian Iraq.

Certainly, Iraq's Shia leaders have refrained from triumphalist bombast. They talk of inclusion, not liberation, and say they will halt their advance at the borders of the original Kurdish region. They are proposing a joint administration in the territories from which the Kurds have been ousted. In Kirkuk, they will leave the local police, led by a Kurd, in charge. There have been few reports of revenge killings or looting. Turkomans in Kirkuk even rallied to protect Kurdish homes. Most Kurds who fled have returned home, says the UN.

Yet the ethnic goodwill could fray again. To Kurdish chagrin, some Arabs and Turkomans cheered the arrival of Iraqi tanks as they filed past Kirkuk's ancient citadel. Footage of government troops pinning Shia flags to government buildings in Khanaqin makes them shiver. And though broken for now, the Kurds might yet rally, should Baghdad's authorities seek to impose direct rule on the reduced Kurdish enclave. Kurds have governed themselves since 1991. Two generations have grown up without bowing to Baghdad or even bothering to learn Arabic.

Mr Abadi's armed Shia rivals also hope to profit from victory. The Shia Popular Mobilisation, or *hashd*, feels emboldened. Two of its leaders stood alongside army generals as they raised Iraq's flag over Kirkuk. Some urge Mr Abadi to demobilise them before he loses control, but Mr Abadi shies away from confrontation. "After the election," suggests a minister.

Iran also looks stronger. Qassem Suleimani, the head of the Quds Force, the foreign operations arm of Iran's Islamic Revolutionary Guards Corps, shuttled between Sulaymaniyah and Baghdad mediating Kurdish capitulation and advising Iraqi commanders on their assault. Remarkably, given that it arms and trains both Iraq's army and Kurdish forces, America kept silent. For all his grandiose promises to roll back Iran, Donald Trump looked like a bystander. In Kirkuk, Iran called the shots. ■

Kurds after the caliphate

To the victors, the toils

CAIRO AND BEIRUT

Syria's Kurds led the advance on Raqqa, but may now fracture

THE bodies of the dead would hang for days from the railings in the main square of Raqqa. It was a macabre reminder to residents that Islamic State (IS) had declared the capital of its so-called caliphate in the Syrian city. Signs around the victims' necks revealed their crimes. Dozens were executed for spying; others for smoking or listening to music.

This week that reign of terror ended. On October 17th, after four months of heavy fighting, the Syrian Democratic Forces (SDF), an army of Kurds and Arabs, took the square. Tying yellow and green flags to the railings where the bodies once hung, they stomped and shouted to celebrate.

The capture of Raqqa highlights how over the past few years the SDF has become the most effective American-backed force in the fight against IS in Syria. Its parent group, the left-wing Democratic Union Party (PYD), now controls a swathe of territory running almost the entire width of northern Syria that it calls Rojava. The PYD declared it autonomous in 2016. Under the Assad regime, Kurds were forbidden to teach in their own language, and hundreds of thousands were stateless. Many saw Rojava as a step towards reversing decades of brutal discrimination.

Yet the region's autocratic rulers seem intent on replacing one form of oppression with another. Over the past few years Kurdish militiamen have razed or evacuated dozens of Arab villages across northern Syria. They have also conscripted hundreds of people into the SDF. Young Arab men are "noticeably underrepresented" at camps for internally displaced persons, says the UN, because they fear being drafted or detained. The PYD does not tolerate dissent from fellow Kurds, either. In May its police, the *Asayish*, raided the offices of Kurdish opposition parties in Qamishli, the region's de facto capital, and arrested about a dozen activists. As many as half a million Kurds have fled to neighbouring countries rather than live under the PYD's rule, activists say.

It is also intent on moulding young minds. Schools in Raqqa, most of whose inhabitants are Arab, are still using official Syrian textbooks—though with photos of the ruling Assad family ripped out. However, some local Kurdish officials have suggested a new curriculum much like the one the PYD has introduced in other areas under its control. The new one is very political, promotes the PYD's left-wing view of the world, and is not accredited by any official standards authority. Arab teachers in Hasaka, in the north-east of Syria, protested in August against the switch.

But apart from sporadic protests, there has been no serious internal opposition to the PYD. The *Asayish* are ruthlessly effective, and the population is exhausted by war. In the long run, though, the PYD's oppressive rule will fuel the same Sunni Arab alienation that gave rise to the Islamic State. "The Kurds didn't read their history well," says an activist. "Their acts will just allow other extremists to come back."

It may also splinter the SDF. Thousands of Arab rebels have already defected to other groups. Because of its American backing, the SDF has enjoyed a degree of immunity from pro-regime forces and Russian warplanes. But with Raqqa liberated, America will probably pull back its special forces. Even without further desertions, the SDF's 50,000 troops are stretched too thin to defend all of its territory, some of which is also important for the regime since the east holds much of Syria's oil reserves. Rather than fight the regime, some SDF commanders are open to negotiating

The wreckage of Raqqa

with it. The SDF has accepted pro-regime militias into its ranks and has been arresting vocal anti-Assad activists.

It will be harder to cut a deal with Turkey. The PYD is affiliated with the Kurdistan Workers' Party, which has fought a decades-long insurgency against the Turkish government. Recep Tayyip Erdogan, Turkey's president, calls the PYD a terrorist organisation, and his warplanes have already bombed camps belonging to the PYD's armed wing in both Syria and Iraq. In October he deployed troops to Idlib province, ostensibly to fight jihadist groups. The real target may be the Kurds.

Just as Iraq's Kurds may fail to realise their dreams of an independent state (see previous article), so their Syrian brethren could find that their own autonomy is even shorter-lived. ■

Qatar and its neighbours

Economic Gulf

ABU DHABI AND DUBAI

The boycott of Qatar is hurting its enforcers

THE largest insurer in the Gulf should have taken out a policy on itself. Last year Qatar Insurance collected about 110m rials ($30m) in premiums from its Abu Dhabi office. But in September it announced that, because of a diplomatic dispute, the United Arab Emirates (UAE) would not renew its business licence, forcing it to close its branch in the Emirati capital. Its stock price has fallen by 30% since the beginning of the summer.

It has been more than four months since Saudi Arabia, the UAE, Bahrain and Egypt closed their borders and cut diplomatic ties with Qatar. The so-called quartet wants the little gas-rich emirate to stop supporting Islamist groups, including the Muslim Brotherhood, and to shut down Al Jazeera, the Arab world's most popular broadcaster, which Qatar sponsors. The dispute has become personal, with diplomats hurling insults in Cairo last month. Officials in Doha, the Qatari capital, expect it will drag on for years.

Qatar can weather it, but at a steep price. Its government injected some $39bn into the Qatari economy from its reserves of $340bn, reckons Moody's, a ratings agency. Last year other Gulf countries accounted for almost half of tourists to Qatar. Arrivals from them have fallen by more than 70% since June. Hotel-occupancy rates were about 50% this summer, some ten percentage points less than a year ago. Trade has slumped.

But the boycott is also hurting others across the Gulf, including some of the countries that imposed it. Particularly hard-hit is Dubai, a services hub for the region. Qatari firms that do business in the UAE all use local partners, and many are feeling the pain. One public-relations executive says her firm is discussing layoffs after losing a Qatari contract. Estate agents say the crisis will also hit Dubai's property market: Qataris bought about $500m-worth of property there last year alone.

South of Dubai's glittering skyscrapers lies Jebel Ali, the busiest port in the region. It handles more than a third of cargoes in the Gulf and, before the boycott, 85% of shipborne cargo for Qatar. Neighbours have long wanted to grab its market share. In September Qatar opened a new $7.4bn port, years in the making, that allows shippers to bypass the UAE altogether. Saudi Arabia is building a port on its west coast, near Jeddah, just south of the Suez canal. The blockade will accelerate this shift from Dubai. Qatar Navigation, a shipping conglomerate, is moving its regional hub from the UAE to Oman, which has not joined the boycott. Its trade with Qatar grew by 2,000% this summer. Traffic at its port, Salalah, is up 29%.

The blockade is also weakening the six-country Gulf Co-operation Council (GCC), of which Qatar, Saudi Arabia and the UAE are members. Although it was never much of a political union, it had at least allowed goods and people to move freely across borders. But the boycott has upended that.

It is also, ironically, rewarding the GCC's biggest rival. Trade between Qatar and Iran was $98m last year. Iranian exports to Qatar grew by about 60% this summer. With Saudi airspace closed, scores of Qatar Airways flights now arc over Iran each day. The airline pays a hefty overflight fee for each one. "If the crisis goes on for years, we're talking about hundreds of millions of dollars in new revenue for Tehran," says an economist in Dubai. ■

Doh! The embargo isn't working

Tanzania's descent into autocracy

The dinosaur of Dodoma

NAIROBI

John Magufuli is bulldozing the opposition and wrecking the economy

CRITICALLY ill in a hospital in Nairobi, Tundu Lissu, the chief whip of Tanzania's main opposition party, Chadema, is a lesson to those who would criticise the Tanzanian president, John Magufuli (pictured). On September 7th Mr Lissu was gunned down in broad daylight near his house in the sleepy administrative capital, Dodoma, after returning from a session in parliament. The attempted assassination came just two weeks after he was arrested—for the sixth time—for such things as insulting the president. It is not clear who was behind the attack. A month later, the government has yet to make any arrests. Mr Lissu had previously complained about being followed, and said he worried he might be killed. "This cowardly attack on one of Tanzania's most fearless and prominent politicians raises concerns about the safety of all dissident voices in the country, at a time when space for dissent is quickly shrinking," said Amnesty International, a human-rights group.

Tanzania, a country of 55m people on the East African coast, is rarely seen as one of Africa's problem cases. Unlike Congo, Uganda or Burundi, it has never had a civil war or a military dictatorship. And although its elections have never once ousted the party (and its predecessor) that has governed Tanzania since independence in 1962, nor are they especially bloody affairs. Yet over the past two years, since the election of John Magufuli, Tanzania's descent into autocracy has been stunning. It is a lesson in how when the presidency is strong and other institutions are weak, a single bad leader can set a country back many years.

The attack on Mr Lissu occurred in an atmosphere of intensifying political repression. Opposition rallies have been banned for almost a year on spurious security grounds. Dozens of people have been arrested for insulting the president on internet chat groups under a cybercrimes law. Even musicians have not escaped the rap. In March Emmanuel Elibariki, a hip-hop artist, released a song in which he asked "is there still freedom of expression in the country?" The answer was no: he was swiftly arrested and his song was banned from the airwaves.

Mr Lissu's is not the only case where words have been met with violence. In August the offices of IMMMA, a law firm that has handled lawsuits against the government, was bombed. Several opposition figures have disappeared in the past year, including the personal assistant of Freeman Mbowe, the leader of Chadema. On the island of Zanzibar members of the Civic United Front, a separatist-leaning party that won elections in 2015 that were later annulled, have been targeted by pro-government militias known as "zombies".

Mr Magufuli, who is nicknamed "the bulldozer", impressed many when he came into office by cracking down on corruption. But his economic ideas have a whiff of the "African socialism" of Julius Nyerere, the country's founding leader, who declared a one-party state, nationalised factories and forced peasants at gunpoint onto collective farms. Donors had to step in to prevent mass starvation.

Mr Magufuli is not as ruinously radical. But he has caused traffic to collapse at Dar es Salaam, Tanzania's main port, which serves six countries, by imposing a huge tax on goods that pass through it. Ships have simply gone to Kenya instead.

More startling still is Tanzania's dispute with Acacia, a British gold-mining firm. The government claims that its two mines have been producing more than 10 times as much gold as they declared (which would make them the two largest gold mines in the world, by far). Preposterously, it says the firm owes taxes of $190bn, or roughly four times Tanzania's annual GDP. Acacia has been forced to halt exports and has cut back production.

Other firms worry they may be next. Petra Diamonds closed its mine in Tanzania in September after the government seized a parcel of diamonds it was exporting. And on October 9th Aliko Dangote, a Nigerian cement billionaire, accused Mr Magufuli of scaring investors away. Few Tanzanian businessmen are as critical publicly, but in private they are damning. "We are shit scared. If this can happen to Acacia, it can happen to anyone," says one.

Foreign firms can at least turn to foreign judges for protection. In August a Bombardier jet bought for Air Tanzania was seized by a Canadian court on behalf of Stirling Civil Engineering. The company had won an international arbitration in 2010 after not being paid for building roads. This may not be the last such judgment. Symbion Power, an energy producer, is claiming $561m from Tanzania's state-owned electricity utility after it was not paid for electricity for more than a year.

What will happen now? There are few constraints on Mr Magufuli. With the opposition neutered, the ruling party remains mostly unchallenged. Mr Magufuli's allies in parliament have even suggested extending the presidential term from five years to seven. Tanzania suffered wretchedly under one bullheaded socialist. It cannot afford another. ■

Save the cycads!

The loneliest plant on Earth

DURBAN

Poachers threaten South Africa's rare flora

WOOD'S CYCAD is a striking plant, tall with a shaggy green crown and bright orange cones. But despite its good looks, it will never find a mate. "The loneliest plant in the world, right here," a guide tells a golf cart full of visitors touring the Durban Botanic Gardens. Found in a Zululand forest in 1895, it is the only cycad of its kind, and a male. Without a female it will never reproduce sexually, though offshoots have been used to make clones of it. The sense of its isolation is magnified by the security cameras trained on the plant to thwart thieves.

Cycads, which resemble spiky palm trees and bear pineapple-shaped seed cones, trace their lineage to the time of the dinosaurs. But some species might not be around much longer. They are the world's most threatened plant group, according to the International Union for the Conservation of Nature.

South Africa's cycads, most of which are found nowhere else in the world, are especially threatened, despite laws regulating the trade in them. Paradoxically, it is those who love them most who pose the biggest danger—collectors who want exotic varieties for their private gardens. Slow-growing adult specimens, some hundreds of years old, sell for tens of thousands of dollars. "People see them as a status symbol," says Phakamani Xaba, the senior horticulturalist at the South African National Biodiversity Institute.

Unlike other endangered species such as rhinos, the plight of the cycad has drawn relatively little attention. But of South Africa's 38 cycad species, 25 are threatened with extinction. Two of the world's cycad species have been wiped out in the wild since 2003; both were from South Africa. With wild stocks dwindling, poachers have turned to raiding protected gardens and reserves. Thieves broke into the Kirstenbosch National Botanical Garden in Cape Town twice within a month in 2014; two dozen rare cycads were ripped from the ground.

To prevent theft, plants have been fitted with microchips; but wily poachers use X-ray scanners to find them and hack them out. Rare cycads are now sprayed with microdot paint that leaves invisible, individualised markers of a plant's provenance. Researchers from the University of Kent are testing radio frequency identification tags on cycads that could relay alerts and GPS co-ordinates.

Part of the difficulty in stopping the illegal trade is telling which cycad is which. Stripped of leaves for transport, it is difficult to distinguish the trunk of an illicitly harvested endangered species from one that is legal to sell. A DNA "barcoding" database, using gene sequences, has helped with identification. Analysis of isotopes has been tested as a way to tell if a plant was harvested from the wild. A cycad-identification app, with close-up photos of leaf and stem types, was developed to help bewildered police tell their *Encephalartos ghellinckii* from their *Encephalartos laevifolius*.

Mr Xaba says it is probably too late to save some cycad species. He laments that collectors are almost never caught. For extreme collectors, rarity only makes a cycad more desirable. "In the end, it's all about the ego," he says.

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Spain's constitutional crisis

Grappling on the brink

MADRID

The government prepares to intervene in Catalonia

WITH its mastery of social media and identity politics, the Catalan independence movement is very 21st-century. But the latest chapter in its struggle with the Spanish government has featured an old-fashioned tool: an exchange of letters, delivered by fax. In these Carles Puigdemont, the head of the Generalitat, Catalonia's government, twice this week refused to clarify or revoke the ambiguous proclamation of independence that he had issued and immediately "suspended" in a speech to his parliament on October 10th. In response, the Spanish government said it will go ahead and seek extraordinary powers to impose constitutional rule in Catalonia.

Spain is thus entering its worst constitutional crisis since the 1930s. It is the culmination of years of rising discontent in Catalonia, one of the country's richest regions, which has 7.5m people and its own language and culture. Although Catalonia enjoys broad self-government, many Catalans want it to have more money, more powers, and to be recognised as a nation. Their demands grew louder after Spain's economic slump of 2008-12. Since 2015 the region's ruling coalition has been bent on secession, a possibility not recognised by the Spanish constitution of 1978.

Mr Rajoy will now ask the Senate to approve invoking the constitution's Article 155. Never before used, it empowers the government to take "all measures necessary to compel" a region to obey the constitution. Its vagueness gives Mr Rajoy broad discretion. He is likely to start by tightening control over Catalan finances and appointing a new regional police chief. "We would have to organise a parallel government," says Alfonso Dastis, the foreign minister.

Having erred in deploying riot police to try to prevent an illegal independence referendum called by the Generalitat on October 1st, the government is proceeding more gingerly. The violence was limited, but won sympathy abroad for the Catalan cause. "We wouldn't want those pictures to be repeated," says Mr Dastis. The Generalitat says 2.3m people (around 43% of the electorate) voted, 90% of them in favour. Those figures are not verifiable, but Mr Puigdemont wields them as a mandate for independence. In his letters to Mr Rajoy, he says he wants "dialogue". But what he proposes to talk about is that "the majority of the Catalan people...want to take the road of an independent state."

Since October 1st Mr Rajoy has moved more adeptly. He persuaded Pedro Sánchez, the leader of the opposition Socialists, to support the use of Article 155 in return for Mr Rajoy's backing for a congressional committee on constitutional reform, which will ultimately try to reach a settlement with Catalonia. Since Mr Rajoy's People's Party holds most of the seats in the Senate and is supported by Ciudadanos, a centre-right group, Article 155 will command a big majority.

For his part, Mr Puigdemont faces conflicting pressures. The drive for independence is hurting the economy: almost 700 companies have moved their legal domicile out of Catalonia in the past fortnight, while tourist bookings in Barcelona have dipped. Moderates want Mr Puigdemont to call a fresh regional election; radicals want a formal declaration of independence backed by a campaign of civil disobedience. All three may happen.

The radicals got a boost on October 16th when a judge of the National Court in Madrid ordered the pre-trial detention of the leaders of two secessionist social movements. They are being investigated for sedition for directing a demonstration in Barcelona in September in which protesters destroyed three police vehicles.

Help, we're being repressed

"Sadly, we have political prisoners again in Spain," Mr Puigdemont tweeted. Tens of thousands demonstrated in Barcelona against the arrests. The judiciary is independent, but secessionists argue that "the Spanish state" is ganging up on them. "It's not so simple," says Jorge Galindo, a political consultant. "Prosecutors and some judges are taking a harsher position than the government."

The arrests mean that the government is likely to slow the application of Article 155, hoping protests die down. The road ahead is fraught with danger, especially for Catalonia. Despite Mr Puigdemont's claim, there is no evidence that secession commands a majority. "Today, the main problem is not the divide between Catalonia and Spain, but the fracture among Catalans themselves," Màrius Carol, the editor of *La Vanguardia*, a Barcelona newspaper, wrote this week. Judicial overreach in Madrid will not conceal that for long. ■

Maltese corruption

Murder in paradise

VALLETTA

A car bomb kills a crusading journalist

TWO or three hundred people gathered outside the courthouse in Valletta on October 17th to protest at the assassination the previous day of Daphne Caruana Galizia, Malta's most intrepid and controversial journalist. It was a modest turnout for what Adrian Delia, leader of the opposition Nationalist Party (PN), called "the darkest moment in the country's political history". After a speech by a friend of the dead woman, the crowd sang the national anthem and dispersed, some weeping.

The last words Ms Caruana Galizia wrote on the blog where she routinely excoriated Malta's elite for its corruption, negligence and incompetence were: "There are crooks everywhere you look now. The situation is desperate." After posting them, she drove away from her home in the village of Bidnija and was killed by an explosion so powerful it threw her rented car 80 metres into a field. Her son ran to the scene, where the car horn was still blaring. "I looked down and there were my mother's body parts all around me," he wrote on Facebook.

Malta, the EU's smallest member, is fast becoming one of its most troubled. The Valletta courthouse is surrounded by signs of breakneck economic growth: the swanky façades of luxury boutiques and hotels; building sites bustling with immigrant construction workers, unencumbered by safety harnesses or helmets. For the past three years, under Joseph Muscat's Maltese Labour Party (PL) government, GDP has soared at an annual average rate of almost 7%, against a background of unremitting corruption allegations.

Most emanated from Ms Caruana Galizia's blog, Running Commentary, launched in 2008 when she felt her twice-weekly columns in a local daily did not give her the space or freedom she needed. With the moral authority of the once-mighty Maltese Catholic church fast evaporating, says Manuel Delia, a fellow-blogger and former PN government official, Ms Caruana Galizia acquired an influence few journalists achieve: "Daphne was the last ethical voice left. She was the only person speaking about right and wrong."

That made her uniquely vulnerable. Even before starting her blog, her home had been the target of an arson attack. But except at election time, it had not been under police guard since 2010.

The leaking in 2016 of the so-called Panama Papers, more than 11m documents taken from a Panamanian law firm, opened new horizons for Ms Caruana Galizia. Her son Matthew is a member of the International Consortium of Investigative Journalists, which has been mining the documents for stories.

Last year Running Commentary revealed that Mr Muscat's chief of staff and one of his ministers had Panama-registered companies and trusts in New Zealand. Ms Caruana Galizia claimed, and they denied, that the offshore vehicles received kickbacks from Russians who had bought Maltese passports. In April she wrote that Mr Muscat's wife was the beneficial owner of a company that allegedly received $1m from the daughter of the president of Azerbaijan, with which Malta has commercial ties. The government called it a lie. Recently, Ms Caruana Galizia turned

Georgia and Abkhazia

Nutella standoff

TBILISI

The spread of Europe is not always smooth

ISOLATED by the Black Sea and Russia, Georgia has spent the past few decades binding itself closer to the rest of Europe. In this effort, hazelnuts play a crucial role. In 2007 Ferrero, an Italian company, set up a branch in Georgia to supply the key ingredient of its signature product: Nutella, the chocolate-hazelnut paste that is the most European of all breakfast spreads. The country has since become the world's third-largest producer, behind Turkey and Italy. Hazelnuts are Georgia's biggest export after copper ore.

In 2014 Georgia and the European Union concluded a Deep and Comprehensive Free Trade Agreement (DCFTA). Yet rather than making Nutella's supply chain smoother, the DCFTA could render it a bit sticky. About 10% of the hazelnuts Georgia exports come from the Russian-backed breakaway territory of Abkhazia, which has enjoyed de facto independence since its war of secession in 1992-93. Georgia has no formal trade relations with Abkhazia, and hazelnuts are the only product which Abkhazian authorities allow farmers to sell there.

Starting in 2018, the DCFTA will require all Georgian agricultural exports to meet EU standards, including having an official certificate of origin. Even if Abkhazian farmers could get a Georgian certificate, it would be considered an act of national betrayal. Their nuts will thus be barred from Nutella's mixing vats.

Cutting Abkhazia off from Europe will leave it even more dependent on Russia. "Russia is our strategic partner, and demand for hazelnuts is low there," says Adgur Ardzinba, the economy minister in Abkhazia's self-proclaimed government, which only Russia and a few other states recognise. "We have to give priority to products that are in high demand [in Russia], such as citrus and wine." The only process that could lead to normalisation of relations with Georgia is the peace talks between the two sides in Geneva. But those are going nowhere, and trade has not been on their agenda.

Meanwhile, the region's hazelnuts face a more immediate foe. An infestation of brown marmorated stinkbugs has devastated the harvest in both Abkhazia and Georgia. Sweet-toothed Europeans need not panic: the Nutella supply is probably not at risk. But the secessionist dispute prevents Georgia and Abkhazia from working together properly to stop the pests. Although cocoa powder and hazelnuts make an excellent blend, commerce and nationalism do not.

A few isolated nuts

A flame snuffed out

her fire on the right, accusing the PN's Adrian Delia of links to a London-based prostitution racket, which he denies.

By the time of her death, Ms Caruana Galizia faced 42 pending libel suits and a protracted list of enemies. Her foes may have included Italian mobsters who are suspected of infiltrating Malta's booming online gaming industry and its narcotics trade. She died in the fifth car-bombing on Malta in two years. None of the others, ascribed to warring drug-traffickers, has led to arrests.

Acknowledging he was the dead blogger's "favourite target", Mr Muscat told parliament he had asked for help from America's FBI and would not leave "a stone unturned" in the search for her assassins. But whatever the result of the inquiry, Ms Caruana Galizia's murder will probably achieve its aim. In an editorial the *Malta Independent*, her former employer, wrote that "for many people, looking up her blog was the first thing they did each day, and the last thing too. Now there is just emptiness. A silence that speaks volumes." ■

France's next reforms

Just a trim

PARIS

Emmanuel Macron's changes to employment rules may not go far enough

TOY robots line Jérôme Veneau's barber shop in Paris, and a Superman symbol adorns one wall. The decor is appropriate: Mr Veneau's efforts to earn a living are robotic and tireless. His first 200 haircuts each month, he says, pay for his social charges and taxes. Only then does he make his first cent of take-home pay.

His customers are so plentiful that he regularly turns people away. Yet after 29 years, he remains a solo practitioner. When he falls ill or takes lunch, the shop closes. Why not hire someone to help? "Never, the whole system is a mess," he says. He once had an employee, but the man claimed to have been injured by repetitive scissor-snipping. A court ordered Mr Veneau to pay €17,000 ($20,000)—some to the worker, some to the state. His family stumped up the cash. "I'll never hire again," he says.

Mr Veneau voted for Emmanuel Macron, France's reform-minded young president, who vows to unblock the country's labour markets. In a television interview on October 15th, Mr Macron promised to improve apprenticeships, job training and the unemployment-benefit system. This is to be his "second act" of reforms; the first, signed into law in September, lets individual firms negotiate directly with unions (rather than having to accept national agreements). Unfair-dismissal processes are also supposed to be more predictable.

Perking up

France, new job vacancies received by government employment agencies per month, '000

Source: Thomson Reuters

Mr Veneau remains unconvinced that enough is changing to risk hiring again. Even Mr Macron admitted this week that his labour reforms need a couple of years to have an impact in cutting unemployment from its current rate of 9.8%.

Nonetheless, as the economy picks up jobs are starting to appear. Employers report 290,000 unfilled vacancies, 27.5% more than a year ago (see chart). That suggests a lack of skills among job-hunters. Last week Mr Macron met leaders of unions and employer federations to see how to improve supplies of trained workers. This week the prime minister, Edouard Philippe, began his own talks on the matter. Parliament is to pass a second law on labour provision by next summer.

Details are sketchy, and some ideas sound dubious. Mr Macron talks of "protecting" the self-employed, and some who quit regular jobs, making them eligible for jobless benefits. That could be costly. One estimate found welfare spending would need to rise by €8bn-14bn in the first year. Costs could be lower if eligibility were restricted, or if there were fewer cases of *rupture conventionnelle* (when employer and employee agree the latter will step down) that already trigger welfare payments.

On skills, some are enthusiastic. Andreas Schleicher, an expert on apprenticeships at the OECD, sees "a paradigm shift in intentions" under Mr Macron. France's complicated existing schemes create only one-third as many apprenticeships as in Germany, often at higher cost and with poorer outcomes. Companies see apprentice levies as punitive. Mr Macron says apprenticeships are seen as a "taboo".

To emulate Germany would require getting firms to help design and implement vocational-training schemes that produce skills they actually want. But such radical change would mean wresting power from the education ministry, teachers and institutions that value only academic instruction. It is unclear whether Mr Macron is ready for such a big upheaval.

Many are sceptical about the labour reforms. Pierre Cahuc, an economist at the École Polytechnique in Paris, says entrenched interests have quietly proved tougher than commentators recognise. He notes that unions have kept the right to negotiate 13 crucial issues at national level, limiting how much freedom individual firms will get. Jean Tirole, a Nobel laureate economist, welcomes efforts to loosen the labour code but sees limits. The state still makes a "hubristic assumption" that it knows best how private-sector companies should structure their workforces. As Mr Veneau says: "It is a mess." ■

Russia's presidential election

Partisan campaign

KHABAROVSK AND MOSCOW

The Kremlin calls him ineligible, but Alexei Navalny is running anyway

"HELLO, Khabarovsk!" Alexei Navalny, Russia's opposition leader and would-be presidential candidate, booms his greeting from a makeshift podium on the outskirts of this far-eastern city, a statue of a victorious revolutionary-era Soviet partisan looming behind him. The young crowd of several thousand, dotted with red balloons and banners reading "Navalny 20!8", goes wild. After eight rallies across the country the candidate's voice is hoarse, but he is fired up.

The rally, Khabarovsk's largest in years, could be part of an American presidential campaign. Tall and charismatic, Mr Navalny looks the part. Russia's electoral politics have long been neutered by President Vladimir Putin, who decides who can or cannot run; the population assumes the role of a television audience with little say over the show's content. Mr Navalny's campaign threatens to change that.

There are five months to go before Russia's presidential election, and Mr Putin, in power since 2000, will almost certainly be re-elected. Mr Navalny is campaigning, but the Kremlin says he is ineligible because of a conviction on (trumped-up) embezzlement charges in 2013, for which he received a suspended sentence. Neither such injustice nor the state media's ignoring of his campaign has deterred Mr Navalny, who disregards the regime's rules. Politics, he insists, is no longer what the Kremlin decides, but what is happening in the streets.

To remind Mr Navalny of the rules, on October 2nd, less than a week after his tour of Russia's Far East, he and his campaign chief were jailed for 20 days. The aim was to prevent him from staging an unauthorised rally he had called for October 7th, Mr Putin's birthday, in St Petersburg, the president's home city. Instead, on that day thousands of protesters turned out in St Petersburg, Moscow and elsewhere, chanting "Russia without Putin". Young faces painted with Russian flags or large "N" logos dominated the throng. "Let's be honest, he's the only alternative there is," said Daniil Kholodniy, a 20-year-old supporter.

Mr Navalny projects optimism. His demands seem simple: allowing himself and other candidates to compete in the election, and ending the harassment of activists and election observers. Yet such competition would threaten Mr Putin, whose 83% approval rating rests on the idea, reinforced by state propaganda, that there is no alternative to his rule. The danger of registering Mr Navalny is not that he will win, but that he will dispel this myth. Just by appearing on television, Mr Navalny would gravely damage Mr Putin's system.


Calling on the kids

State propaganda has given most Russians a negative impression of Mr Navalny. But the goal of his campaign is less to win over voters than to cure them of their learned helplessness. "Who is our biggest enemy?" he asks the crowd in Khabarovsk. "Putin, corruption," they shout. "No, Putin and corruption are easy to defeat," he responds. "Our biggest enemy is the belief that we cannot change anything."

Pro-choice

Mr Navalny depicts corruption as a form of social injustice, which it is. He evokes nationalism as a force for modernisation, rather than revelling in imperial nostalgia like his opponent. In 2011-12 he galvanised mass protests in Moscow and St Petersburg and successfully branded the Kremlin's United Russia party as a band of "thieves and crooks". But Mr Putin changed the subject by annexing Crimea and fomenting a war in Ukraine in 2014.

Now Mr Navalny is back, sensing what he calls "a recoiling from the war in Ukraine". The euphoria of Crimea's annexation has given way to disappointment. Mr Navalny capitalises on the growing realisation in Russian society, particularly among the young, that the current system offers them no future. The protests are smaller than five years ago, but their geographical and social mix is much broader. (Some 140 cities, including poorer ones, were swept by protests last June.) Mr Navalny has built one of the largest political networks in the country, operating in some 80 cities with the help of 160,000 volunteers. "We don't know what to do with all of them," he says.

His campaign is financed by small contributions, and his rallies always involve crowd participation. Unlike many of Russia's veteran liberals, Mr Navalny does not complain about lack of access to state television. Instead, he has built a media network on the internet. His YouTube channel broadcasts several times a day and has about 1.5m subscribers. "We are not fighting for 100% of the population," he says. Historical change is carried out by "the 3-5% of the people who are politically active and can come out on the streets." It is not just his committed supporters who see him as a legitimate candidate. So do opportunistic regional elites.

Walking into a posh restaurant in the Far East after a rally, followed by his entourage and two bodyguards, he is treated like a celebrity, not a troublemaker. A young waitress grills him about his plans to fight corruption. Two businessmen, who in the past voted for Mr Putin, come up to ask about trade tariffs. After ten minutes of agitated conversation, they shake hands: "You are our candidate," says one, promising to contribute cash to his campaign.

The Kremlin faces a dilemma. By refusing to register Mr Navalny, it risks making the election look farcical. Mr Navalny is certain to call for a boycott and bring people onto the streets. This, he says, "will create a feeling that the election is a sham." It also looks as though the Kremlin has decided that locking him up for long periods would be counter-productive.

There are other methods. Besides physical intimidation—in April, pro-Kremlin thugs splashed dye and acid in Mr Navalny's face—the regime has tried to marginalise him ideologically, presenting him alternately as a violent ultra-nationalist or a pro-American liberal. In Khabarovsk, fake campaign posters said he wanted "gay parades instead of victory parades". None of this propaganda has really worked. Now the Kremlin is allegedly encouraging Ksenia Sobchak, a socialite opposition journalist with family ties to Mr Putin, to run for president in order to distract attention.

Mr Navalny's ability to bring the young to the streets this year has been a "cold shower" for the authorities, says Valery Fedorov, a pollster working for the Kremlin. Yet for now he is seen as a nuisance rather than an existential threat. His tactics, Mr Fedorov argues, are like "partisan warfare": they "can't defeat a regular army". The Soviet partisan depicted in the statue behind Mr Navalny's stage in Khabarovsk might have disagreed. ■

Charlemagne | The kid goes all right

Will Sebastian Kurz pacify Austria's populists, or fire them up?

SEBASTIAN KURZ has a problem. On October 15th Austria's 31-year-old foreign minister scored an impressive election victory, somehow presenting himself as a credible messenger of change even though his centre-right Austrian People's Party (ÖVP) has been in office for 30 years. His energy and charisma kept the Freedom Party (FPÖ), a far-right outfit with neo-Nazi roots, from running the country; it had led in the polls for two years before Mr Kurz took over as chairman of the ÖVP in May. But to govern Mr Kurz needs a coalition partner, and the FPÖ, which came third in the election, is his first choice. Now Europe is left wondering whether Austria's political whizz kid is fending off a populist uprising, or preparing to lead it.

Mr Kurz spoke to your columnist this week. He was fresh from a day spent discussing the vagaries of coalition politics with Austria's president, and taking a congratulatory call from France's Emmanuel Macron. Should he become chancellor, Mr Kurz will be the world's youngest head of government (Kim Jong-Un has three years on him). Older readers who fear a decline in decorum among millennials should be reassured. Charlemagne was greeted with the greatest of courtesy and thanked profusely for finding time to visit Vienna; afterwards he was walked personally to the ministry's exit and seen off with a formal bow.

Yet Mr Kurz's charm conceals a rough edge. Coalition talks will begin on October 20th, but Mr Kurz will not speculate on what a deal with the FPÖ might look like. In 2000, when the two right-wing parties first formed a government, EU governments cut bilateral links and Israel recalled its ambassador. Alert to the dangers, this week Mr Kurz told an Israeli daily that he would not accept anti-Semitism in a coalition partner. Besides, these days the FPÖ leadership sees more fertile ground in Islamophobia and Austria-first nationalism. It has formal links to Vladimir Putin's United Russia party, and portrays the EU as a threat to a "Europe of fatherlands". If Mr Kurz does link arms with the FPÖ (and other coalitions are possible), his European counterparts will need convincing that the nationalist influence will be muted.

A second fear among Europeans is that Mr Kurz himself is merely a rabble-rousing populist in centrist clothing. He earned his reputation abroad by adopting a tough line during the refugee crisis of 2015-16, when Austria was taking in, per person, more asylum-seekers than any EU country bar Sweden. In early 2016, before Angela Merkel convinced Turkey to keep refugees from Europe's shores, Mr Kurz plotted with Balkan ministers to close the borders across which they had been pouring. He then turned his attention to Italy, hammering the NGOs he said were smuggling migrants across the Mediterranean, and threatening to deploy troops to the Brenner Pass. All this has some Europeans fearing Mr Kurz could join the leaders of Hungary and Poland in an axis of resistance to migration.

Yet Mr Kurz's obdurate stance on borders is now conventional wisdom across the EU. Moreover, he cut his political teeth on a subject that is less typical of far-right populism: how to integrate immigrants. Here Mr Kurz has something for both sides. He wants to help newcomers learn German and find jobs. But he also denounces Islamic radicalism and plays up the difficulty of integrating refugees from countries with "different systems", like Afghanistan and Iraq. And he defends Austria's ban on face-covering veils, a solution in search of a problem. (Few Austrian Muslims wear veils, but the ban recently ensnared a man clad in a full-body shark costume.)

Confidantes of the minister describe a good listener eager for advice and untroubled by history or ideology. "For me, the EU has always been a given," says Mr Kurz, who was eight when Austria joined. That might explain his readiness to question its free-movement rules—he frets about so-called benefit tourism—and to jab at a meddlesome Brussels bureaucracy. Some find his openness to ending sanctions on Russia and backing strongmen in the Balkans naive. But supporters welcome his pragmatism.

Mr Kurz is also keen to flaunt his pro-European credentials. His government, he says, would be "as supportive as possible" of Mr Macron's proposals for EU reform, even if he distrusts some of his ideas on the euro zone. ("We are on the German side," he says, even before being asked about any specific policies.)

Europeans are right to fear a right-wing coalition in Austria. The FPÖ is a nasty party harbouring unreconstructed neo-Nazis, and its enduring strength is Austria's shame. But its electoral success means it must now face the dilemma that confronts many radical-right parties: the compromises of coalition versus the purifying rage of opposition. It has already had to drop its advocacy of an Austrian exit from the EU, after realising that few voters were interested. The FPÖ would earn government posts in a coalition, perhaps including the next foreign or interior minister, as well as extracting some policy concessions. But Mr Kurz will not allow himself to be tugged out of the European mainstream.

All Europe contributed to the making of Kurz

Mr Kurz's critics have been too quick to confuse a focus on border management with xenophobia. He makes the opposite case: properly integrating newcomers, he insists, goes "hand-in-hand" with showing that migration is under control. Integration, he accepts, will be "extremely difficult", and his critics will hardly be calmed by his flirtation with the FPÖ. But the relative quiet at Europe's borders offers him space to make good on his claim.

Mr Kurz's ascent has been fuelled by two factors: tough talk on borders, and the Macronesque appeal of a fresh face to a weary electorate. Both of these will wear off soon enough. He will not lead a populist revolt in central Europe; he will probably spend more time fighting vested interests at home. But he may be the first European leader forged in the heat of the refugee crisis. That experience has shaped his thinking, and Europe's too. ■

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Labour's plans

Jeremy Corbyn's model town

PRESTON

How one city became an unlikely laboratory for Corbynomics

WHEN the Park Hotel in Preston was built in 1883, it was fit for a future king. The then Prince of Wales stayed at the hotel in its Victorian pomp, during a stop in the thriving mill town. A century later the grand redbrick building was inhabited by bureaucrats, after it had been turned into council offices. Now, Lancashire County Pension Fund is returning the hotel to its former use, as part of a £100m ($130m) investment spree that it is carrying out in the local area. The Park Hotel's rebirth is one part of a municipal experiment that could extend nationwide if Jeremy Corbyn steers Labour into power.

The recent transformation of the opposition leader from electoral no-hoper to plausible prime minister has got voters wondering how Mr Corbyn's socialist ideals would translate to real-world policies. One answer can be found in Preston, a Labour-run city of 140,000 in north-west England that is something of a test bed for the party's plans. Mr Corbyn hailed Preston's "inspiring" innovations in a recent speech. After one visit John McDonnell, the shadow chancellor who has a tight rein over the party's economic policy, declared: "This kind of radicalism is exactly what we need across the whole country."

The evolution of Preston into the poster child of Corbynomics started years before Mr Corbyn was elected Labour's leader, says Matthew Brown, who sits in the council's cabinet and has spearheaded the programme. In 2011 a £700m redevelopment of the city centre collapsed after the economic downturn. So the council turned to other tactics to generate local investment.

First, it set about persuading local public institutions—colleges, the police, a housing association, the university—to consider spending more of their combined £1bn budget locally, as "anchor institutions". Local suppliers were given advice on how to pitch for tenders that may have seemed out of reach. The Centre for Local Economic Strategies, a Manchester-based think-tank, audited the spending of six such institutions last month and found that they spent 18% of their most recent year's budget in Preston, compared with 5% in 2013. In cash terms, this meant an extra £75m being spent in the city—around £530 per citizen. The share of their spending in Lancashire doubled from 39% to 79%. It required no extra money nor new legislation. "It's about collaboration," says Mr Brown. "You have to be clever in austerity."

Preston's anchor institutions feature in a 48-page pamphlet commissioned by Mr McDonnell on "alternative models of ownership". Brexit, the report suggests, is a chance to rewrite procurement rules and force the public sector to buy some goods and services locally, which is banned by EU law. Labour's manifesto also promised to use the government's £200bn in procurement spending as a weapon to enforce social goals. Suppliers would have to maintain a pay ratio of under 20:1 between their highest- and lowest-paid employees, for example. Other wonks think Labour should go further. Joe Guinan of Democracy Collaborative, an organisation that has overseen a similar model to Preston in Cleveland, Ohio, has said the National Health Service could be "the mother of all anchoring institutions".

Not all are so impressed. Getting institutions to buy locally amounts to municipal protectionism, with money that was once spent elsewhere in Britain spent locally, points out Colin Talbot, a public-policy expert at Cambridge University. "There is no value being added," he says. An overly confined economy may reduce economies of scale and exacerbate the effects of any downturn. If the Park Hotel goes under, it may hit Preston's pensioners, too.

Still, the Preston model is "a practical example of 'taking back control'," argues Tom Kibasi of IPPR, another think-tank. Like every district in Lancashire, Preston voted to leave the EU. Part of the feeling of lack of control stemmed from a lack of local ownership, argues Mr Brown. The council is trying to correct this. Last month it launched a not-for-profit energy firm, similar to those that Labour's manifesto promised. It is cajoling the city's anchor institutions to provide capital for a regional investment bank, much like the ones that Mr Corbyn has proposed.

The council has also encouraged local firms to consider becoming co-operatives—which are owned and controlled by their workers—and lobbied its anchor institutions to deal more with co-ops. Nationally, Labour wants to double the size of the co-operative sector, for instance by giving workers a "right to own" if a firm's owners ▸▸

sell up. In a speech last week Mr Corbyn asked why Uber, the ride-hailing app, could not be replaced by a co-op. Labour's obsession with them is window-dressing, believes Mr Talbot. "They do not want to appear to be 'commanding heights'," with their plan to nationalise utilities such as gas and electricity, "so they are talking about trendy co-op things as well," he says.

For all the praise that Labour's leaders heap on Preston, Mr Corbyn's team bristles if the city is described as a crucible of Corbynism. Preston offers radicalism on a shoestring, with its council's annual spending on services cut by a third since 2010, to £20m. A Corbyn government, they insist, would loosen funding constraints and let local authorities go further. But even if Mr Corbyn never reaches Downing Street, Corbynomics will thrive in one corner of Lancashire. "You can begin to democratise the economy, even with a Tory government," says Mr Brown. ■

Welfare reform

Discredited

GLASGOW

Another defeat in Parliament may force a rethink of a failing policy

SINCE the general election in June, when the Conservatives lost their majority, Parliament has become a perilous place for the government. In September the Tories were defeated on two motions, one related to the 1% cap on pay rises for staff in the National Health Service, the other on a proposed increase in university tuition fees. The motions were non-binding, yet the government's hand was forced in both instances. The NHS pay cap is to be lifted and tuition fees have been frozen.

On October 18th Theresa May suffered her third big defeat in little more than a month, when MPs passed a motion proposed by Labour to pause the roll-out of "universal credit", a reform of the welfare system. Like the motions on NHS pay and tuition fees, it is non-binding. Yet it too may force the government to rethink its approach. If it did, it would be a victory for economic logic and common sense.

Universal credit is the biggest shake-up of welfare in decades, replacing six working-age benefits with one. The government has been rolling it out since 2013 but lately the pace has quickened, from five job centres a month adopting the full service to over 50. Eventually one in four households will receive the credit. After being cut repeatedly, it is a hard-nosed scheme—more so than the benefits it replaces. Dianne (not her real name), a graphic designer, has been on universal credit for six months. After paying the rent, she has just over £200 ($265) a month to live on.

Yet the recent furore over universal credit is not driven by opposition to the scheme itself. Most MPs support the idea of simplifying the benefits system, and of removing some of the perverse incentives that existed under the old one. Instead the worry is about its woeful administration.

New claimants must wait at least five weeks before the first chunk of cash lands in their account. (A smidgen of transitional help, in the form of a loan from the state, is available.) Usually the benefit is then paid monthly. People on legacy benefits typically wait for a shorter time for their first payment and receive subsequent ones more frequently. The idea behind paying at longer intervals is to mimic the way in which most employees receive salaries.

But five weeks is a long time. The average household in the bottom wealth quintile has gross financial assets of perhaps £2,000. Many have nothing, and so nothing to live on during the waiting period. And many wait for longer than five weeks. The administrative complexity of the new system means payments are often delayed. About one in 20 people has not received payment even after ten weeks.

The delays wreck families' finances. Dianne, the graphic designer, claimed universal credit in February but did not receive it until May. When she told her adviser that she would be unable to cope, she was given a pamphlet on how to budget. She may sell her car, which would improve her immediate position but make it harder to get to job interviews. Analysis from the Trussell Trust, which runs a network of food banks, suggests that in areas where universal credit has been fully rolled out, referrals for emergency food have risen much faster than in areas where it has not.

Paying universal credit monthly, meanwhile, is not good economics. About a tenth of employees are paid weekly. Those on low incomes struggle to budget over long periods. New claimants, indeed, appear to have become more likely to fall into arrears on their rent, as they run out of money before the month is over. In one Glasgow suburb, where the full service was rolled out about a year ago, a one-bedroom house is available to let—but not to universal-credit claimants. "The landlord has experienced problems with people on UC," the estate agent apologises.

Universal credit is designed to allow the government to make improvements as it goes along, points out Rory Mair of Citizens Advice Scotland, a charity. But it has merely tinkered. It has streamlined the system by which social-housing landlords are paid rent. Under pressure from Labour, ministers announced this week that the helpline, which had cost up to 55p a minute, would be made free (as the "hotline" for reporting benefit cheats already was).

Scotland's devolved government has been bolder. Scottish councils offer more generous support while claimants await their first payment. Such largesse is more feasible north of the border: because of the financial settlement between Westminster and Holyrood, per-person public spending in Scotland is a tenth higher than in Britain overall. But Scotland is also giving people the option of being paid twice-monthly, which should cost nothing.

After the latest defeat, the Tories are under pressure to act. Some want them to make universal credit more generous in the budget next month by reducing the rate at which benefits are withdrawn as people earn more. A version of the Scottish government's tweaks is another option. Such changes would not destroy the principle of universal credit, but simply make it work better, says Nicholas Timmins of the Institute for Government, a think-tank. To fix the scheme may require pausing it, which would be embarrassing. Better, though, than pressing on with a failure. ■

Not working

Bagehot | Bagehot v Brexit

Walter Bagehot would have loathed government by referendum

EARLY day motions are parliamentary devices which give backbench MPs a chance to ask for a debate on a subject they choose. Two such motions doing the rounds note that this year marks the 150th anniversary of the publication of Walter Bagehot's "The English Constitution". The first, tabled by two Conservatives, notes that Bagehot's "great facility" for explaining the "practical workings" of the political system ensures that his classic text remains "both relevant and highly influential today". The second, tabled by five Labour MPs, invokes Bagehot as it urges Europe's nations to ensure that "parliaments do not become mere constitutional decoration in the face of the continuing encroachment of the EU on parliamentary democracy."

Bagehot's great work is still worth debating. G.M. Young, the foremost historian of Victorian England, argued that Walter Bagehot (pronounced to rhyme roughly with gadget) was nothing less than "the greatest Victorian". He was certainly the greatest Victorian journalist-cum-intellectual. He edited *The Economist* for 16 years, until his death from pneumonia in 1877, aged just 51. He wrote on a wide range of subjects, from politics to literature to finance. "Lombard Street", his analysis of a Victorian banking panic, still provides central bankers with their template for what to do in a crisis, as Ben Bernanke, the chairman of the Federal Reserve during the crisis of 2008, fulsomely acknowledges.

"The English Constitution" revolutionised political debate because it succeeded in exposing the reality of power behind the façade of abstract formulae. Montesquieu's idea that government can be divided into three branches—the executive, legislative and judicial—had proved so influential that the Founding Fathers built it into America's constitution. Bagehot argued that the real division of powers is that between the "dignified" and the "efficient" branches of government. The dignified branch consists of the monarchy, and Parliament when it is engaged in ceremony. The efficient branch consists of the prime minister, the cabinet and the government ministries. The job of the dignified branch is to win the people's loyalty by putting on a show. The job of the efficient branch is to use that loyalty to run the country. Bagehot argued that Britain is a "disguised republic" and a hidden meritocracy. The real rulers are secreted in the second-class carriages but are obeyed because of the splendour of the waxwork rulers in the first-class carriages.

Bagehot expressed himself in sparkling prose. The monarchy puts "a family on the throne" and "brings down the pride of sovereignty to the level of petty life". A "princely marriage is the brilliant edition of a universal fact". The cabinet is a "hyphen which joins, a buckle which fastens" the executive to the legislature. Bagehot famously warned, in discussing the monarchy, against letting in daylight upon magic. But his every sentence is a shaft of brilliant light.

The five Labour MPs are certainly right that Bagehot would have worried about the transfer of power from Britain to the EU. As a creature of his time, he regarded continental Europe as a political backwater, governed by either unaccountable bureaucracies or wilful despots. And as a liberal pragmatist, he thought that power should be exercised as close to home as possible. It is possible to imagine Bagehot admiring the single market as an instrument of easier commerce. It is impossible to imagine him endorsing Utopian fantasies about forging an ever-closer union out of a hotch-potch of political systems and cultures.

That said, it is equally impossible to imagine Bagehot as a Brexiteer. He had doubts about extending the franchise to the uneducated masses, let alone giving power to the people in the form of a referendum. He thought that the popular will had to be filtered through institutions that tamed raw emotions and countered brute self-interest. Parliament was only the first of these institutions. Bagehot thought that MPs were wiser than the electorate in general but nevertheless too apt to act like a crowd. The heart of Parliament lay in the prime minister's government, which had the responsibility to pursue the long-term good of the country, even if it meant ignoring the voice of the masses. For a prime minister to entrust the future of the country to a referendum would have struck him as an abomination.

Governed by weakness of imagination

Bagehot thought that the genius of the British political system lay in its moderation. Moderation is the hallmark of cabinet rule, and of British culture. The British dislike grand ideologies, regarding them as the afflictions of foreigners—and particularly of those worst of all foreigners, the French. The Brexit referendum has replaced moderation with polarisation and realism with ideology. The Brexiteers have more in common with the *sans-culottes* of France than they have with sensible Victorian Englishmen. They are in the grip of an idea that knows no compromise—sovereignty pure and unsullied—and they are willing to support that idea even if it crumbles on contact with reality. This week a minister suggested that Britain could grow its own food if it reached no deal with the EU.

It may be too late to put the demon of populism, unleashed by the referendum, back into the constitutional bottle. The wild men of Brexit continue to drive the debate. Anyone who wants to compromise is labelled, disgracefully, a saboteur. Europe's bureaucrats are playing into the wild men's hands by focusing on legal niceties rather than strategic interests. But Bagehot's "English Constitution" suggests that it is not too late to salvage the situation. Britain is a land of pragmatism, compromise and common sense. The ideological zealots who have brought the country to this sorry pass are impostors who are waiting for their bluff to be called. Parliament should debate the 150th anniversary of Bagehot's "English Constitution"—and use that debate to consider the state of British democracy in an age of Brexit and bile. ■

Sexual harassment at work

An open secret

Crass or coercive sexual behaviour by bosses and colleagues is less common than it was, but still a big problem

"I SPENT a great deal of time on my knees," Marilyn Monroe once said of how she became a film star. "If you didn't go along, there were 25 girls who would." The "casting couch"—the film industry's cosy euphemism for the extortion of sexual favours from movie hopefuls by Hollywood power-brokers—has been under renewed scrutiny in recent days, after allegations of sexual assault and harassment against Harvey Weinstein, a producer, published in the *New Yorker* and *New York Times* earlier this month. More than 40 women, many of them famous, have now added their names to the list of victims of crimes they say ranged from demands for sex in return for roles, to indecent exposure, to groping and even rape. Police in America and Britain are investigating. Mr Weinstein has been expelled from the Academy, the institution that awards the Oscars, and sacked by the Weinstein Company, the studio he co-founded in 2005. It is now likely to be bought out (see page 62).

The scandal seems to be making other media-industry executives look again at their responses to complaints about sexual harassment. In 2015 Isa Hackett, a producer at Amazon Studios, told managers that Roy Price, its head of programming, had propositioned her and made lewd remarks. An internal investigation went nowhere, and an article in August about the allegations on the *Information*, a tech-news website, gained little attention—until the story about Mr Weinstein broke. A few days later Mr Price was suspended. He resigned on October 17th.

But the clear-out may not go much further. Mr Weinstein and Mr Price were already diminished figures, Mr Weinstein after some poorly performing movies and Mr Price because of a shift in Amazon's video strategy. And though women around the world took to social media to share their stories of sexual harassment and assault at work, many using the hashtag #metoo, a similar outpouring preceded last year's presidential election, inspired by a video showing Donald Trump boasting of committing sexual assault. That was hailed at the time as a turning point. But Mr Trump went on to win the election.

Most sexual harassment in the workplace is less serious than the acts Mr Weinstein is accused of. But there are several similarities. One is a power imbalance between the perpetrator and victim. Another is that the victims stay silent, fearing that their careers will be harmed if they speak out, and that they will be disbelieved. A third is that bystanders do nothing to stop it happening. And fourth, the harm caused is often underestimated.

Physical assaults such as groping, and demands for sexual favours made by work superiors, used to be widely regarded as a working woman's lot. That is rarer now—though some of the actresses accusing Mr Weinstein of serious assaults say they stayed silent for so long partly because they feared being characterised as "sleeping their way to the top". And the subtler types of harassment, such as suggestive remarks and lewd jokes, are still widely tolerated, though they can make a workplace so unbearable for a woman that she decides to leave. Much of it happens behind closed doors, meaning that even if a manager understands a victim's distress, there may be no corroborating evidence.

All this means that sexual harassment is startlingly common, and harassers are rarely punished. In surveys over the past few decades in a range of industrialised countries around half of women, and a smaller but significant share of men, say they have experienced it (the perpetrators are usually male). The overall rate does not seem to be falling, though it is hard to tell. Some think that rising awareness of verbal harassment as a serious issue may be masking a decline in the physical type.

She said, he said

It is likely, though, that any survey understates the reality. Many people describe various hypothetical acts as sexual harassment, but do not think of themselves as victims even though they have experienced the same things. A woman who feels threatened by co-workers' sexual remarks but certain that saying anything will only make matters worse may prefer to minimise the problem, even to herself.

There are no reliable figures from the developing world, but it is likely, if anything, to be even more common there. In the fields and factories where poor women work, managers can prey on them knowing that they have no other way to make a living. Though multinationals often set policies governing safety and working hours at their suppliers, those policies rarely, if ever, cover sexual harassment.

In most rich countries, firms are required by law to have formal complaint procedures. But human-resources departments may try to discourage reporting; victims may feel that their experience was not sufficiently serious to warrant official action. Most fear reprisals. There is rarely supporting evidence. Of the few who make formal complaints, hardly any see them upheld.

Victims who turn to the courts face further obstacles. In Britain, for instance, employment tribunals are likely to regard an allegation as less plausible if an internal complaint has not been made first, or if the alleged incident happened more than three months before the complaint. The harm caused is classed as "injury to feelings", which attracts relatively low damages since there is no financial loss, as with discriminatory pay or hiring practices. All this means that few cases are heard, says Dee Masters, a barrister at Cloisters in London, except those tagged onto other complaints, such as discriminatory dismissal or an allegation that a woman received a lower bonus than her male colleagues.

Then she will be asked why she did not complain earlier. "The honest answer", says Ms Masters, "is that it didn't make financial sense." Any civil e-mails between a woman and her alleged harasser are likely to be used to undermine her story, though the reason for these is equally obvious: "She was trying to keep her job."

Hollywood is an extreme example of a work environment that facilitates what America's Equal Employment Opportunity Commission (EEOC), a federal agency, calls "quid pro quo" harassment. This is when accepting sexual advances, or tolerating lewd remarks, is made an implicit or explicit condition of getting or keeping a job. It relies on disparities of power—in the case of Hollywood, between the hordes of would-be starlets and the handful of (mostly male) agents, producers and directors who can deliver fame and riches.

It is also endemic in other countries' media industries. Some producers in Bollywood, as India's Hindi film industry is known, keep hotel rooms for castings, and young actresses know only too well what a late-night script-reading will involve. The occasional public allegation is easily hushed up: Indian newspapers rely on access to Bollywood players to fill their entertainment pages, which attract lucrative advertising. In 2009 Jang Ja-yeon, a South Korean soap star, killed herself, leaving behind a letter in which she alleged that her agent had forced her to have sex with a string of directors and producers. In a national survey of actresses a few months later, three-fifths said that they, too, had been pressured to have sex; half of those who refused said their careers had suffered.

Similar power imbalances feed sexual harassment in universities. Young academics are at the mercy of star professors, whose goodwill and references they need when they start the hunt for a scarce permanent job. Universities may sack an administrator they find guilty of harassment, says Lauren Edelman, a professor of law and sociology at the University of California, Berkeley. But they often protect faculty members by paying off their accusers and insisting on non-disclosure agreements. In Silicon Valley, too, firms may be reluctant to discipline men who produce or own valuable intellectual property. Several senior executives at Uber, a ride-sharing platform, resigned earlier this year after Susan Fowler, a former engineer at the firm, wrote a blogpost detailing widespread sexual harassment at its head office.

Show business for ugly people

Politics is another problem industry. Most senior people in parties and parliaments are men, and some target young interns and researchers hoping to be selected as election candidates or hired by think-tanks. But though professional women are more likely than those in manual jobs to make a formal complaint about sexual harassment, they are no more likely to experience it. Waitresses, hotel staff and agricultural workers are particularly vulnerable. In 2010 researchers at the University of California, Santa Cruz, interviewed 150 female farmworkers, and found that almost all had suffered sexual violence on the job. Just 7% of working American women are employed in restaurants, but a third of all those who bring sexual-harassment cases to the EEOC are. Waitresses in states where restaurants may pay below the minimum wage bring an outsize share of cases. Their reliance on tips makes it harder for them to stand up to lustful customers and bosses.

The other type of sexual harassment recognised by the EEOC is that which creates a "hostile environment": for example, crude remarks and persistent innuendo. The perpetrators are often colleagues rather than superiors. It may even be directed at senior women, with the intention of taking them down a peg or two. In male-dominated industries it may be used to signal to women that they are not welcome.

Though such verbal harassment is widely regarded as minor compared with physical intrusions such as groping, the victims report feelings of vulnerability, fear and powerlessness. A report for the European Commission in 1999 found that those subjected to either sort of harassment experienced a wide range of symptoms, including anger, depression, humiliation and mistrust.

The idea that a hostile environment can constitute harassment gained legal currency in America after a case in 1989. Teresa Harris brought a claim against Forklift Systems, the firm where she had worked in Tennessee. The facts were not disputed: that her boss made frequent remarks about her breasts and buttocks, once asked whether she had won a contract by offering to have sex with the customer, and on occasion made female employees fish for quarters in his trouser pockets. Ms Harris asked him to stop. He apologised but continued, so she resigned. Lower courts ruled that though a "reasonable woman" would have found his behaviour unpleasant, Ms Harris's job had not been at risk and her work performance should not have been affected. There had been no quid pro quo and sexual discrimination had not occurred. The parties eventually settled, but not before the Supreme Court decided that such remarks and actions could create an atmosphere hostile to female employees.

Few would now argue that a "reasonable woman" should have to put up with such behaviour. Michele Paludi of Excelsior College in New York State has been training managers to deal with allegations, and carrying out independent investigations for companies and universities, since the 1980s. She has seen a big shift in attitudes. "Firms have moved from thinking it's not a big issue, or that it's just a personal matter between two staff, to seeing it as relevant for them," she says.

The costs for firms include legal and reputational risk, as well as poor staff morale and higher staff turnover. Surveys asking about sexual harassment find that victims blame their companies for not putting a stop to it. Typically some respondents say that it made them change jobs. Other women see what is happening, and decide that their employer does not care about them. A large analysis in 2007 of 41 American studies came up with an estimate of $22,500 per year in lost personal and team productivity for each harassed employee.

Studies show that men and women hold different opinions as to what constitutes sexual harassment. A situation that many men perceive as a normal expression of sexual desire may be regarded by many women as a threatening expression of masculine power. Men may dismiss a filthy remark as a joke when women hear it as an intentional humiliation. Men are more likely than women to say that the victim is to blame.

Men are also more likely to say that a degree of sexual banter and horseplay at work is pleasurable. But some women say they enjoy it, too. One study in 1994 of waiters and waitresses in Austin, Texas, found that almost all engaged in a great deal of groping and fondling, and frequently told sexual jokes and anecdotes. Most regarded this as unproblematic—as long as it was with colleagues they regarded as peers. When it came from a supervisor or customer, a colleague of a different race or sexual orientation, or one of the kitchen staff, they did not hesitate to call it harassment.

Such ambiguities point to two difficulties for firms keen to stamp harassment out. Whether sexual words or actions are welcomed depends on their source, context and perceived intent. A man who makes personal remarks about his female colleagues, or frequently touches them, may mean no harm, but be unaware that his actions are unwelcome. Or he may be carefully calibrating his actions to allow him to claim innocent intent. Further complicating matters, the power and wealth that make it easier to get away with harassment can, in other situations, be aphrodisiacs. In 2005 a student at New York University asked Mr Trump's third wife, Melania, if she would have chosen to be with him if he had not been rich. "If I weren't beautiful," she replied, "do you think he'd be with me?"

Many American firms have tried to bulldoze their way through such subtleties by introducing no-dating policies. Employees who start a sexual relationship with each other are supposed to notify their managers; one of the couple may have to resign. But most workplace harassment is not within a mutually acknowledged relationship, even one that has ended. And no-dating rules, as well as being intrusive, can have perverse consequences. If one party has to quit, it is usually the more junior one, who will more often be the woman. In Europe broadly drawn workplace-dating bans fall foul of privacy laws.

America also has some of the world's most detailed anti-harassment laws. A vast training industry has grown up around them. But much of what firms do is what Professor Edelman calls "symbolic compliance": paper policies that mean little in practice, and training done mainly to convince courts that the firm takes harassment seriously, thus reducing any damages. Training may involve identifying instances of sexual harassment in an online questionnaire, or attending a talk, perhaps with a video outlining the legal definition. Some unfortunate employees are made to engage in role-play.

The examples presented can be so absurd that they are worse than useless, says Robyn Swirling, the founder of Works in Progress, a new organisation that aims to improve anti-harassment training. She asked her friends and professional contacts to tell her about any training they had received. One said "having a candle-lit dinner with the intern" was given as an example of what was forbidden; another offered, "Don't take your pants off at a work event." A third said, sardonically, that he had learned how far he could go without getting into trouble.

Several studies have shown that poor training can even backfire. Justine Tinkler, a sociologist at the University of Georgia, gave an "implicit association" test to men, designed to reveal their hidden biases. Before the test half of them, randomly selected, were presented with anti-harassment material similar to that used by many firms. Judging by their responses, the material activated stereotypical ideas of men as powerful and women as vulnerable.

This is troubling, since such notions are associated with a propensity to commit sexual harassment, and to dismiss it as trivial. Other studies suggest that training can widen the gap between men's and women's conceptions of harassment, or make men less likely to view coercion of a subordinate as harassment and more likely to say that many complaints are ill-founded or malicious.

Mediated conversations between small groups of men and women could help forge consensus about what constitutes sexual harassment, suggests Professor Edelman. Anonymous "climate surveys" that include questions about employees' experiences of harassment have been shown to be useful—if managers take note of the results. Training senior women to offer confidential advice might encourage junior ones to report problems earlier, says Ms Masters, though she cautions that such women may be "complacent" about their own workplaces, since it is younger women who are more likely to be targets.

Training needs to debunk common myths about harassment, says Ms Paludi, in particular the notion that a delayed complaint is probably false. The trick, she says, is not to present trainees with a third-party scenario, but to ask what they would do themselves. Typically, they shift from saying that harassment should be reported immediately to worrying about retaliation and the possible harm to their careers.

Firms need to be transparent about how they will respond to a complaint, says Ms Swirling. In her informal survey, some women said that if harassment was "inappropriate, but in the grand scheme of things minor", they might stay silent for fear of ruining the perpetrator's career. They want to know that complaints will be dealt with proportionately. Making it acceptable to "call out the small things" should help shift a work culture over time. She recommends that managers encourage staff who witness an unwelcome off-colour remark or sexualised gesture, even if it is directed at someone else, to say immediately that it is inappropriate.

Friendly environments

Such intervention will be more effective if it is not only women who are doing it. Ms Tinkler cites another study in which a presentation about sexual harassment did not activate stereotypes when the voiceover was male rather than female. The point is not that training should be done only by men, she says, but that when men speak up it gives the issue legitimacy and makes it less polarised. "It's less likely to be perceived as women against men." If firms are to go beyond legal compliance and make sexual harassment rarer, they need to insist that it is everyone's problem. ■

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IBM's tricky transformation

Big blue yonder

NEW YORK

IBM lags in cloud computing and its "Watson" technology underwhelms in artificial intelligence. Can the tech industry's great survivor recover?

TECHNOLOGY giants are a bit like dinosaurs. Most do not adapt successfully to a new age—a "platform shift" in the lingo. A few make it through two and even three. But only a single company spans them all: IBM, which is more than a century old, having started as a maker of tabulating machines that were fed with punch cards.

Yet after 21 quarters with falling year-on-year revenues (see chart), doubts had been growing about whether IBM would manage the latest big shifts: the move into the cloud, meaning computing delivered as an online service; and the rise of artificial intelligence (AI), which is a label for all kinds of digital offerings based on insights extracted from reams of data. In May Warren Buffett, chief executive of Berkshire Hathaway, a holding company, announced that his firm had sold a third of its total stake in IBM, then valued at $13.5bn, saying that "I don't value IBM the same way I did six years ago when I started buying." Analysts were starting to wonder how long Ginni Rometty, the firm's boss (pictured), would remain at the helm.

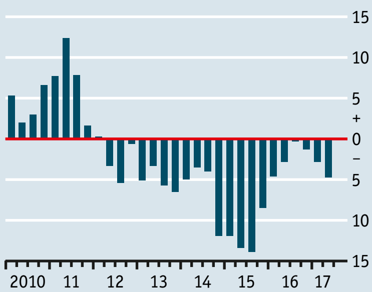
On October 17th, however, IBM's quarterly results suggested that sceptics might just be wrong. Revenues slipped again, to $19.2bn, but they did so less than expected. The firm indicated that it could see growth return in the next quarter and its shares rose on October 18th by 8.9%, the biggest one-day gain since 2009. Could Big Blue, still one of the world's largest information technology (IT) firms with nearly 390,000 employees, have turned the corner?

If big IT firms often fail to adapt to such shifts, it is because these changes require more than adopting new technology. They also force companies to question what they stand for, according to Michael Cusumano, a business professor at the Massachusetts Institute of Technology. The brand, the technical skills, how products and services are sold, must all be examined. Many firms choose to defend their existing domains instead.

After a near-death experience in the early 1990s, when sales of its mainframes collapsed, IBM seemed to have found a formula to stay ahead in technology. Under Louis Gerstner and Sam Palmisano, its former bosses, it quickly adapted to the internet and was one of the first big IT firms to back open-source software. It ditched businesses about to become commodities, such as personal computers and low-end servers. And it stuck to a financial "road map" telling investors how profitable it intended to be over the next five years. Nor did it hesitate to spend billions buying back stock to lift its earnings per share.

Submerged platform

IBM revenues, % change on a year earlier



Source: Bloomberg

Yet this fixation on financial metrics (a stance that predated Ms Rometty) is a big reason why IBM had a late start in the cloud—a trend it had spotted earlier than many competitors. As a result, it is now an also-ran in cloud computing, at least in the part of it called the "public cloud", or networks of big data centres shared by many firms. IBM is number three at best; Amazon and Microsoft lead the pack by some distance, benefiting from the growing number of firms moving applications into the cloud, rather than running them on their own computer systems. More than 40% of IBM's revenues come from products and services that directly compete with public-cloud offerings, says Steve Milunovich of UBS, an investment bank.

IBM has tried to avoid the problem, being, for example, the first tech giant that went big on AI. Building on a technology called Watson, which in 2011 won "Jeopardy!", an American quiz show, the firm two years later launched a new line of business to help organisations make predictions from patterns in their data. It promoted the effort heavily and invested billions, particularly in health care, for example to help hospitals to use patient data to gauge health risks. Yet progress has proved slow, mainly because it is often hard to make sense of patient records. The M.D. Anderson Cancer Centre in Houston earlier this year cancelled a Watson project after spending $60m because it was deemed ▸▸

not ready for clinical use. People in the field of AI are now dismissive of Watson, which in turn affects its ability to attract talent.

The slow take-off of the AI business makes managing the decline of old businesses while quickly growing the new ones even harder for IBM. In addition to the cloud and AI it is developing cyber-security, mobile services and offerings based on blockchains, special databases that also underlie Bitcoin, the cryptocurrency. "It's like having to run up an escalator in the wrong direction", says Frank Gens of IDC, a market-research firm.

For the past five years IBM has not been running fast enough, resulting in declining revenues. Now, according to its own measures, at least, it has enough upward momentum that it will no longer be slipping down. Revenues of what it calls "core business", or sales of IBM products and services that are used in conventional computing, fell by 9% in the latest quarter, down from 11% in the previous one. By contrast, the firm's "strategic imperatives", which mainly include the cloud and AI, grew by 10%, up from 7%. These generate 45% of IBM's business, up two percentage points from the previous quarter. "We are now exactly where we promised early this year we would be," says Martin Schroeter, the firm's chief financial officer.

Still, the company was in a similar place a year ago, only to see the decline of its old businesses accelerate and the growth of the new ones slow. This time the positive trends may continue, due to a seasonal effect around chief information officers needing to spend their budgets (last year revenue rose by $2.5bn from the third to the fourth quarter). Mr Schroeter expects the bump to be between $300m and $400m higher this time around, in part because a recently introduced new version of IBM's mainframe has been selling well.

The real test will come later on, when the effect of the new mainframes wears off and IBM must still prove that it has reached an inflection point in its efforts to change. And that will not be easy. The old core will continue to decline. Notwithstanding the success of the new mainframe models, which specialise in thwarting hacking attacks, this computing franchise "is eroding", in the words of Mr Milunovich, who expects it to continue to shrink by 3% annually. This will weaken the corporate edifice. According to some estimates, although mainframe sales generate only 2% of the firm's revenues, related software and services account for a quarter of its revenues and more than two-fifths of its profit.

As for the new businesses, they seem to be gaining momentum, but how much is unclear. IBM includes many types of related products and services in its cloud revenue, even the "private" clouds it is building for customers on their premises. But it is the public cloud that has become the centre of gravity in IT and the main source of innovation, says Mr Gens. It is where new software and, increasingly, new hardware, such as specialised AI chips, are developed. Microsoft is now even building tools for developers in the public cloud so that they can experiment with quantum computers, which are much more powerful than conventional ones.

With AI the financial picture is similarly blurry. IBM does not reveal Watson's profits. In July Jefferies, another investment bank, warned in a report that profits from IBM's AI investments may in fact only barely cover their cost of capital. The firm itself says that AI is now woven like a "silver thread through all its products", in the words of Mr Schroeter. It also says that more customers are using the technology to power new services, such as tax advice and automated customer support. And it has made certain AI products, such as speech recognition and translation, available as online services for other firms to combine them with their own offerings. But Amazon, Microsoft and many startups sell similar "cognitive services", some of which are said to be better than IBM's.

The new businesses may simply not be as profitable as the old ones. Mr Schroeter says that they are and that margins will fatten (profits were down 4.5% in the past quarter, to $2.73bn). This week's bounce in IBM's shares suggest that investors are giving Ms Rometty the benefit of the doubt. But the firm has yet to show that this optimism and the expectation of a successful turnaround are justified. ■

Aircraft manufacturers

Protection racket

Why Airbus's tie-up with Bombardier is so damaging for Boeing

LIKE an airliner in service, Bombardier's C-Series programme has had multiple highs and lows. In 2008 the Canadian firm began its attempt to break Airbus and Boeing's duopoly on smaller jets, spooking the pair into upgrading their own models. Costs and delays pushed it near bankruptcy in 2015, followed by a bail-out from the Quebec government worth C$2.8bn ($2.2bn). The next year an order for 75 C-Series jets from Delta, the world's third-biggest carrier, kept the programme aloft. But decisions in September and October by America's Commerce Department to agree to demands by Boeing, an aerospace giant, to impose a total tariff of 300% on importing those planes into America risked the C-Series project crashing once and for all.

Alabama bound

On October 16th came a surprise surge. Bombardier said it would hand over half the project to Airbus, a European aerospace firm, free of charge. Bombardier and Investissement Québec, the province's investment arm, will own about 31% and 19% respectively. *Aviation Week*, a trade journal, called it "the deal of the century". For Bombardier, whose shares rose 16% on news of the deal, it rescued the C-Series from a premature demise, and pulled the firm clear of a financial cliff.

Airbus had first looked at buying into the C-Series in 2015 but did not invest, worried about the technical risks in its development. But now the C-Series is in service, so the tie-up makes more sense. Bombardier, for its part, lacked sales expertise for big jets or a global maintenance network, which was putting off buyers, but Airbus thinks it can fix these problems by sharing its marketing skills and servicing system.

The latter's shares rose by 5% this week—Airbus now owns a controlling stake in a new aircraft, admired for its fuel efficiency, for which most development costs have already been paid. "This is a win-win-win situation for everyone", crowed Airbus's chief executive, Tom Enders. But not for Boeing, Airbus's arch-rival. The deal is aimed at sidestepping the tariff imposed at the American firm's behest. Airbus plans to assemble Delta's jets—half the components of which are American—at its existing factory in Alabama. It hopes that will result in the C-Series being classed as a domestic product.

But overturning the tariffs may be easier said than done. Jennifer Hillman of Georgetown University, who was a commissioner at America's International Trade Commission (USITC), thinks that the deal comes too late to affect the decision to impose anti-dumping or anti-subsidy duties against the C-Series (although the USITC may strike down the duties anyway). Boeing has insisted that any duties should be "paid on any imported C-Series airplane or part". It could also argue that not enough value was added in assembly, and that Airbus therefore should still face the duties. Airbus and Bombardier's manoeuvre "looks like a questionable deal between two heavily state-subsidised competitors to skirt the recent findings of the US government", Boeing said.

It is right to fear the new combination. Although Airbus has lost ground in "widebody" jets recently as it refreshes its range, the European giant has already grabbed half the market for "narrowbodies" such as the C-Series. Analysts think the tie-up will further tighten Airbus's grip. Boeing may now have to spend tens of billions of dollars launching a new narrowbody jet to compete, much sooner than planned.

And by pushing for tariffs on the C-Series, Boeing has annoyed customers, from Delta to the governments of Canada and Britain, which are threatening to tear up future military contracts. News of the tie-up was greeted warmly not only in Canada but also in Northern Ireland, where the C-Series' wings are made. The Democratic Unionist Party, the province's largest party, which supports the government of Theresa May, the British prime minister, said it was "thrilled" with the deal.

For Boeing, "the wounds are self-inflicted", says Adam Pilarski, the former chief economist of McDonnell-Douglas, now part of Boeing. If Boeing had let the Canadian minnow alone, after all, the C-Series would probably have sold only 300 or so planes. But now Boeing's tariffs have destroyed the C-Series' value and handed it to its rival for free. Airbus wants to sell up to 6,000 of the planes over the next 20 years.

The triumph of the "cute little plane", as Airbus once dismissively dubbed the C-Series, however, should not obscure a more troubling trend, which is the increasing dominance of Airbus and Boeing in aerospace. Instead of breaking their duopoly, Bombardier was consumed by it. ■

In "Pipe Dreams" in the issue of October 7th, we did not mention that Telxius, controlled by Spain's Telefónica, owns half of Marea, a subsea cable, along with Facebook and Microsoft, which each have 25%. Sorry.

Saudi Aramco's IPO

My kingdom for a bourse

A capricious crown prince is muddling the world's biggest share offering

THE proposal to sell shares in Saudi Aramco, the world's biggest oil company, stunned the financial markets last year. Muhammad bin Salman, now Saudi Arabia's crown prince, promised that it would be the biggest initial public offering (IPO) of all time, valuing Aramco at $2trn. It was to be the centrepiece of his plan to transform the Saudi economy, reducing its dependence on oil. It was meant to foster financial transparency and accountability in one of the world's most hermetic kingdoms. Above all, it would cement the young prince's image as a bold moderniser soon to inherit the throne.

Alas, youthful impatience appears to have got the better of him. His tendency to micromanage the IPO and vacillate over where Aramco should be listed has caused delay and confusion. Matters came to a head this week when advisers, speaking anonymously, and company executives doing the same, gave conflicting reports, suggesting a mutinous atmosphere.

The kingdom's advisers say privately that the decision to list in New York or London has been postponed, and that the plan "for now" is to issue shares on Riyadh's puny Tadawul exchange, with a private placement possibly to Chinese investors. But Khalid al-Falih, the oil minister and Aramco's chairman, insisted the IPO would go ahead at home and abroad next year as originally planned. Company officials scorn the idea of listing only on the Tadawul, which would be swamped by an Aramco IPO.

The confusion appears to have originated from the royal palace. From the outset, MBS, as the crown prince is known, has insisted that the firm should be valued at no less than $2trn, and that the IPO should happen next year. He had not fully appreciated either the threat of lawsuits related to the terrorist attacks of September 11th 2001 that could result from listing on the New York Stock Exchange, or the complexities of issuing shares on the London Stock Exchange, where institutional investors are angry about efforts to water down listing rules for Aramco. He wrongly assumed that, given the huge fees promised to bankers and advisers, other actors in the world of finance would bend the knee.

Listing initially on the Tadawul only, as well as doing a private placement, may be a misguided attempt by MBS to skirt some of these difficulties, advisers say. It is seen as a way to promote the Saudi capital markets, and avoid the impression of selling off the family silver to foreigners. But with a limited pool of capital in the kingdom, some say a listing there could never raise the $100bn that MBS needs for his so-called Public Investment Fund to bankroll non-oil investments in the country.

Advisers say the kingdom is also considering recent expressions of interest by Chinese oil companies and other Asian investors, who are keen to take up to a 5% stake in Aramco. The attraction is that it would further cement ties between the world's biggest producer and huge consumers of oil. But it would be unlikely to give the crown prince the $2trn valuation he wants, unless he guarantees large supplies of cheap oil as a side deal.

The confusion is uncomfortable for Aramco, which, as national oil companies go, should be an attractive bet for investors. It has 15 times more reserves of oil and gas than ExxonMobil, its biggest private competitor, higher production, fewer employees and lower costs per barrel. It also has an abundance of young (including many female) engineers, and technology that can almost visualise the sea of oil beneath the desert sands. Its executives say that efficiencies inherited from the days that it was American-owned persist. Many Aramcons, as company officials are known, appear to view the IPO as an unwelcome distraction, but are at least mollified by the prestige they think an international listing would confer.

To achieve that goal, MBS may need to reflect further on what an IPO means. His government is Aramco's only shareholder and should, of course, have the final say. But unless he is prepared to loosen the reins, allow the IPO to advance at a prudent pace, and let investors decide what the correct value is, he might do better to scrap it altogether. His attitude so far suggests too little faith in the market forces that he wants to unleash. ■

The Weinstein Company

Into the frame

NEW YORK

A property billionaire helps Harvey Weinstein's film studio

AS DISTRESSED assets go, the Weinstein Company (TWC) is uniquely distressing. Much of its value was bound up in the brands of its eponymous founding brothers, one of whom, Harvey Weinstein, has been accused of sexual harassment and of assault by dozens of women in the film industry in America and elsewhere. Amazon Studios, Apple and some television networks have hastened to cut ties with the studio, unwind production deals and remove Mr Weinstein's name from credits. Mr Weinstein's accusers may well sue the company. It was already heavily indebted after a recent string of box-office flops.

Who would see an opportunity? Aside from TWC's particular troubles, independent films are a tough business, and the studio has had to haggle with creditors. But for a vulture investor some of the studio's assets hold value. On October 16th Thomas Barrack (pictured above), chairman of Colony Capital, a private-equity firm, said he would immediately put an undisclosed sum of cash into TWC and look at buying part or all of it. Mr Barrack, a 70-year-old property investor who is a friend of President Donald Trump and who has served as the chairman of Mr Trump's inaugural committee, has experience swooping in for high-profile distressed assets. In 2008 his firm acquired Michael Jackson's Neverland ranch. Colony also put up millions to rescue Annie Leibovitz, a photographer known for her work with celebrities, from financial trouble.

Still, some see the potential acquisition as a bail-out for the Weinsteins, who own more than two-fifths of the studio. Harvey Weinstein, who was fired from running the company on October 8th, has now given up his board seat, and Bob Weinstein, who now faces a single accusation of sexual harassment (and denies the allegation), may be on his way out. Making no direct reference to the scandal engulfing the studio, Mr Barrack said Colony would help return TWC to "its rightful iconic position in the independent film and television industry".

He is certainly familiar with TWC's assets, which comprise its film library as well as a slate of films and television projects. In 2010 his firm participated in the purchase of Miramax Films, the Weinstein brothers' predecessor film company, from Disney for $660m. According to a Hollywood producer familiar with both firms, Miramax's new owners could not develop projects based on many of their successful old titles, like "Shakespeare in Love" and "Bad ▸▸

Indian aviation

Winging it

MUMBAI

An inventor of planes runs into heavy bureaucratic turbulence

ALL great aviation ventures start with mavericks willing to defy both the laws of physics and the scepticism of their peers. William Boeing, Oleg Antonov and Howard Hughes are some of the best-known examples. Next, perhaps, is Amol Yadav, who for much of the past decade has been building aeroplanes on the roof of the Mumbai flat he shares with 18 family members, and battling the Indian authorities to let him fly them.

Admittedly, only experts would be able to distinguish the six-seater propeller plane (pictured) Mr Yadav has designed from scratch from a run-of-the-mill Cessna. But his plane is the only one in decades with wholly Indian credentials, he says. Much larger outfits have tried but struggled to get an indigenous craft certified for production, including National Aerospace Laboratories, one of several state-owned aviation mastodons.

Self-identified visionaries are commonplace in business. But politicians have fallen over themselves to support Mr Yadav. His plane was the surprise star of a "Make in India" jamboree in 2016 to promote manufacturing in the country. The chief minister of Maharashtra, the state Mumbai is in, has promised not only government backing but land for Mr Yadav to develop and build his follow-up act, a 19-seater that is currently taking up space in his improvised domestic hangar. He has spent about 50m rupees ($800,000) of friends' and family's money to pursue his goal. Helping him is a staff of ten full-time aeroplane builders, assisted by a group of volunteers.

Even Narendra Modi, the prime minister, has been briefed on Mr Yadav's rooftop activities, and directed officials to help him. But Indian bureaucrats are unmoved. The continued development of the 19-seater hinges on the smaller plane being certified as airworthy by the civil aviation authority. It has been so long since its officials have had to sign off on a new plane design that they seem to have forgotten how. Inspecting the six-seater plane had been on its to-do list since 2011. Mr Yadav complains that repeated rule changes have been designed to block him. Even entreaties from the prime minister's office have failed to sway the regulator.

Having been hoisted off its rooftop hangar, the smaller plane is now languishing on the tarmac of Mumbai airport as if lashed to the ground by red tape. Whether Mr Yadav's aircraft are airworthy is unproven. He says they are, and might know, given his day job as a captain for Jet Airways, a private airline. Mr Yadav wants America's Federal Aviation Administration to certify his planes—he will soon apply to it—and India's bureaucrats to accept its verdict.

Private backers want to invest in his budding aviation venture, Mr Yadav says, but that might alter its destiny as a future national champion. No aircraft-maker anywhere has thrived without state backing, he notes, usually through defence contracts. He also has blueprints for a fighter jet, development of which would cost half the $250m or so India pays to buy a single jet from Dassault, a French manufacturer—if only bureaucrats would grasp his vision, that is.

But India's not rolling out the red carpet

Santa", without the consent of the Weinstein brothers, who had produced them. Miramax and TWC entered into complicated development agreements, but little of significance has come from them thus far ("Bad Santa 2" was made, and flopped on its release last year, failing to earn back its budget). The two also share production rights to some television properties, including Project Runway, a reality competition around fashion.

Combining Miramax and TWC into one entity would clear up rights issues for both companies. Mr Barrack no longer has a stake in Miramax, as Colony and its fellow investors sold the studio last year to beIN Media Group, a sports media company based in Qatar, for an undisclosed sum. Mr Barrack may buy TWC as a short-term salvage job in order to sell it to Miramax's current owner, or he could break the company into pieces, splitting off, for example, the television production business, and sell them off individually. Whatever happens to the business now, the Weinstein name will not be on it. ■

Lotte exits China

Thaad's all, folks

SEOUL

A Chinese backlash over South Korea's missile defences hits Lotte and other firms

IN A cosmetics emporium in central Seoul, rows of snail-slime face-masks sit untouched. Not long ago, visiting Chinese tourists would snap these up as avidly as a designer handbag in New York or anything from London featuring the Queen. Yet now their rejuvenating properties are failing to lure the country's shoppers. Seo Sung-hae, a salesman, says business has slowed to a snail's pace, because of a drop in the number of Chinese visitors. "We used to have 100 customers a day, but after THAAD, there are almost none," he says.

THAAD, or Terminal High Altitude Area Defence, is an American missile-defence system designed to guard against North Korea that was installed in South Korea starting in March. Chinese authorities protest that its radar could be used to spy on its territory. Chinese newspapers have encouraged consumers to boycott South Korean goods. The plan was to "bully" Korea into ditching THAAD, says Han Suk-hee of Yonsei University, who until April was South Korea's consul-general in Shanghai.

Seven months on, the campaign has fallen short of that goal but has claimed a big corporate victim. On October 12th Lotte, a South Korean conglomerate, confirmed that it hopes to sell its Chinese hypermarkets by the end of the year. That marks a significant retreat for the firm, which had been trying to crack the market since 2008. The group employs about 20,000 people—a third of its overseas staff—in China, and in 2015 registered 3trn won ($2.65bn) of sales there.

It became a target after signing a deal in February with the South Korean government that allowed the defence ministry to use one of its golf courses as a base for the THAAD launchers. (Shin Dong-bin, its chairman, later said he had no choice but to comply). Chinese officials then closed 77 of the 99 Lotte Mart stores in China on pretexts such as breaches of fire-safety rules. The firm itself shut another 13 stores when customers stayed away. Sales in the second quarter slumped to 21bn won ($18.5m), down from 284bn won in the same period last year.

South Korean cars, beauty products and even confectionery have been affected. Sales at Beijing Hyundai, jointly owned by the South Korean conglomerate and Chinese manufacturer BAIC Motor, dropped by two-fifths in the first eight months of the year. AmorePacific, a cosmetics firm in South Korea, reported a 58% dip in its second-quarter operating profits. The country's tourism industry, too, has felt the pinch since group tours from China were banned in March. There were 87% fewer Chinese tourists on Jeju, a pretty island south of the peninsula, during this year's harvest festival than in 2016. Korean businesses will lose $15.6bn of tourism revenue if the slump continues until next March, according to the Hyundai Research Institute, a think-tank funded by the conglomerate. Korean industries other than tourism could lose $8.3bn over the row, says the Korea Development Bank.

Yet the boycott is being applied selectively. It favours some Chinese firms by penalising their South Korean competitors, while leaving manufacturers on the mainland free to continue importing the parts on which their businesses rely from other South Korean firms, notes Choi Pae-kun, an economist at Konkuk University in Seoul. Korean exports to China jumped by 23% in September compared with the same month last year, driven in part by surging demand for memory chips, many of which are made by Samsung.

The row with China may obscure some failings of South Korean business. Carmakers' share of the Chinese market fell from 9% in 2014 to 7% in 2016, before the row. Partly due to competition from online retailers, Lotte Mart has been losing money in China since 2011. But the events of March were undoubtedly a turning point. Beijing Hyundai's sales rose in January and February, but plunged by 65% in May. Lotte Mart's overseas losses are predicted to rise from 124bn won in 2016 to 250bn won this year. "It can't be 100% THAAD," says Kim Soo-min, a lawmaker. "But even if there were losses before, they would not suddenly more than double in a year."

China's stance may be shifting. Mr Han says an agreement on October 13th to extend a currency-swap deal between South Korea and China was a "gesture" of peace from Beijing. China will surely see little point continuing the boycott, since it failed to stop the remaining THAAD launchers being installed last month, he argues. Some analysts predict that China will end its ban on tour groups visiting South Korea after the Communist Party's congress, which began on October 18th. "There is a little bit of hope," says Ms Kim. ■

Closing time came suddenly

Schumpeter | Reality distortion field

Companies that burn $1bn a year are sexy, dangerous, and statistically doomed

YVES SAINT LAURENT, Lady Gaga, David Bowie. Some people do not operate by the same rules as everyone else. Might the same be true of companies? Most bosses complain of being slaves to short-term profit targets. Yet a few flout the orthodoxy in flamboyant fashion. Consider Tesla, a maker of electric cars. This year, so far, it has missed its production targets and lost $1.8bn of free cashflow (the money firms generate after capital investment has been subtracted). No matter. If its founder Elon Musk muses aloud about driverless cars and space travel, its shares rise like a rocket—by 66% since the start of January. Tesla is one of a tiny cohort of firms with a licence to lose billions pursuing a dream. The odds of them achieving it are similar to those of aspiring pop stars and couture designers.

Investing today for profits tomorrow is what capitalism is all about. Amazon lost $4bn in 2012-14 while building an empire that now makes money. Nonetheless, it is rare for big companies to sustain heavy losses just to expand fast. If you examine the members of the Russell 1000 index of large American firms, only 25 of them, or 3.3%, lost over $1bn of free cashflow in 2016 (all figures exclude financial firms and are based on Bloomberg data). In 2007 the share was 1.4% and in 1997, under 1%. Most billion-dollar losers today are energy firms temporarily in the doldrums as they adjust to a recent plunge in oil prices. Their losses are an accident.

But a few firms love life in the fast lane. Netflix, Uber and Tesla are tech companies that say their (largely unproven) business models will transform industries. Two others stand out for the sheer persistence of their losses. Chesapeake Energy, a fracking firm at the heart of America's shale revolution, has lost at least $1bn of free cashflow a year for an incredible 14 years in a row. Nextera Energy, a utility that runs wind and solar plants, and which investors value highly, has managed 12 years on the trot.

Collectively these five firms have burned $100bn in the past decade, yet they boast a total market value of about $300bn. Combining punchy valuations with massive losses means taking the entrepreneurial art form to a dizzying extreme. Steve Jobs, Apple's co-founder, was said to have a "reality distortion field" that allowed him to bend the perception of others (although Apple itself was fairly timorous, losing just $874 in its worst year, in 1993). The experience of the five suggests that bending reality today has three elements: a vision, fast growth, and financing.

Take the vision thing first. A charismatic leader with a world-changing plan is *de rigueur*. For its first 23 years Chesapeake was led by Aubrey McClendon, a cocky Oklahoman who pioneered the process of blasting rocks to extract gas and oil (he died last year in a high-speed car crash). Reed Hastings at Netflix plans to destroy the conventional TV industry by selling films and shows over the internet. Like Mr Musk, Travis Kalanick, Uber's tarnished former boss, dreams of changing how humans travel. Nextera is led by technocrats but their aim is grandiose—to usher in a new generation of energy technology.

The vision needs to be validated by runaway growth. Often firms emphasise a flattering operating measure, such as oil and gas pumped from the ground, the number of rides hailed and so on. Investors need to believe in a high "terminal value", a point in the future when high, stable profits will arrive. So it helps to show that, hypothetically, profits would gush if breakneck growth were to stop. Uber says it is profitable in cities where it has operated longest, such as San Francisco. Nextera says that if it stopped investing in new capacity, it would make $6bn of free cashflow a year. Netflix amortises the cost of content over periods of up to five years, so reports an accounting profit even as it bleeds cash.

The third element is financing to pay for huge cumulative losses. Each of the five firms has been a financial innovator, taking advantage of cheap money and growth-hungry investors. Uber has tapped private capital markets, Nextera has structured part of its business as a partnership, Tesla has taken deposits from customers and also trades environmental tax credits. Chesapeake Energy sparked Wall Street's lust for shale junk bonds, and Netflix has signed commitments to make $14bn of future payments to studios and artists to buy creative content.

So sustaining a reality distortion field is possible, but the longer it goes on for, the harder it gets. More capital has to be raised and, in order to justify it, the bigger the firm's projected ultimate size—its terminal value—has to be. Fast growth puts huge strain on managers. At some point the edifice can come tumbling down. The five companies described here have $60bn of borrowings, and one, Chesapeake, is struggling with its debt load.

Poker face

A few firms other than Amazon have defied the odds. Over the past 20 years Las Vegas Sands, a casino firm, Royal Caribbean, a cruise-line company, and Micron Technology, a chip-maker, each lost $1bn or more for two consecutive years and went on to prosper. But the chances of success are slim. Of the current members of the Russell 1000 index, since 1997 only 37 have lost $1bn or more for at least two years in a row. Of these, 21 still lose money.

To justify their valuations, the five firms examined by Schumpeter must grow their sales by an estimated 8-33% each year for a decade. Based on the record of all American companies since 1950, and the five firms' present revenue levels, the probability of this happening ranges between 0.1% and 25%, using statistical tables from Credit Suisse, a bank.

Firms that burn piles of cash are often lionised in an era when growth is sluggish and few companies reinvest all their profits. But losing a billion dollars or more a year is a wildly risky affair and the odds are that such businesses will fall flat. This should not be a surprise—hardly anyone can pull off building a fashion empire around androgyny, wearing a raw meat dress to an awards ceremony, or singing about life on Mars. ■

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Renegotiating NAFTA

Preparing for the worst

American demands are so extreme some suspect it of not wanting a deal at all

THESE are troubling times for Roberto Santana Flores, a Mexican maker of *charro* shirts, a modern take on the Mexican cowboy aesthetic. He recalls life before the North American Free-Trade Agreement (NAFTA), a trade deal linking Mexico with America and Canada. He remembers his shirts incurred a whopping 37.5% tariff if exported to America. Now they cross the border duty-free. But his dream of expanding his factory and his American customer base is under threat. He scours the newspapers daily for news of the NAFTA negotiations. They tell of conflict. Some even warn the deal may collapse. Since it covers trade worth more than $1trn a year, that is alarming for many more than Mr Flores.

On October 17th trade representatives of the three countries gathered to mark the end of the fourth round of talks. A collapse does not seem imminent. Robert Lighthizer, the United States Trade Representative (pictured, centre), denied that abandoning the deal was even being discussed, and announced an extension of negotiations into the first quarter of 2018. But he also played down the damage that would be done if no agreement is reached. And Chrystia Freeland, the Canadian foreign-affairs minister, said that in a "no-fuss Canadian way" she was preparing for "the worst possible outcome".

Some parts of the revamp are progressing nicely. A trilateral statement boasted of progress on the rules covering competition policy, customs, digital trade and regulatory practices. In others, the evident tensions were always to be expected. Mr Lighthizer expressed dismay that his counterparts had rejected some text (on telecommunications, anti-corruption and digital trade) agreed to in the Trans-Pacific Partnership—a 12-country deal from which President Donald Trump withdrew America in January. But Mr Lighthizer knows that a three-party deal differs from one granting extra access to Japan. For her part, Ms Freeland was incredulous at the stinginess of America's offer on government procurement. It meant that Bahraini businesses would have more access than Mexican and Canadian ones.

These are not the only American proposals to cross the others' red lines. Rules that would make it easier to impose anti-dumping duties to protect seasonal American agricultural products, for example, have provoked outrage. Demands to phase out Canada's system of supply management for dairy, poultry and eggs are politically explosive. No big political party in Canada dares take on the well-organised dairy lobby. America's proposal to scrap NAFTA's Chapter 19, which provides a way to resolve disputes over anti-dumping and countervailing duties, recalls 1987, when the issue provoked a Canadian walkout from trade talks.

All this is acrimonious, but within the normal bounds of trade negotiations. It is a final set of American demands that is most contentious. Ms Freeland talked of "unconventional" proposals that made her team's work "much more challenging". John Murphy of the United States Chamber of Commerce, a business lobby, was blunter, describing them as "so extreme that they allow no room for negotiation".

The first is a five-year "sunset" clause, forcing a systematic regular review of the deal. Presumably the American administration believes this would deter its trading partners from bad behaviour. More probably, it would chill cross-border investment and trade. Nuno Limão, a professor of economics at the University of Maryland, has found that a hefty chunk of the trade-stimulating impact of deals comes from increased predictability. A sunset clause embedding uncertainty would do the reverse. On October 17th Mr Lighthizer, who does not see his job as promoting investment in Mexico, seemed unmoved by such concerns, asking why businesses did not just factor the risk into their decision-making.

Making America grate again

The second deal-breaker covers the car industry, responsible for more than a quarter of American imports from Mexico and Canada and, in Mexico's case, all of the trade deficit in goods. Mr Trump wants to bring American jobs back from its neighbours, and eliminate the bilateral trade deficit. At present, at least 62.5% of a vehicle must be from within NAFTA members to qualify for tariff-free treatment. Mr Lighthizer wants that raised to 85%, with an extra requirement of 50% American content.

Those involved in the industry squeal at the disruption such changes would inflict on deeply integrated supply chains. Official statistics do not capture the likely fallout. In a recent article Wilbur Ross, America's commerce secretary, who has ▸▸

reportedly been pushing for tighter rules, complained that only 16% of the value embedded in Mexican exports to America is American. But a new paper by Alonso de Gortari of Harvard University finds that once the way supply chains are adapted for the export market is taken into account, the true value embedded in Mexican vehicle exports to America is 38%.

Rather than bring jobs back to America, the proposed content rules would in the short term force car manufacturers to bypass the deal altogether, instead incurring the 2.5% tariff on cars imported into America. That would raise prices for American consumers and make North American producers less competitive.

So unorthodox is the latest batch of demands, introduced only during the latest round of talks, that some question whether the Trump administration is negotiating in good faith. Mr Lighthizer claims to be trying to please only his boss, Mr Trump. But Congress must pass the final deal. This is topsy-turvy. Normally, in America's trade talks, the president plays nice cop to Congress's tough guy. This time, roles are reversed. Members of Congress are examining whether it has the legal power to block an attempt to withdraw from NAFTA.

After four rounds and 22 days of negotiations squeezed into just over two months, there is now a month until the next round. In theory this should give each side time to think of "creative ways" to narrow their differences. So far the rounds have been packed so tightly together that there has not been much chance to update positions between rounds, nor to share texts in advance. But at this stage, it seems unlikely that any deal that will please the Mexicans, the Canadians, Congress and Mr Trump exists. Mr Flores, the cowboy-shirt exporter, has begun to think beyond NAFTA. After all, "there are other countries to sell to." ■

Buttonwood | A taxing problem

Reducing inequality in a globalised economy

INEQUALITY is one of the big political issues of the 21st century, with many commentators citing it as a significant factor behind the rise of populism. After all, nothing could be more indicative of the triumph of the common man than the elevation of a property billionaire to the American presidency.

A new IMF report* looks at how fiscal policy can help tackle inequality. In advanced economies, taxation already has an impact. The Gini coefficient (a standard measure of income inequality) is around a third lower after taxes and transfers than it is before them. But whereas such policies offset around 60% of the change in market inequality between 1985 and 1995, they have had barely any impact since.

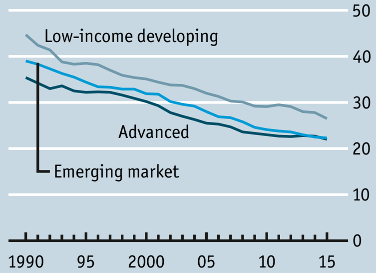
That is because of a change in policy direction. Across the West, taxes on higher incomes have generally fallen. This could be for a number of reasons, the IMF says. The tax take from high earners could have become more "elastic" (ie, sensitive to rate changes); in a mobile world, the elite will move countries to reduce their tax bills. But there is no sign that elasticity has increased in recent decades. A second possibility, easily dismissed, is that the share of income taken by the rich might have fallen; it has, of course, increased. A third option is that society reached a consensus that tax rates needed to be cut to help the rich. In fact, surveys show that people are more in favour of redistributive policies than they were in the 1980s.

Another reason that governments might have driven down top tax rates could be to create greater incentives to invest, thereby boosting economic growth. That certainly seems to be the rationale behind the cuts being proposed by President Donald Trump.

But the IMF, after analysing tax rates in OECD countries between 1981 and 2016, found no strong relationship between how progressive a tax system is and economic growth. Indeed the study adds that for countries wanting to redistribute wealth, there may be "scope for increasing the progressivity of income taxation without significantly hurting growth".

Race to the bottom

Average corporate income-tax rate by economic group, %



Source: IMF

The latter sentence will be seized on by politicians on the left. But the argument works better in some places than in others. The IMF reckons that the optimal tax rate on higher incomes, assuming the aim is revenue maximisation, is 44%. Britain's highest rate is already 45%. So the IMF study does not really provide much ammunition for Jeremy Corbyn, the leader of the Labour Party, the main opposition, who wants to raise it to 50%. It is a better argument, perhaps, for Bernie Sanders, the Democrat, since the top American tax rate, before any Trump cuts, is only 39.6%.

Even here, a note of caution is needed. Companies are inclined to move in search of more favourable tax treatment—hence the success of Ireland in attracting business with its 12.5% corporate-tax rate, and the row about "inversions" where American companies move overseas to lower-tax jurisdictions. In response, countries have steadily lowered corporate-tax rates; since 1990 the average rate in advanced economies has fallen by more than 13 percentage points (see chart).

Many rich individuals can choose to shift the way they report their income to take advantage of lower corporate-tax rates. So it is difficult to push up the tax rate on individual incomes while simultaneously lowering the corporate rate. As the IMF report drily remarks: "International tax co-ordination could potentially address this problem but has proved very difficult to implement." So are there other ways to reduce inequality via the tax system? Another option discussed by the IMF is taxing property, which is an immovable asset. Inheritance taxes are another possibility, although they are costly to administer, and no G7 country raises more than 1% of GDP through this route.

Given the political clout of the rich, it seems unlikely that an international consensus on reducing inequality through higher taxes is going to emerge. In the absence of such a consensus, few governments will take the risk of raising their own rates unilaterally. Step forward, however, a future Corbyn government, which plans to increase the tax rate on companies as well as on individuals—all in the context of Brexit, when companies might in any case be reconsidering their decision to invest in Britain. It will be an economic experiment closely watched by other countries, suggesting a new national slogan: "Britain—we try policies so you don't have to."

* https://www.imf.org/en/Publications/FM/Issues/2017/10/05/fiscal-monitor-october-2017

Economist.com/blogs/buttonwood

South Africa's biggest asset manager

PIC apart

PRETORIA

An important and respected institution becomes embroiled in politics

THE rot in South African politics, which has eaten away at state companies, is spreading. This week McKinsey, a consultancy, apologised for the "distress" it had caused the South African people. Political mud had already drowned Bell Pottinger, a British public-relations firm, and forced resignations at KPMG, an auditor. So the shenanigans at the government-owned Public Investment Corporation (PIC), have set off alarm bells. One concern is an apparent attempt to oust Dan Matjila, its boss. A linked worry is whether PIC funds will be used to prop up state businesses.

The PIC is a lucrative prize: it is Africa's largest money manager, controlling 1.9trn rand ($140bn) of assets, mostly the pensions of state employees, and holding 11% of shares in South Africa's biggest 25 companies. So anonymous allegations against Mr Matjila, including the claim that he had misdirected funds to his girlfriend's business, naturally provoked a furore. On September 29th, after an internal audit, the PIC's board cleared him of wrongdoing. But many detected a plot to remove Mr Matjila and install a more pliable replacement. Mr Matjila himself told a South African newspaper that well-connected people wanted to force him out and get "the keys to the big safe", though he now says that his remarks were misconstrued.

Meanwhile, the government has been scratching around for funds to rescue South African Airways (SAA), the national carrier, which has not turned a profit in six years. The airline's corporate plan listed the PIC as a possible source of finance. But Mr Matjila has been reluctant to throw money at SAA, which he says has "governance issues". Nor did he agree to an alternative idea, in which the government would raise funds by selling its entire stake in Telkom, a phone and internet firm, to the PIC. Instead, the Treasury used 3bn rand of taxpayers' money to help SAA meet a repayment deadline on 30th September.

For now Mr Matjila survives. He has not completely ruled out investing in SAA, which worries public-sector unions. In theory, their members' pensions are not at risk: as a defined-benefit scheme, any shortfall in funding would have to be made up by the government. And the sums involved in an SAA bail-out would be only a tiny fraction of the PIC's assets. But the debate is about the principle, says Azar Jammine of Econometrix, a consultancy. Other state companies are likely to

Matjila, survivor

come calling; by its own reckoning, the PIC already holds about 50% of their bonds.

The PIC has been fairly well run. In contrast, many state firms are mismanaged and mired in allegations that overpriced contracts have been awarded to businessmen with the right political connections. The anti-corruption ombudsman found especially murky practices at the state-run rail agency when it was chaired by Sfiso Buthelezi (now, as deputy finance minister, the PIC's chairman). Lumkile Mondi, of the University of the Witwatersrand, sees the attacks on Mr Matjila as part of a broader effort to "put cronies into institutions for private purposes".

Such talk is dismissed by Malusi Gigaba, the finance minister, who has denied any "looting campaign" at the PIC. Ostensibly to allay concerns, he ordered an investigation into any irregularities. And Mr Matjila has tried to reassure pensioners, pointing out that the PIC can only invest within mandates set by its clients, such as the Government Employees Pension Fund.

The uproar has drowned out other questions about how the PIC should use its money. In recent years it has shifted to a more active investment strategy, with a focus on jobs and development. In the long run, argues Mr Matjila, that does not mean sacrificing returns; by creating jobs in industry, for example, the PIC is creating customers for other businesses in its portfolio, such as supermarkets. The PIC has also made unlisted investments in areas like health care and renewable energy.

But such an approach is open to charges of political interference. David Maynier, finance spokesman for the Democratic Alliance, the main opposition, says that the PIC risks becoming a "piggy bank" for the ruling African National Congress. Despite a few questionable investments, that has not come to pass. So far, at least. ■

Job tenure

Staying put

Millennials in America do not switch jobs faster than their parents did

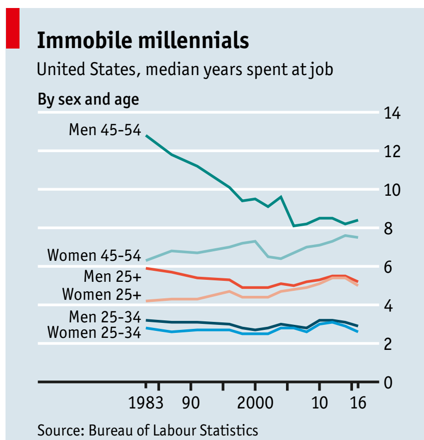
EVERYBODY knows—or at least thinks he knows—that a millennial with one job must be after a new one. Today's youngsters are thought to have little loyalty towards their employers and to be prone to "job-hop". Millennials (ie, those born after about 1982) are indeed more likely to switch jobs than their older colleagues. But that is more a result of how old they are than of the era they were born in. In America at least, average job tenures have barely changed in recent decades.

Data from America's Bureau of Labour Statistics show workers aged 25 and over now spend a median of 5.1 years with their employers, slightly more than in 1983 (see chart). Job tenure has declined for the lower end of that age group, but only slightly. Men between the ages of 25 and 34 now spend a median of 2.9 years with each employer, down from 3.2 years in 1983.

It is middle-aged men whose relationship with their employers has changed most dramatically. Partly because of a collapse in the number of semi-skilled jobs and the decline of labour unions, the median job tenure for men aged 45-54 in America has fallen from 12.8 years in 1983 to 8.4. That decline has been offset by women staying longer in their jobs and higher retirement ages, which is why the overall numbers have barely changed.

American workers are also now less likely to move home to find new work (see briefing). Fewer than 12% moved home last year, down from 20% in the 1950s. This pattern is true of younger workers, too: only a fifth of Americans between the ages of 25 and 35 moved last year; for past generations the fraction was closer to a quarter.

One place where millennials probably



are switching jobs more often is western Europe. Data from the OECD, a think-tank, show that since 1992 in each of France, Germany, Italy and Spain, the average job tenure for workers has increased overall. But it has shortened for younger workers. However, it is far from clear that this is by the young workers' choice. Labour-market restrictions in Europe have forced a growing share of workers into temporary "gigs". Over half of workers aged 15 to 24 in those four countries are on fixed-term contracts.

Data on Britain, which has looser labour-market regulations than continental Europe, tell a more complicated tale. OECD statistics show that average job tenures have fallen for young Brits. But research from the Resolution Foundation, another think-tank, finds that millennials are actually less likely to leave jobs voluntarily than the previous generation. Britons are also moving home less often. Between 2001 and 2016, the share of workers moving home to change jobs fell from around 0.7% to 0.5%. The number of workers doing so for work in Britain has risen again in recent years, but is still below its 2001 peak.

Some workers are indeed hopping from startup to startup every six months, or working as quasi-freelancers for Uber. But they are the exceptions. A drastic increase in job-switching rates would probably require a correspondingly drastic increase in labour demand. Those who fret that millennials are fickle may have too rosy a view of the labour market. ■

Chinese finance

Failing state

Government guarantees are not all they seem

THE Communist Party dominates China's economy and uses state-run companies, which it controls with an iron fist, to enforce its diktats. Or so the theory goes. Reality is messier: the party often struggles to monitor state-owned enterprises (SOEs), let alone to get them to toe its line. As it convenes its five-yearly congress, one of the financial system's dodgiest corners has served up a reminder of the limits to its power.

In the past two months at least seven online lenders backed by SOEs have collapsed. It was a business none should have been in, far removed from the industries they were supposed to focus on. The money potentially lost is trivial—roughly 1bn yuan ($150m), compared with government assets worth more than 100trn yuan. Still, these cases highlight how hard it is for the party to stamp its authority on the vast state sector.

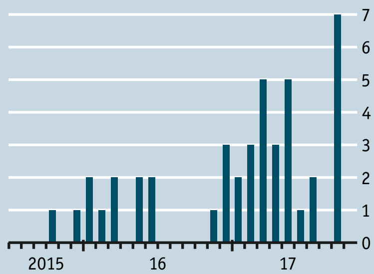
The troubled SOEs include distant subsidiaries of the national nuclear company, an aviation company and a big energy company in Shanxi, a northern province. They had acquired stakes, from as little as 20% up to 100%, in online peer-to-peer (P2P) lending platforms.

They were "marriages of convenience", says Joe Zhang, chairman of China Smartpay, a financial-services company. The P2P firms got instant credibility; SOEs, many of them struggling, eyed quick profits. Some will have done well from the P2P boom: industry-wide loans have increased more than 30-fold since January 2014, to 1.1trn yuan. Yet this frenzied activity has also left problems in its wake. On average more than 100 P2P firms have failed each month since early 2015, some because of mismanagement, others victims of outright fraud.

Investors imagined SOE-backed platforms would be safer. Jinsu Online, a P2P lender backed by a subsidiary of the China National Nuclear Corporation, said its backer would guarantee all its

Lenders of the last default

China, defaults by peer-to-peer lenders in which state-owned enterprises own shares



Source: Wangdaizhijia

funds. Lala Wealth, backed by a subsidiary of the Aviation Industry Corporation of China, vowed that its SOE shareholders would make it stronger. Both went into default last month. In the former case, the SOE had denied any involvement before the collapse; in the latter the SOE said it, too, was a victim.

The body that regulates China's state firms warned them last year to stay clear of P2P, fearing that online lenders would exploit their reputations. But industry data show an increase in the number of P2P firms with SOE shareholders since then of a third, to nearly 200.

It seems odd that the government has such weak control over SOEs, given President Xi Jinping's tightening grip on China's economy. But more than 100,000 companies technically count as SOEs. Most are owned by local governments. Moreover, as many as five layers of ownership have separated those that invested in P2P lenders from their parent groups; many also include private businesses as large shareholders. An optimistic conclusion is that these collapses might teach investors to think twice before assuming that the state always stands behind SOEs, however risky. A worrying one is that many still rely on such support.

Development banks

How green is my value?

Multilateral lenders vow to be less cagey about their carbon footprints

THE World Bank gets a lot of flak. Developing countries clamour for a bigger role in its management. President Donald Trump's administration lambasts it for lending too much to China. Employees are in open rebellion against their boss, Jim Yong Kim. Now the embattled institution faces criticism from a traditionally friendlier quarter: environmentalists. They accuse it and other multilateral development banks (MDBs) of not being upfront about their true carbon footprint.

That must hurt. After all, MDBs pioneered climate-friendly finance. Ten years ago the European Investment Bank issued the world's first green bond to bolster renewables and energy-efficiency schemes. The World Bank has not backed a coal-fired plant since 2010. In 2011-16 it and the five big regional lenders in the Americas, Asia, Africa and Europe offered developing countries a total of $158bn to help combat climate change and adapt to its effects. They disclose the amount of carbon dioxide emitted by their day-to-day operations, from lighting offices to flying bankers around the world. But many greens point out they have been more coy about their continued support of dirtier development.

Oil Change International, an advocacy group, estimates that, excluding low-carbon but disruptive projects such as large hydropower plants, for every dollar invested in the past three years in green energy such as solar or wind farms, MDBs funnelled 99 cents to the fossil-fuelled sort (see chart on next page). Helena Wright of E3G, a think-tank in London, says that about $1.5bn in "green" lending between 2013 and 2015 looks, closer up, distinctly brownish. The European Bank for Reconstruction and Development (EBRD), for example, counted 9% of a €200m ($222m) loan to build a port terminal in Morocco as climate finance, although the facility would handle and store crude oil and coal.

The banks dispute such findings. Many of the supposedly brown loans go through national treasuries or financial intermediaries. They can choose to finance fossil-fuel projects from general expenditure, not the MDBS' cash specifically. Other "brown" loans bankroll cleaner alternatives to grubby coal plants, such as gas-fired ones. The EBRD explains that the Moroccan loan is to adapt the port to rising sea levels.

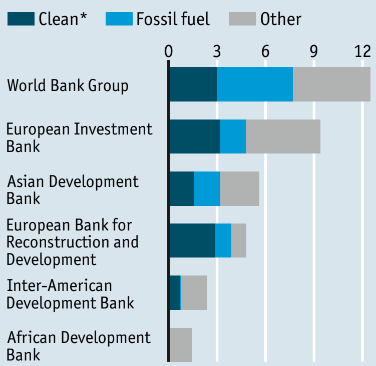
Yet many development bankers concede that their institutions could be more forthcoming about the greenhouse-gas emissions embedded in their portfolios. Some private-sector financial firms such as AXA, a giant French insurer, and public-sector pension funds in America and Britain have been reporting such totals for several years now. Among the MDBS, only the Inter-American Development Bank and the EBRD do so comprehensively.

Others are belatedly piling in. At the World Bank's annual jamboree in Washington this month Mr Kim vowed to report total carbon dioxide produced and avoided by bank-funded projects. A framework for monitoring net emissions should be ready next year. The Europeans are refining their approaches. So was their African counterpart, before an administrative overhaul last year put the initiative on hold. Last month the Asian Development Bank pledged to gauge and reduce its portfolio's net contribution to global warming.

Chinese-led newcomers to development banking also look keen, at least on paper. The New Development Bank focuses on "sustainable infrastructure" and dedicated its first batch of loans entirely to clean-energy projects. In June the vice-president of the Asian Infrastructure Investment Bank, Thierry de Longuemar, affirmed that the bank will not finance coal-fired power plants. "We will not consider any proposals if we are concerned about the environmental and reputational impacts," asserts a spokeswoman. Their Western-led forebears can tell them how closely critics will monitor that promise. ■

Fossil record

Energy finance, 2016, $bn



Source: Oil Change International

*Excludes large hydroelectric plants

Counterfactual underwriting

Might-have-beens

A Lloyd's report urges insurers to ask "what if?"

ON JULY 7th disaster was narrowly averted when an Air Canada passenger plane, trying to land on a full taxiway at San Francisco airport, pulled up just in time. Five seconds longer, and it might have crashed into fully loaded planes and killed over 500 people, in potentially the deadliest aviation disaster ever. Instead, the incident became a non-event—not just in collective memory but also in insurance. With no losses, there was nothing to log. Yet ignoring such near-misses, argues a report published this week by Lloyd's of London, an insurance market, and RMS, a risk-modeller, is a missed opportunity.

Counterfactual "what if" thinking may be an enjoyable pastime for historians—"What if Hitler had been assassinated?" being one favourite—but is not common among underwriters. They prefer to base estimates of future risk—and hence premiums—on hard data of what happened in the past, eg, the number of aeroplanes that crashed and the total losses incurred. Since actual aviation losses have been light this year compared with previous years, they may well conclude that such risks are falling. Particularly in a weak market for insurance, where pressure on prices is constant, the temptation to lower premiums merely because losses have been low can be dangerous, warns RMS's Gordon Woo, a "catastrophist" (ie, specialist in the mathematical modelling of extreme risks).

For common perils, such as car crashes or burglaries, plenty of data are available, allowing confident predictions based on the past. But for unusual, emerging or extreme risks—such as natural catastrophes, cyber-threats or terrorism—the lack of precedents means such methods can be inadequate. This leaves underwriters with blanks to fill in, particularly around how frequently a rare event—a tsunami, say, or an epidemic—might occur and what the maximum losses could be. Models which run hundreds of thousands of loss simulations can help fill in such blanks but are not perfect. And the lack of real-life data makes accurately underwriting an event that has never happened very hard.

To make up for such shortcomings, the report calls on the industry to keep an alternative-claims book in which they record hypothetical losses from near-misses (such as the Air Canada plane) and could-have-been-worses ("suppose Hurricane Irma had hit Miami"), multiplied by their probability. They could then use this as an underwriting aid. By this logic, because the chance of Irma's striking Miami was roughly 20%, and it would have increased estimated maximum losses by $100bn, this would be recorded as an additional potential loss of $20bn. Besides deepening the data pool on which underwriters base risk assessments, such calculations could help regulators submit catastrophe models to stress tests.

Adding a layer of what-if analysis may well increase premiums, as insurers realise they need to be more cautious about certain risks than losses suggest. But it could also reduce some premiums, particularly for emerging perils that underwriters tend to overprice so long as they lack data. "We are most scared about things we don't understand," says Jonathon Gascoigne of Willis Towers Watson, an insurance broker. Launching an in-depth investigation into every near-miss would be costly. It might make more sense for several insurers to pool resources. Better still, says Trevor Maynard from Lloyd's, if other bodies also joined in, from municipalities and governments to capital providers. They too share an interest in preparing for disaster.

Today it is hard for insurers to raise premiums, though this may change once hurricane-season claims come in. Many struggle to stay profitable; around a third of the London market expects to lose money from underwriting in 2017, according to PWC, a consultancy. Low interest rates and weak capital returns mean few can count on investment income to make up for lousy business. In this context, some might be tempted to undercharge for risk, says Mr Woo, adding that now more than ever "insurers would benefit from looking at the past as just one realisation of what might have happened". ■

Free exchange | The low road

Agreement on how to fight recessions in a low-interest-rate world remains elusive

ONE day, perhaps quite soon, it will happen. Some gale of bad news will blow in: an oil-price spike, a market panic or a generalised formless dread. Governments will spot the danger too late. A new recession will begin. Once, the response would have been clear: central banks should swing into action, cutting interest rates to boost borrowing and investment. But during the financial crisis, and after four decades of falling interest rates and inflation, the inevitable occurred (see chart). The rates so deftly wielded by central banks hit zero, leaving policymakers grasping at untested alternatives. Ten years on, despite exhaustive debate, economists cannot agree on how to handle such a world.

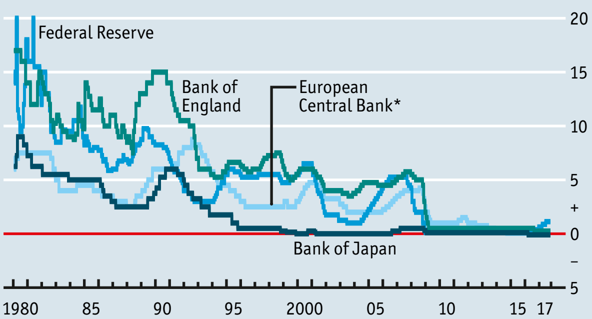
During the next recession, the "zero lower bound" (ZLB) on interest rates will almost certainly bite again. When it does, central banks will reach for crisis-tested tools, such as quantitative easing (creating money to buy bonds) and promises to keep rates low for a long time. Such policies will prove less potent than in the past; bond purchases are less useful, for instance, when credit markets are not impaired by crisis and long-term interest rates are already low. In the absence of a solid policy consensus, the use of any unorthodox` tool is likely to be too tentative to spark a fast recovery.

Broadly, economists see two possible ways out, both aired at a recent conference run by the Peterson Institute for International Economics, a think-tank. One is to change monetary strategy. Ben Bernanke, chairman of the Federal Reserve during the crisis, proposed a clever approach: when the economy next bumps into the ZLB, the central bank should quickly adopt a temporary price-level target. That is, it should promise to make up shortfalls in inflation resulting from a downturn. If a recession causes below-target inflation for a year, the central bank would promise to tolerate above-target inflation until prices reach the level they would have attained without the slump.

If credible, that promise should buck up animal spirits, encourage spending, and drag the economy back to health. Raising inflation targets would reduce the frequency and severity of ZLB episodes. It would, however, force households to accept higher inflation all the time, rather than just in the aftermath of a severe downturn. A permanent price-level target, for its part, would force central banks to respond to an inflation-increasing blow to the economy—such as a big natural disaster—with rate rises, piling on pain in such cases. Less clear is whether a central bank could fulfil its promise. The Fed has failed to hit its 2% inflation target for the past five years, after all. Mr Bernanke's proposal would do little good if markets doubted a central bank's ability to fulfil its promise to deliver catch-up inflation.

Nowhere to go

Benchmark interest rates, %



Sources: Bloomberg; Thomson Reuters *German Bundesbank discount rate pre-1999

The constraints facing central banks suggest better hopes for the second way forward—greater reliance on fiscal policy. This was the theme of a contribution to the conference from Olivier Blanchard and Lawrence Summers, crisis veterans from the IMF and the American administration, respectively. Before the crisis, economists used to dismiss fiscal policy as a recession-fighting tool. Stimulus was clumsy, slow and, given the control exercised by central bankers, unnecessary. But with interest rates near zero, stimulus might be the most effective way to boost demand—so long as the central bank is willing to play along. Recent history, however, suggests that it could certainly not be relied upon to do so. In 2013, the Fed announced it would begin reducing its asset purchases, despite low and falling inflation and an unemployment rate above 7%—conditions which might elicit a fiscal stimulus from an anxious government. More government spending in such cases, if deemed likely to raise inflation, might simply prompt a central bank to move forward its timetable for tightening. That would dampen—and perhaps offset entirely—the effect of the fiscal stimulus.

The dawn of a new error

So fiscal and monetary policy would have to be closely co-ordinated—amounting, in all likelihood, to a loss of central-bank autonomy. A central bank that stood by as fiscal stimulus pushed inflation above its target has in effect relinquished its independence. One that stubbornly raised rates as elected leaders sought to boost growth would quickly find its position politically untenable—much as the Federal Reserve did after the election of Franklin Roosevelt in 1932. Just how troubling a loss of independence would be is intensely debated. Messrs Blanchard and Summers are themselves at odds on it: Mr Summers is open to relaxing independence; Mr Blanchard worries that politicised central banks might have been too timid during the crisis, just as many governments turned too quickly to austerity. Other economists cite a more common fear: that governments would inevitably push for too much monetary stimulus, accelerating inflation.

Central-bank independence was an institutional response to the inflation of the 1970s, just as government business-cycle management was a response to the Depression. But the rules that underpinned the conditions of the 1970s seem no longer to apply. For a decade (more, in Japan) inflation and interest rates have limped along at historically low levels, even as government debts ballooned and central banks created piles of new money. That presents a significant problem for prevailing institutions, but also for conventional macroeconomic wisdom.

In the 1970s, an intellectual shift within economics took place in tandem with the change in policy practice. The discipline could explain why predictable monetary policy set by independent central banks was preferable to a government's attempts to spend its way to full employment. Yet things need not unfold that way this time. With economists at odds as future ZLB episodes loom, the example of the 1930s might be more apt. Then populist politicians struck out in unorthodox new directions, for better and occasionally much worse. It was only later that experts could settle on a coherent narrative of the crisis and recovery. That is not the ideal way forward. Yet it may be the only option available. ■

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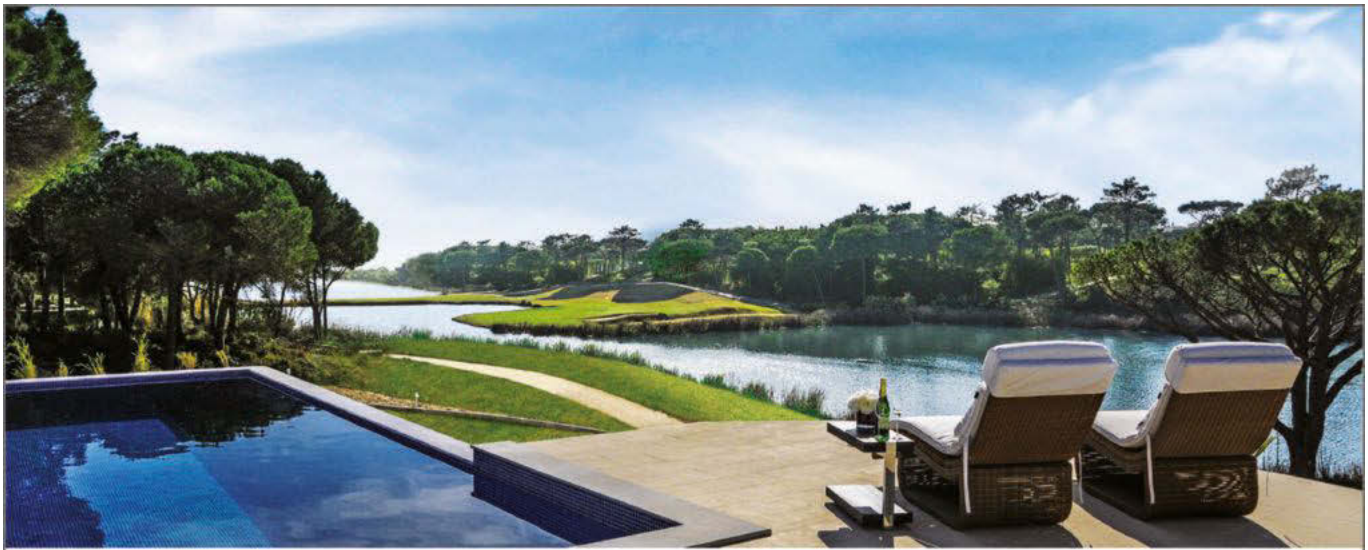

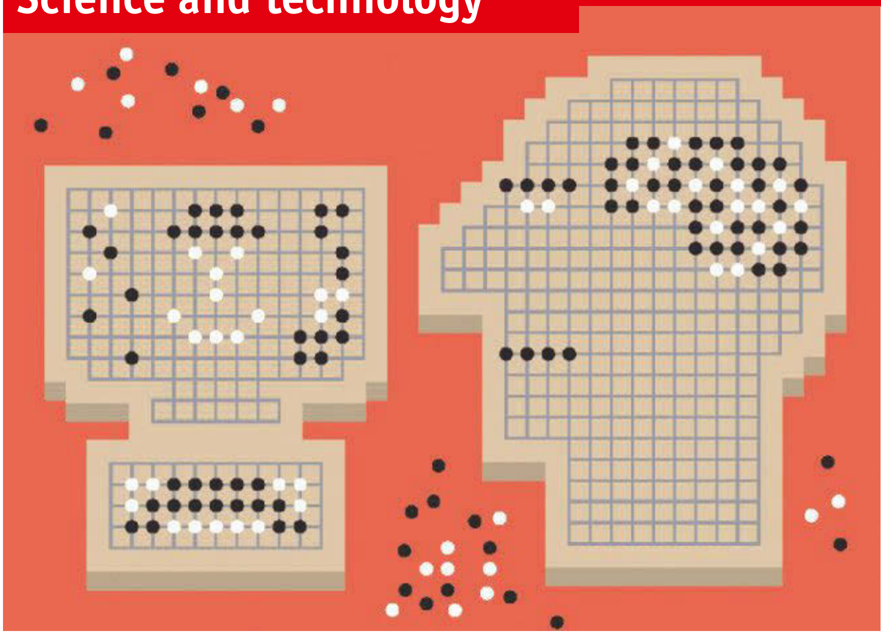

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Artificial intelligence

Going places

The latest breed of AI can work things out for itself, without being taught by people

IN 2016 Lee Sedol, one of the world's best players of Go, lost a match in Seoul to a computer program called AlphaGo by four games to one. It was a big event, both in the history of Go and in the history of artificial intelligence (AI). Go occupies roughly the same place in the culture of China, Korea and Japan as chess does in the West. After its victory over Mr Lee, AlphaGo beat dozens of renowned human players in a series of anonymous games played online, before re-emerging in May to face Ke Jie, the game's best player, in Wuzhen, China. Mr Ke fared no better than Mr Lee, losing to the computer 3-0.

For AI researchers, Go is equally exalted. Chess fell to the machines in 1997, when Garry Kasparov lost a match to Deep Blue, an IBM computer. But until Mr Lee's defeat, Go's complexity had made it resistant to the march of machinery. AlphaGo's victory was an eye-catching demonstration of the power of a type of AI called machine learning, which aims to get computers to teach complicated tasks to themselves.

AlphaGo learned to play Go by studying thousands of games between expert human opponents, extracting rules and strategies from those games and then refining them in millions more matches which the program played against itself. That was enough to make it stronger than any human player. But researchers at DeepMind, the firm that built AlphaGo, were confident that they could improve it. In a paper just published in *Nature* they have unveiled the latest version, dubbed AlphaGo Zero. It is much better at the game, learns to play much more quickly and requires far less computing hardware to do well. Most important, though, unlike the original version, AlphaGo Zero has managed to teach itself the game without recourse to human experts at all.

The eyes have it

Like all the best games, Go is easy to learn but hard to master. Two players, Black and White, take turns placing stones on the intersections of a board consisting of 19 vertical lines and 19 horizontal ones. The aim is to control more territory than your opponent. Stones that are surrounded by an opponent's are removed from the board. Players carry on until neither wishes to continue. Each then adds the number of his stones on the board to the number of empty grid intersections he has surrounded. The larger total is the winner.

The difficulty comes from the sheer number of possible moves. A 19x19 board offers 361 different places on which Black can put the initial stone. White then has 360 options in response, and so on. The total number of legal board arrangements is in the order of 10^{170}, a number so large it defies any physical analogy (there are reckoned to be about 10^{80} atoms in the observable universe, for instance).

Human experts focus instead on understanding the game at a higher level. Go's simple rules give rise to plenty of emergent structure. Players talk of features such as "eyes" and "ladders", and of concepts such as "threat" and "life-and-death". But although human players understand such concepts, explaining them in the hyper-literal way needed to program a computer is much harder. Instead, the original AlphaGo studied thousands of examples of human games, a process called supervised learning. Since human play reflects human understanding of such concepts, a computer exposed to enough of it can come to understand those concepts as well. Once AlphaGo had arrived at a decent grasp of tactics and strategy with the help of its human teachers, it kicked away its crutches and began playing millions of unsupervised training games against itself, improving its play with every game.

Supervised learning is useful for much more than Go. It is the basic idea behind many of the recent advances in AI, helping computers learn to do things such as identify faces in pictures, recognise human speech reliably, filter spam from e-mail efficiently and more. But as Demis Hassabis, Deepmind's boss, observes, supervised learning has limits. It relies on the availability of training data to feed to the computer to show the machine what it is meant to be doing. Such data must be filtered by human experts. The training data for face recognition, for instance, consist of thousands of pictures, some with faces and some without, each labelled as such by a person. That makes such data sets expensive, assuming they are available at all. And, as the paper points out, there can be more subtle problems. Relying on human experts for guidance risks imposing human limits on a computer's ability.

AlphaGo Zero is designed to avoid all these problems by skipping the training- ▸▸

wheels phase entirely. The program starts only with the rules of the game and a "reward function", which awards it a point for a win and docks a point for a loss. It is then encouraged to experiment, repeatedly playing games against other versions of itself, subject only to the constraint that it must try to maximise its reward by winning as much as possible.

The program started by placing stones randomly, with no real idea of what it was doing. But it improved rapidly. After a single day it was playing at the level of an advanced professional. After two days it had surpassed the performance of the version that beat Mr Lee in 2016.

DeepMind's researchers were able to watch their creation rediscover the Go knowledge that human beings have accumulated over thousands of years. Sometimes, it seemed eerily human-like. After about three hours of training the program was preoccupied with the idea of greedily capturing stones, a phase that most human beginners also go through. At others it seemed decidedly alien. For example, ladders are patterns of stones that extend in a diagonal slash across the board as one player attempts to capture a group of his opponent's stones. They are frequent features of Go games. Because a ladder consists of a simple, repeating pattern, human novices quickly learn to extrapolate them and work out if building a particular ladder will succeed or fail. But AlphaGo Zero—which is not capable of extrapolation, and instead experiments with new moves semi-randomly—took longer than expected to come to grips with the concept.

Climbing the ladder

Nevertheless, learning for itself rather than relying on hints from people seemed, on balance, to be a big advantage. For example, *joseki* are specialised sequences of well-known moves that take place near the edges of the board. (Their scripted nature makes them a little like chess openings.) AlphaGo Zero discovered the standard *joseki* taught to human players. But it also discovered, and eventually preferred, several others that were entirely of its own invention. The machine, says David Silver, who led the AlphaGo project, seemed to play with a distinctly non-human style.

The result is a program that is not just superhuman, but crushingly so. Skill at Go (and chess, and many other games) can be quantified with something called an Elo rating, which gives the probability, based on past performance, that one player will beat another. A player has a 50:50 chance of beating an opponent with the same Elo rating, but only a 25% chance of beating one with a rating 200 points higher. Mr Ke has a rating of 3,661. Mr Lee's is 3,526. After 40 days of training AlphaGo Zero had an Elo rating of more than 5,000—putting it as far ahead of Mr Ke as Mr Ke is of a keen amateur, and suggesting that it is, in practice, impossible for Mr Ke, or any other human being, ever to defeat it. When it played against the version of AlphaGo that first beat Mr Lee, it won by 100 games to zero.

There is, of course, more to life than Go. Algorithms such as the ones that power the various iterations of AlphaGo might, its creators hope, be applied to other tasks that are conceptually similar. (DeepMind has already used those that underlie the original AlphaGo to help Google slash the power consumption of its data centres.) But an algorithm that can learn without guidance from people means that machines can be let loose on problems that people do not understand how to solve. Anything that boils down to an intelligent search through an enormous number of possibilities, said Mr Hassabis, could benefit from AlphaGo's approach. He cited classic thorny problems such as working out how proteins fold into their final, functional shapes, predicting which molecules might have promise as medicines, or accurately simulating chemical reactions.

Advances in AI often trigger worries about human obsolescence. DeepMind hopes such machines will end up as assistants to biological brains, rather than replacements for them, in the way that other technologies from search engines to paper have done. Watching a machine invent new ways to tackle a problem can, after all, help push people down new and productive paths. One of the benefits of AlphaGo, says Mr Silver, is that, in a game full of history and tradition, it has encouraged human players to question the old wisdom, and to experiment. After losing to AlphaGo, Mr Ke studied the computer's moves, looking for ideas. He then went on a 22-game winning streak against human opponents, an impressive feat even for someone of his skill. Supervised learning, after all, can work in both directions. ■

Palaeoclimatology

A stormy past

Geological traces of ancient hurricanes show how hard climate science is

THAT hurricanes are likely to become more powerful as the climate warms is not a matter much debated among researchers. A warmer climate will increase sea-surface temperatures relative to those of the adjacent atmosphere in some regions, leading to more evaporation, more clouds and stronger storms. You might expect this to be reflected in the geological record. But a study just published in *Geology* by Michael Toomey of the United States Geological Survey suggests, counter-intuitively, that the hurricanes which struck Florida during a cool period 12,000 years ago were more powerful than those during a subsequent time of warmth.

Incoming!

Dr Toomey's findings stem from his analysis of sediment cores collected near the Dry Tortugas, islands off Florida's coast. These contain strata laid down during the Younger Dryas, a time when the climate cooled, and also during the warmer years that followed it. The Younger Dryas is thought to have been caused by a freshwater lake that covered part of central Canada breaking through the glacier which had dammed it and draining into the Atlantic Ocean. This injection of fresh water altered the ocean's circulation and triggered a cold period across much of the northern hemisphere.

Dr Toomey looked in the cores for layers of turbidite, a rock that forms when sediment gets disturbed, flows down marine slopes and is deposited as a jumbled mess on the ocean floor. Turbidites are often a result of earthquakes, but the Dry Tortugas are not prone to them. Thus, Dr Toomey argues, these particular turbidites must have been formed, as similar deposits are today, by hurricanes.

Nowadays, the bigger the storm, the bigger the grain size of the resultant turbidite. So it is curious that turbidite grains laid down during the Younger Dryas had an average diameter of 23 microns whereas those from the subsequent, warmer years averaged 19 microns. Why the Younger Dryas was so stormy, at least off the coast of Florida, in such a cold period is a mystery—and one that shows how complicated Earth's climate actually is.

Observing the cosmos

When stars collide

Gravitational-wave astronomy starts in earnest

THE timing was impeccable, to the point where one might wonder if it had been stage-managed. Less than two weeks after Sweden's Royal Academy of Science announced that it was awarding this year's Nobel physics prize "for decisive contributions to the LIGO detector and the observation of gravitational waves", that detector has come up with its most interesting finding yet.

LIGO is the Laser Interferometer Gravitational-Wave Observatory. Actually, it is two observatories, 3,002km apart in the American states of Louisiana and Washington—a degree of separation ensuring that only disturbances registered by both are considered as coming from outer space. Its purpose, as its name suggests, is to detect gravitational waves. These are ripples in space, propagated at the speed of light, that are created by tumultuous astronomical events involving gargantuan bodies. Their existence was predicted, just over a century ago, by the mathematics of Albert Einstein's general theory of relativity, which is actually a theory of gravity.

LIGO first detected such a wave in September 2015, though the discovery was not made public until February 2016. Since then, until this week's announcement, it had seen three others. A fifth might thus be thought unexceptional news. But it is not. For this detection marks the beginning of what LIGO's supporters always claimed the project would lead to, the use of gravitational waves as an additional window on the universe, through which events observable in other ways can also be seen. That is because, for the first time, the event that created the waves was also noticed by telescopes that look at parts of the electromagnetic spectrum. This means optical, radio-frequency, X-ray and gamma-ray observations can all be correlated with the gravitational data.

X-rays mark the spot

The difference between the fifth gravitational wave and the other four is its origin. The others were the results of two black holes merging. This one was caused by two neutron stars colliding.

Neutron stars are the remnants of supernova explosions. They are, as the name suggests, made almost entirely of neutrons—particles that can pack closely together. Neutron stars are thus small and dense. They are just a few kilometres across even though, typically, they weigh more than the sun.

Because normal stars (some of which will end up as neutron stars) are frequently found orbiting each other as pairs in binary systems, astronomers think that binary neutron stars should also be common. Rotating binary neutron stars emit energy and gradually spiral inward towards each other, eventually merging. When they collide, a burst of gravitational waves is produced. Such a merger will also emit energy all across the electromagnetic spectrum, from radio waves to gamma rays. That is not true of a merger between black holes, the strong gravity of which prevents any electromagnetic radiation escaping.

Though announced on October 16th, the latest gravitational wave was actually observed on August 17th. LIGO, and also Virgo, a detector in Italy, both saw a wave consistent with the merger of neutron stars with masses 1.1 and 1.6 times that of the sun. Those in charge soon found out that another telescope—the Gamma Ray Burst Monitor, aboard a satellite called the Fermi Gamma-ray Space Telescope—had picked up a short-lived burst of gamma rays from the same part of the sky two seconds later. Astronomers around the world then got to work, training other telescopes on the part of the sky the gamma-ray burst had come from and poring through data that had already been collected. Sure enough, optical telescopes pinned the event down within an hour to a galaxy called NGC 4993 (the fuzzy blob in the picture above), which is about 130m light-years away. A campaign over the next two weeks produced more observations in visible, ultraviolet and infrared light through a network of ground-based telescopes. X-ray and radio telescopes also saw the merger.

The events in NGC 4993 were not, however, visible through every astronomical window—and that, in itself, is significant. Astronomers looked for the merger signal in two neutrino telescopes, IceCube (at the South Pole) and ANTARES (in the Mediterranean Sea), and in the Pierre Auger Observatory (in Argentina), which records the arrival of cosmic rays. None of these observatories saw anything. That, according to Szabolcs and Zsuzsanna Marka of Columbia University, in New York, two of the physicists involved in LIGO, could be because the merger just observed is at the weak end of gravitational-wave-producing events. Neutrinos (a type of extremely light, electrically neutral subatomic particle) would be produced in bulk only by more energetic collisions, as might cosmic rays, most of which are high-energy protons. The Drs Marka hope, though, that in the future LIGO will indeed detect such events, permitting them to be observed in four different ways, namely electromagnetically, gravitationally, and by their emissions of neutrinos and protons.

For those behind LIGO, Virgo and other detectors now under construction, these are exciting times. In particular, neutron-star mergers are thought to be an important source of the heaviest chemical elements, such as gold, platinum and uranium. These are formed by the addition of neutrons (some of which then decay into protons) to lighter atomic nuclei. An explosive collision between neutron-rich bodies promotes this process.

The arrival of gravitational-wave astronomy also shows the virtues of patience. Einstein, when he published general relativity, said that he did not expect that such waves would ever actually be detected. Many modern-day physicists make similarly pessimistic noises about some current ideas, such as string theory, saying these will remain forever in the realm of the hypothetical. Perhaps another century will prove them wrong, too. ■

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Britain and Europe

Hard or soft Brexit?

The best of a clutch of recent books on Brexit—from both sides

SIXTEEN months after Britain voted to leave the European Union, the political debate over Brexit seems as intense as ever. That belies one of the hopes of David Cameron, the Tory prime minister who called the referendum, when he claimed to be drawing a poison that had long infected British politics. Publishers, writers and bloggers alike have not been slow to spot the market that the poison has created. Yet too many of the books and pamphlets that have been published since the vote amount to little more than a re-run of the same old arguments over whether to remain or leave. Four recent works, though, do better than most at avoiding that trap.

Liam Halligan and Gerard Lyons, two pro-Brexit economists, insist it does not come in hard or soft versions. To them the choice is between clean (meaning fully out of the EU and its single market) and messy (meaning a half-in, half-out position akin to those of Norway or Switzerland). Yet during the campaign many Brexiteers insisted there would be no question of leaving the single market. Even now, a few recalcitrants favour joining Norway in the European Economic Area (EEA), whose members are in that market. Mr Halligan and Mr Lyons prefer the mantra of Theresa May, Mr Cameron's successor, that Brexit means taking back control of laws, borders and money—which they (and she) insist necessitates leaving both the single market and the customs union.

Clean Brexit. By Liam Halligan and Gerard Lyons. *Biteback; 382 pages; £20*

Making a Success of Brexit and Reforming the EU. By Roger Bootle. *Nicholas Brealey; 353 pages; £10.99 and $19.95*

How to Stop Brexit (and Make Britain Great Again). By Nick Clegg. *Bodley Head; 149 pages; £8.99*

Brexit and British Politics. By Geoffrey Evans and Anand Menon. *Polity; 139 pages; £12.99*

Unlike some hardliners, the two authors acknowledge that this may involve short-term economic costs, although they think the Treasury and other official forecasters have hugely exaggerated these. But they are convinced that in the long run Brexit will produce big gains. They note that 90% of future global growth will be outside the EU, and they have hopes of a string of free-trade deals to benefit from this. Better (and less) regulation and an escape from European protectionism could thus promote a genuinely global Britain.

It is an attractive vision. But it is not clear exactly how EU (or EEA) membership stands in its way. Germany exports four times as much as Britain to China. The Netherlands (like Britain) has one of the least regulated product and labour markets in the OECD club of rich countries. EEA members are able to strike free-trade deals with third countries. Moreover, many of the ills that the authors want to cure—low productivity, inadequate training, a dysfunctional housing market, poor infrastructure—have little to do with EU membership. It is hard to see how Brexit will help them.

Roger Bootle, another economist, will have none of such pessimism. He accepts that Britain has deep problems, but he sees escaping from the EU as a crucial solution. His book is an expansion of his earlier work, "The Trouble with Europe", published in 2014. He, too, insists that there is a bright future for a post-Brexit Britain. Much of his argument rests on the gains to be made from no longer being shackled to an underperforming and undemocratic club.

His biggest beefs with the EU concern what he calls such disasters as the single currency, the refugee crisis and the passport-free Schengen zone. Yet Britain has long had opt-outs from these. Mr Cameron even negotiated an opt-out from the goal of ever-closer union. Some of the Brexiteers' ambitions could have been achieved while remaining in a looser, multispeed, multi-tier form of union, which was emerging even before the referendum.

That vision is also central to Nick Clegg's new book. The former Liberal Democrat leader makes two main arguments for stopping Brexit. First, the referendum was won on a false prospectus (such as the famous £350m a week for the NHS advertised on the Leavers' battle bus). And second, the costs of Brexit are becoming increasingly obvious, with businesses moving out of Britain and the economy clearly lagging behind the rest of Europe.

Mr Clegg now wants Parliament to overrule any Brexit deal negotiated by the ▸▸

Philip Pullman's new novel

Open unto the fields, and to the sky

A Spenserian trip down the River Thames

La Belle Sauvage: The Book of Dust Volume One. By Philip Pullman. *Knopf; 464 pages; $22.99. Penguin Random House and David Fickling; £20*

IN HIS famous trilogy, "His Dark Materials", Philip Pullman created a detailed fantasy universe every bit as compelling as J.R.R. Tolkien's Middle-Earth or C.S. Lewis's Narnia. Mr Pullman's world is much closer to the real one than the other two. London and Oxford (the author's home) feature prominently, as do other European places, albeit with some political tweaks. The two pre-eminent distinguishing features are an all-powerful, malevolent Church centred in Geneva, and daemons: a sort of external soul that all humans have and which takes the form of different animals depending on the person's character.

Mr Pullman returns to that world in "La Belle Sauvage", the first in a trilogy called "The Book of Dust", which he has resisted calling a sequel. It takes place just over a decade before "His Dark Materials" begins. Lyra, one hero, has just been born, and spirited away for her safety to a nunnery in Godstow. At the risk of drawing too downmarket a comparison, "La Belle Sauvage" functions a little like "Rogue One" does for the Star Wars universe: less a narrative ploughing ahead than a bit of retroactive plot-filling.

Malcolm, a second character, is another of the author's young, thoughtful artful dodgers, whom Mr Pullman has managed to make decent, dutiful and interesting—not easy for a novelist. His parents run the Trout, a pub in Godstow (among the book's pleasures for Oxonians is seeing which real Oxford landmarks made it into this new world).

The plot largely comprises a journey down the river in which Malcolm and his companions face one test after another. Mr Pullman owes (and acknowledges) a debt to "The Faerie Queene" by Edmund Spenser, though "La Belle Sauvage" may also put readers in mind of "The Buried Giant", Kazuo Ishiguro's recent novel set in an almost-England populated by mythical beasts as well as humans.

Integral to this series, as to the previous one, is Dust—an elementary particle extant in multiple universes that is both conscious and attracted to consciousness—and the Church's fear and hatred of Dust, and indeed of anything it cannot control. Mr Pullman's anticlericalism is not smug or contemptuous; among his heroes is a group of nuns, expressing their faith through love, charity and care. Rather, Mr Pullman seems to believe, as Shakespeare once wrote, that there are more things in heaven and earth than any single philosophy can dream of.

Not Binsey but Godstow (perhaps)

government. He calls on readers to join either Labour or the Conservatives so as to put pressure on both main parties to drop their support for Brexit (Sir Vince Cable, now Lib Dem leader, may not be best pleased with this idea). Mr Clegg suggests that Sir John Major, a former Tory prime minister, should then be asked to negotiate a new deal that keeps Britain in an outer tier of EU membership. Yet this seems surreal. There is little sign that public opinion on Brexit has changed. It will be both legally and practically hard to reverse course. It is still possible that Brexit may never happen. But right now it seems more likely that Britain will leave the EU with no deal at all.

That would surely make the fallout from Brexit more damaging—and more poisonous. In their book, two political scientists, Geoffrey Evans and Anand Menon, set this in its broader context. Their conclusion is that the Brexit vote has changed British politics fundamentally. It has ended a 40-year socially liberal, pro-market political consensus. It has deepened regional divides, notably between Scotland and England, and between London and the rest of the country. It has set older against younger voters. And it may even have paved the way for the election of a neo-Marxist Labour prime minister. Mr Cameron, one assumes, never dreamed of that. ■

British empire history

Food and fate

The Taste of Empire: How Britain's Quest for Food Shaped the Modern World. By Lizzie Collingham. *Basic Books; 384 pages; $32. Published in Britain as "The Hungry Empire" Bodley Head; £25*

IN 1879 a group of British soldiers at the battle of Rorke's Drift in South Africa struggled to defend themselves against thousands of Zulu warriors. For shelter they threw up an improvised barricade. And the material they chose? Bricks of biscuit tins made by Carr's of Carlisle.

It is an image that nicely sums up "The Taste of Empire", in which Lizzie Collingham, a British historian of curry and of the Raj, argues that food was not an adjunct to Britain's imperial might but fundamental to it. Usually it is assumed that Britain's empire appeared and then Britain's food trade—that vast tonnage of tea, flour, sugar, bully beef and Crosse & Blackwell pickle that swept across the seven seas—appeared to feed it. Ms Collingham turns that idea neatly on its head. It was not so much the empire that began the trade, but trade that began the empire.

The book opens on July 18th 1545, a "fish day" on the *Mary Rose*, an English warship that would be wrecked before the month was out. Genetic analysis of fish bones found aboard shows that some of the fish the sailors ate came from the waters off Newfoundland, where the shoals of cod were so thick that you were "hardlie…able to row a Boate through them". British fisherman returned there, and the island was eventually claimed as a colony. In other words, Britain never fished for cod in Newfoundland because it was a British colony; it became one because British fishermen caught cod there.

The importance of the Newfoundland fish trade in "laying the foundations of the British empire", Ms Collingham writes, has been "frequently overlooked". And yet food is so fundamental. As much as war, it has driven international revolutions. Between 1846 and 1850 1m Irish died in the potato famine. In the four years that followed, 2m more emigrated. Food has driven innovation, too: biscuit makers such as Carr's were using the production line long before Henry Ford got in on the game.

Food did not just drive the expansion of empire. It could, like those Carr's tins in the barricade at Rorke's Drift, be used to shore it up too. "The Englishwoman in India", a handbook dating from 1864, instructed its readers to bring out with them not only clothes but also table linen, Wedgwood china, cutlery and crystal glasses. The idea was to mirror the "best regulated establishments" at home and show the "natives" how to do it. Dinner was less a meal than a statement of imperial intent.

Just as well it was not all about the culinary experience, as some of those starchy eating habits made for quite inedible food. When one British woman dined at the house of an Indian dignitary she arrived hoping for a nice curry. Instead, she was served a dismal procession of pseudo-Anglo fare: "terrible soup, terrible roast meat" finished off by cheese and biscuits so ancient that they had "little walkies [weevils] and their eggs clinging to the sides".

Such details are the strength of this book—and its weakness. Paragraphs are as studded with dates and numbers as a plum pudding with raisins. Still, it is hard to mind when many of them are so interesting. And what other book would offer its reader instructions on "how to make the best liquid laudanum"? (Top tip: add a hefty dash of saffron and do not stint on the opium.) ■

Herbert Hoover

A devil to sup with

Hoover: An Extraordinary Life in Extraordinary Times. By Kenneth Whyte. *Knopf; 752 pages; $35*

FOR his philanthropic efforts during the first world war, Herbert Hoover was described as a "man who began his career in California and will end it in heaven". In a new biography, Kenneth Whyte lists the many hardships Hoover went through. Generally, he used them to his advantage—to increase his wealth, achieve fame and become America's 31st president. At least, that is, until the Great Depression, which ruined him politically.

Born in Iowa in 1874, Hoover became determined early in life to earn a fortune for the security and independence it would bring. After graduating as a geologist from Stanford, he managed gold mines on the hot Australian frontier and mines in China during the dying days of the Qing empire. His career brought him the money he craved.

Hoover learned that the best way to thrive in a hellish place is by being a self-described devil. He fudged his age and experience to get his job in Australia. He overworked his employees. During the Boxer rebellion in China he swindled a captive mandarin to gain control of mines there (an action later judicially overturned). Ultimately, though, his own diligence was most important to his success.

Fortunately, Hoover was a devil with a conscience. After securing his wealth, he longed to work for the public good. The first world war gave him the opportunity to lead a great philanthropic mission. Working as a mining financier in London when the war began, Hoover learned of the dire food situation in occupied Belgium. He abandoned his career and, between 1914 and 1917, when America entered the war, he led thousands of volunteers to raise money, buy food and ship it to Belgium and other occupied areas. They sent more than 2.5m tonnes of food in all, feeding over 9m people.

Hoover gathered an intelligent group around him, worked astoundingly hard and expected the same from his staff. He also engaged in a vigorous propaganda campaign to get donations, portraying the relief as a "bottom-up" effort on the part of ordinary people while quietly seeking government support.

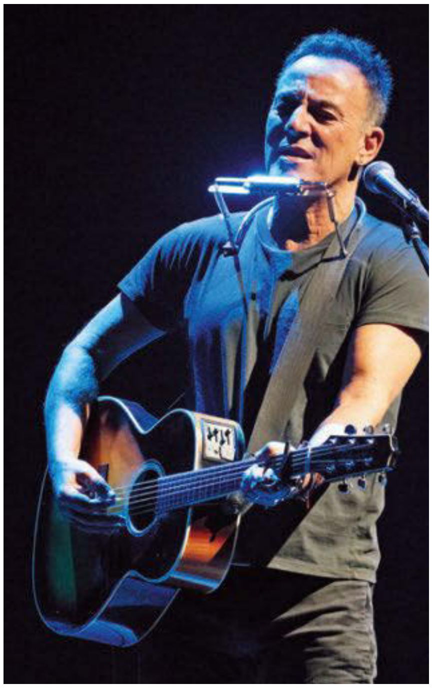
Success brought admiration and further opportunities. Hoover was put in charge of America's food supply after it entered the war, and he oversaw its aid to Europe after the armistice. He served as secretary of commerce under Warren Harding and Calvin Coolidge throughout much of the 1920s, using his position to make government more efficient.

In 1927 the flooding of the Mississippi River provided the perfect opportunity for a man with disaster-relief experience. Hoover's success there provided him with a springboard to the presidency. He won the Republican nomination on the first ballot in 1928. The prosperous mood, attributed to the Republicans, ensured that Hoover easily won that year's election.

He began his presidency in March 1929 with ambitious plans for reform. The Great Depression, which began seven months later, dashed his hopes. Banks failed, people queued in soup lines and Hoover lost control of events. He became embroiled in disputes with Congress, and balked at using federal funds to solve problems he felt should be left to the states. Blamed for presiding over the crash and failing to deal with its aftermath, he was soundly defeated in the election in 1932.

After losing office, Hoover became a spectator to events. Though he lived until 1964, he would never influence events as he had before his defeat.

Why was it that Hoover, hitherto so talented at overcoming crises, was unable to overcome the Great Depression? Perhaps he had come to believe his own propaganda about ordinary people collectively solving problems without government aid. Or maybe the scale of the problem was too great even for someone of Hoover's abilities. Mr Whyte does an excellent job of describing the qualities that brought Hoover his early successes—but provides too little guidance as to why, in the end, he failed his severest test. ■



Bruce Springsteen

Belts it out

NEW YORK

Carving out a legacy in stories and song

THE man known as "The Boss" certainly knows how to work a room. Standing alone on stage in the Walter Kerr Theatre (capacity 939), dressed in a black T-shirt and dark jeans, Bruce Springsteen goes off-microphone early in his new Broadway show to confess something. "I've never held an honest job in my entire life," he declares. "I've never done an honest day's work. I've never worked 9 to 5." Then he pauses a beat: "And yet that is all I have ever written about." (Laughter.) "I have become absurdly successful writing about something of which I have absolutely no practical experience." (More laughter.)

It is a nicely prepared line, well timed and well delivered. It would do fine in any of the stadium shows the rock star has played for decades. But Mr Springsteen's showmanship here lies in the act of speaking directly to the room. He knows the fact that he can be heard, unamplified, is part of the magic. He is inviting his audience to lean in and listen as he tells and sings the story of his life.

That he does like a spoken-word poet. "Springsteen on Broadway" is partly an adaptation of "Born to Run", his recent autobiography, partly a curated playlist of his most soulful work. For two hours he sprinkles magic dust—sentimental, sometimes dark, often funny recollections of his childhood, family, home town and career—in a way that gives structure and depth to both his stories and his songs.

He recalls walking into bars as a child, past the smell of "beer, booze and aftershave", to peer up at his father through cigarette smoke and tell him: "Mom wants you to come home." Mr Springsteen then starts into the song "My Father's House", but stops in the middle to recount a dream he had shortly after his father died, where he ends up watching himself perform awhile with his father. "For a moment we both watched the man on fire on stage," he recalls. "I say, 'Look dad, that guy on stage, that's how I see you.'" When he resumes singing, the lyrics carry more power than when he wrote them.

He does a similar trick with "Born in the USA", which he pointedly reminds the audience was meant as a protest song. He sings it after talking about friends he lost in the Vietnam war, and after telling how he and two of his friends managed not to get drafted, although their numbers were called. "I sometimes wonder who went in my place, because somebody did." The rendition that follows, played on acoustic guitar, and sung without any enthusiasm for the song's famous title chorus, is true to its crushingly downbeat verses. It feels nothing like the rock anthem that he and the E Street Band released in 1984. This is a 68-year-old man considering his mortality, and shaping his legacy.

The man is helped by the staging and lighting. Heather Wolensky sets him in a spare brick warehouse and Natasha Katz subtly alternates the spotlighting, from dark colours to soft yellows, to match the mood. Mr Springsteen is perhaps most effective, though, when he puts aside the microphone, knowing the audience would hang on his every word. It is worth hearing what he has to say. ■

Johnson | Value from the vulgar tongue

A history of slang charts the change in taboos

SAMUEL JOHNSON defined his profession as that of a "harmless drudge". Yet it has been well served by lexicographers writing entertainingly about their work. Two good examples are Kory Stamper waxing lyrical about the job itself and Jesse Sheidlower, in "The F-Word", about the ubiquitous English swear word.

But lexicography really is patient, slow and yes, sometimes tedious work. Trying to find citations here or there that show what some rare word means or, perhaps even harder, revising the endless definitions for all-purpose words that run for page after page in a big dictionary is not for those of an impatient bent.

Few lexicographers are lucky enough, then, to have both endlessly pleasurable work and the talent to write amusingly about it. Jonathon Green is one. Mr Green is the world's most respected chronicler of slang. His masterwork is the three-volume "Green's Dictionary of Slang". First published in 2010, it is continually updated in an online version, much of which is free (his extensive citations require a subscription). In addition he has written a comprehensive history of slang, "The Vulgar Tongue", and a new book, "The Stories of Slang". The latest volume is a bit of a notebook-dump, as journalists would say in their own slang, but what a glorious notebook-dump it is.

For centuries few lexicographers bothered to record slang. The first dictionaries defined only difficult words. Later dictionaries would be more comprehensive, trying to define most words in common use. Johnson's dictionary included some slang terms. But the great majority stayed away from the vulgar stuff. There is a story that two sisters, Mrs Digby and Mrs Brooke, once congratulated Johnson on not including "ghastly" words; Johnson, so the tale goes, replied "What! My dears!

Then you have been looking for them?" Sadly, the story, first recorded in 1829, strains credulity. In the era of Johnson's dictionary (1755), readers would hardly expect to find rude words in a learned tome.

Research on slang is speculative and difficult. Early dictionaries ignored it and later ones, in a more puritanical age, disapproved of it. But a few old works on "cant"—the language of the thieving underworld—give lexicographers like Mr Green a view of the unguarded, mostly unwritten language of centuries past. One unusual dictionary from 1676 included a list of cant terms, with the explanation that learning such language "may chance to save your Throat from being cut, or (at least) your Pocket from being pick'd". Another book alerted readers to different kinds of thieves and their acquaintances, among them the "blue pigeon flyer" who stole lead from roofs, the "mace" who stole watches or even the "queer rooster"—a police spy.

Another area that slang chroniclers study is how taboos change over time. Shakespeare's work was censored for political reasons, but not, at least early on, for its often riotous sexual slang. Mr Green reckons that Shakespeare used about 500 slang terms, of which 277 had never been recorded before. The sex act itself is "tick-tack", "night-work" or "nibbling". It is performed with the man's "potato-finger" or "kicky-wicky", as well as "Venus's glove", the woman's "bugle-bo". The buttocks were a rich source of puns, from the "wind instrument" to the "low countries".

Sex and "the human giblets with which we do it" has always been a rich source of slang, Mr Green points out. But "Stories of Slang" explores some "understudy" sources of slang terms. It chronicles slang from medicine, city life, food, love and more. Boxing yields terms like the "knowledge-box" and "top-loft" for the head, and the "tripe-shop" for the stomach. The grim and messy work of doctors and nurses is another rich seam: consider the "frequent flyer" (someone continually turning up to the emergency room, in need or not), the "plumber" (a urologist) or "watering the rose garden" (changing the drips on patients in a geriatric ward).

The slang of the past always seems cleverer and more creative than today's. That is probably because every era looks down on the most usual sources of slang: the underworld and the young. But with the benefit of time and perspective, it is clear how fertile the imaginations of those in these much-derided groups really are. Lovers of language should be grateful to those who create slang, and to those few like Mr Green who make it their work to open this window into the psyche for the benefit of all.

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Economic data

% change on year ago

	Gross domestic product			Industrial production	Consumer prices		Unemployment	Current-account balance		Budget balance	Interest rates, %	Currency units, per $	
	latest	qtr*	2017†	latest	latest	2017†	rate, %	latest 12 months, $bn	% of GDP 2017†	% of GDP 2017†	10-year gov't bonds, latest	Oct 18th	year ago
United States	+2.2 Q2	+3.1	+2.2	+1.6 Sep	+2.2 Sep	+2.0	4.2 Sep	-460.9 Q2	-2.5	-3.4	2.31	-	-
China	+6.8 Q3	+7.0	+6.8	+6.6 Sep	+1.6 Sep	+1.7	4.0 Q2§	+155.3 Q2	+1.4	-3.9	3.77§§	6.62	6.74
Japan	+1.4 Q2	+2.5	+1.5	+5.3 Aug	+0.6 Aug	+0.5	2.8 Aug	+192.2 Aug	+3.6	-4.5	0.07	113	104
Britain	+1.5 Q2	+1.2	+1.5	+1.6 Aug	+3.0 Sep	+2.7	4.3 Jul††	-128.9 Q2	-3.6	-3.6	1.37	0.76	0.81
Canada	+3.7 Q2	+4.5	+2.8	+7.4 Jul	+1.4 Aug	+1.7	6.2 Sep	-45.0 Q2	-2.6	-2.0	2.04	1.25	1.31
Euro area	+2.3 Q2	+2.6	+2.1	+3.8 Aug	+1.5 Sep	+1.5	9.1 Aug	+362.1 Jul	+3.1	-1.3	0.40	0.85	0.91
Austria	+2.6 Q2	+0.4	+2.3	+5.7 Jul	+2.4 Sep	+2.1	5.6 Aug	+6.1 Q2	+2.1	-1.2	0.55	0.85	0.91
Belgium	+1.5 Q2	+1.7	+1.6	+3.9 Jul	+2.0 Sep	+2.1	7.3 Aug	-5.3 Jun	+0.6	-2.0	0.68	0.85	0.91
France	+1.8 Q2	+2.2	+1.7	+1.1 Aug	+1.0 Sep	+1.1	9.8 Aug	-26.0 Aug	-1.3	-3.0	0.77	0.85	0.91
Germany	+2.1 Q2	+2.5	+2.1	+4.5 Aug	+1.8 Sep	+1.7	3.6 Aug‡	+274.6 Aug	+8.0	+0.7	0.40	0.85	0.91
Greece	+0.7 Q2	+2.2	+1.0	+5.7 Aug	+1.0 Sep	+1.2	21.0 Jul	-0.7 Jul	-1.3	-1.4	5.53	0.85	0.91
Italy	+1.5 Q2	+1.4	+1.4	+5.7 Aug	+1.1 Sep	+1.3	11.2 Aug	+51.2 Jul	+2.5	-2.3	2.04	0.85	0.91
Netherlands	+3.3 Q2	+6.3	+2.7	+3.9 Aug	+1.5 Sep	+1.3	5.9 Aug	+76.0 Q2	+10.0	+0.6	0.47	0.85	0.91
Spain	+3.1 Q2	+3.5	+3.1	+2.2 Aug	+1.8 Sep	+2.0	17.1 Aug	+23.1 Jul	+1.4	-3.3	1.55	0.85	0.91
Czech Republic	+3.4 Q2	+10.3	+4.5	+5.8 Aug	+2.7 Sep	+2.4	2.9 Aug‡	+1.7 Q2	+0.9	-0.1	1.46	21.8	24.6
Denmark	+1.9 Q2	+2.8	+2.2	+2.1 Aug	+1.6 Sep	+1.0	4.4 Aug	+25.8 Aug	+8.2	-0.4	0.52	6.32	6.78
Norway	+0.2 Q2	+4.7	+1.8	+5.7 Aug	+1.6 Sep	+2.0	4.2 Jul‡‡	+16.6 Q2	+5.4	+4.2	1.63	7.96	8.17
Poland	+4.6 Q2	+4.5	+4.3	+4.3 Sep	+2.2 Sep	+1.8	6.9 Sep§	-1.3 Aug	-0.6	-2.0	3.31	3.60	3.94
Russia	+2.5 Q2	na	+1.8	+0.8 Sep	+3.0 Sep	+4.0	5.0 Sep§	+36.9 Q3	+2.5	-2.1	8.13	57.4	63.0
Sweden	+3.0 Q2	+5.2	+3.1	+7.3 Aug	+2.1 Sep	+1.9	6.0 Aug§	+22.5 Q2	+4.4	+0.9	0.85	8.15	8.83
Switzerland	+0.3 Q2	+1.1	+0.9	+2.9 Q2	+0.7 Sep	+0.5	3.1 Sep	+68.9 Q2	+9.9	+0.7	-0.05	0.98	0.99
Turkey	+5.1 Q2	na	+4.9	+3.8 Aug	+11.2 Sep	+10.7	10.7 Jul§	-37.0 Aug	-4.5	-2.0	11.41	3.68	3.11
Australia	+1.8 Q2	+3.3	+2.4	+0.8 Q2	+1.9 Q2	+2.1	5.5 Sep	-21.8 Q2	-1.5	-1.7	2.72	1.28	1.31
Hong Kong	+3.8 Q2	+4.1	+3.1	+0.4 Q2	+1.9 Aug	+1.6	3.1 Aug‡‡	+15.0 Q2	+4.2	+0.9	1.74	7.81	7.76
India	+5.7 Q2	+4.1	+6.7	+4.3 Aug	+3.3 Sep	+3.5	5.0 2015	-29.2 Q2	-1.4	-3.5	6.76	65.1	66.7
Indonesia	+5.0 Q2	na	+5.2	+2.3 Aug	+3.7 Sep	+3.9	5.3 Q1§	-14.2 Q2	-1.7	-2.6	6.61	13,516	13,032
Malaysia	+5.8 Q2	na	+5.4	+6.8 Aug	+3.7 Aug	+3.9	3.4 Aug§	+8.1 Q2	+2.3	-3.0	3.91	4.22	4.20
Pakistan	+5.7 2017**	na	+5.7	+13.0 Jul	+3.9 Sep	+3.9	5.9 2015	-12.1 Q2	-4.5	-5.9	8.20†††	105	105
Philippines	+6.5 Q2	+7.0	+6.6	+2.7 Aug	+3.4 Sep	+3.2	5.6 Q3§	-0.8 Jun	+0.3	-2.7	4.84	51.4	48.2
Singapore	+4.6 Q3	+6.3	+2.9	+19.1 Aug	+0.4 Aug	+0.7	2.2 Q2	+59.0 Q2	+19.8	-1.0	2.08	1.36	1.39
South Korea	+2.7 Q2	+2.4	+2.8	+2.7 Aug	+2.1 Sep	+2.0	3.4 Sep§	+83.1 Aug	+5.6	+0.9	2.39	1,130	1,129
Taiwan	+2.1 Q2	+0.5	+2.2	+3.2 Aug	+0.5 Sep	+0.6	3.8 Aug	+70.7 Q2	+13.2	-0.1	1.02	30.2	31.7
Thailand	+3.7 Q2	+5.4	+3.5	+3.7 Aug	+0.9 Sep	+0.7	1.1 Aug§	+44.9 Q2	+11.4	-2.5	2.27	33.1	35.0
Argentina	+2.7 Q2	+2.8	+2.7	-2.5 Oct	+24.2 Sep	+25.2	8.7 Q2§	-19.7 Q2	-3.4	-6.2	5.39	17.3	15.2
Brazil	+0.3 Q2	+1.0	+0.7	+4.0 Aug	+2.5 Sep	+3.5	12.6 Aug§	-13.5 Aug	-0.8	-8.0	8.76	3.17	3.18
Chile	+0.9 Q2	+3.0	+1.3	+5.1 Aug	+1.4 Sep	+2.2	6.6 Aug§‡‡	-5.6 Q2	-1.7	-3.0	4.55	625	669
Colombia	+1.3 Q2	+3.0	+1.7	-3.1 Aug	+4.0 Sep	+4.3	9.1 Aug§	-12.4 Q2	-3.7	-3.3	6.46	2,938	2,906
Mexico	+1.8 Q2	+2.3	+2.2	-0.5 Aug	+6.3 Sep	+5.9	3.3 Aug	-17.6 Q2	-1.8	-1.9	7.10	18.9	18.7
Venezuela	-8.8 Q4~	-6.2	-9.3	+0.8 Sep	na	+720	7.3 Apr§	-17.8 Q3~	-1.2	-19.5	9.58	9.99	9.99
Egypt	+4.9 Q2	na	+3.8	+23.8 Aug	+31.6 Sep	+26.9	12.0 Q2§	-15.6 Q2	-6.0	-10.8	na	17.6	8.88
Israel	+4.0 Q2	+2.4	+3.6	+2.6 Jul	+0.1 Sep	+0.4	4.1 Aug	+10.7 Q2	+3.5	-2.5	1.77	3.51	3.83
Saudi Arabia	+1.7 2016	na	-0.5	na	-0.1 Sep	+1.1	5.6 2016	+7.6 Q2	+0.5	-7.5	3.68	3.75	3.75
South Africa	+1.1 Q2	+2.5	+0.7	+1.4 Aug	+5.1 Sep	+5.3	27.7 Q2§	-7.9 Q2	-2.9	-3.2	8.79	13.6	14.0

Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. ~2014 **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. †††Dollar-denominated bonds.

Markets

	Index Oct 18th	% change on one week	% change on Dec 30th 2016 in local currency	% change on Dec 30th 2016 in $ terms
United States (DJIA)	23,157.6	+1.2	+17.2	+17.2
China (SSEA)	3,541.6	-0.2	+9.0	+14.4
Japan (Nikkei 225)	21,363.1	+2.3	+11.8	+15.4
Britain (FTSE 100)	7,542.9	+0.1	+5.6	+12.6
Canada (S&P TSX)	15,782.2	-0.1	+3.2	+11.0
Euro area (FTSE Euro 100)	1,238.5	+0.3	+11.4	+24.4
Euro area (EURO STOXX 50)	3,619.7	+0.3	+10.0	+22.8
Austria (ATX)	3,403.1	+2.0	+30.0	+45.1
Belgium (Bel 20)	4,075.3	+0.4	+13.0	+26.2
France (CAC 40)	5,383.8	+0.4	+10.7	+23.6
Germany (DAX)*	13,043.0	+0.6	+13.6	+26.8
Greece (Athex Comp)	757.5	+1.2	+17.7	+31.4
Italy (FTSE/MIB)	22,354.7	-0.9	+16.2	+29.8
Netherlands (AEX)	547.7	+1.1	+13.4	+26.6
Spain (Madrid SE)	1,035.5	-0.1	+9.7	+22.5
Czech Republic (PX)	1,053.8	-0.1	+14.3	+34.1
Denmark (OMXCB)	944.5	+0.1	+18.3	+31.9
Hungary (BUX)	39,081.8	+1.6	+22.1	+36.8
Norway (OSEAX)	867.6	+0.1	+13.5	+22.6
Poland (WIG)	64,474.4	-1.9	+24.6	+44.6
Russia (RTS, $ terms)	1,147.8	+0.4	-0.4	-0.4
Sweden (OMXS30)	1,644.7	+0.2	+8.4	+20.8
Switzerland (SMI)	9,309.6	+0.5	+13.3	+17.2
Turkey (BIST)	106,926.4	+3.0	+36.8	+30.9
Australia (All Ord.)	5,954.8	+2.0	+4.1	+13.2
Hong Kong (Hang Seng)	28,711.8	+1.1	+30.5	+29.6
India (BSE)	32,584.4	+2.4	+22.4	+27.6
Indonesia (JSX)	5,929.2	+0.8	+11.9	+11.6
Malaysia (KLSE)	1,749.0	-0.5	+6.5	+13.2
Pakistan (KSE)	40,733.5	+0.6	-14.8	-15.6
Singapore (STI)	3,329.0	+1.5	+15.6	+22.9
South Korea (KOSPI)	2,482.9	+1.0	+22.5	+31.0
Taiwan (TWI)	10,720.3	+0.7	+15.9	+23.7
Thailand (SET)	1,707.5	-0.4	+10.7	+19.5
Argentina (MERV)	26,213.1	-2.7	+54.9	+41.5
Brazil (BVSP)	76,591.1	-0.1	+27.2	+30.6
Chile (IGPA)	27,649.7	+1.1	+33.4	+42.9
Colombia (IGBC)	11,012.5	-0.3	+9.0	+11.3
Mexico (IPC)	49,939.0	-0.4	+9.4	+19.5
Venezuela (IBC)	560.0	+5.2	-98.2	na
Egypt (EGX 30)	13,590.2	-1.6	+10.1	+13.1
Israel (TA-125)	1,321.9	+0.7	+3.5	+13.6
Saudi Arabia (Tadawul)	6,941.8	+0.8	-4.1	-4.1
South Africa (JSE AS)	58,152.4	+0.7	+14.8	+15.8

Britain's economy

Source: OECD *Ratio of export volumes to the weighted average of import volumes in destination countries

Other markets

	Index Oct 18th	% change on one week	% change on Dec 30th 2016 in local currency	% change on Dec 30th 2016 in $ terms
United States (S&P 500)	2,561.3	+0.2	+14.4	+14.4
United States (NAScomp)	6,624.2	+0.3	+23.1	+23.1
China (SSEB, $ terms)	349.0	-3.8	+2.1	+2.1
Japan (Topix)	1,724.6	+1.6	+13.6	+17.2
Europe (FTSEurofirst 300)	1,539.8	+0.4	+7.8	+20.4
World, dev'd (MSCI)	2,030.4	+0.3	+15.9	+15.9
Emerging markets (MSCI)	1,126.9	+0.9	+30.7	+30.7
World, all (MSCI)	495.7	+0.4	+17.5	+17.5
World bonds (Citigroup)	938.9	-0.1	+6.2	+6.2
EMBI+ (JPMorgan)	841.9	+0.4	+9.0	+9.0
Hedge funds (HFRX)	1,261.7§	nil	+4.8	+4.8
Volatility, US (VIX)	10.1	+9.9	+14.0	(levels)
CDSs, Eur (iTRAXX)†	55.0	-0.5	-23.7	-14.8
CDSs, N Am (CDX)†	53.7	-6.9	-20.8	-20.8
Carbon trading (EU ETS) €	7.8	+5.4	+18.5	+32.4

Sources: IHS Markit; Thomson Reuters. *Total return index. †Credit-default-swap spreads, basis points. §Oct 17th.

Indicators for more countries and additional series, go to: **Economist.com/indicators**

The Economist commodity-price index

2005=100

	Oct 10th	Oct 17th*	% change on one month	% change on one year
Dollar Index				
All Items	146.5	147.9	+1.1	+7.7
Food	149.8	150.5	-0.1	-3.6
Industrials				
All	143.1	145.3	+2.4	+23.2
Nfa†	128.8	129.3	-2.0	+0.3
Metals	149.3	152.1	+4.1	+34.4
Sterling Index				
All items	201.6	204.3	+3.8	+0.6
Euro Index				
All items	154.2	156.5	+3.0	+0.6
Gold				
$ per oz	1,292.9	1,282.6	-2.0	+1.7
West Texas Intermediate				
$ per barrel	50.9	51.9	+4.9	+3.2

Sources: Bloomberg; CME Group; Cotlook; Darmenn & Curl; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Thomson Reuters; Urner Barry; WSJ. *Provisional †Non-food agriculturals.

The last of Earth

Joseph Schmitt, spacesuit technician, died on September 25th, aged 101

WHEN he was growing up in rural southern Illinois, each member of Joseph Schmitt's large family had their own job to do. Aunt Katie baked for everyone; he remembered the big pie-safe on her porch. His brother did the hog-butchering, while an uncle made all the family's shoes. And he, as a boy, also had his special jobs. He delivered clean washing to his widowed mother's customers, pulling it along in his little four-wheel wagon, and he shined shoes and cleaned spittoons in his brother-in-law's barbershop. At a dime a shine, it took 300 of them to get enough money to buy his mother a new cooking stove. But even his pocket-change contribution kept the family going.

His grown-up career was the same to him: just playing his small part. By a real piece of luck, and because he was good with his hands—especially at mending flightsuits and rigging parachutes—he was taken on by NASA as a spacesuit technician in the most exciting years of America's space project, and saw the first of almost everything. He was there when Chuck Yeager broke the sound barrier in 1947; when Alan Shepard made America's first manned space flight, in 1961; when John Glenn first orbited Earth, in 1962; when Apollo 8 went round the moon in 1968, and when Apollo 11's module landed on it in 1969, for him the most mind-boggling moment of all. The team had never worked so hard at anything. But he went on for many years yet, to suit up men for the first Skylab flight and the first Shuttles, before in 1983 he left to get on with all the stuff at home that needed fixing.

As a suit tech, he considered himself a low man on the pole. His job was to help design the spacesuits and then, before the flight, put the astronauts into them, one suit tech to each astronaut. First came cotton long johns and, in later years (after some accidents) a proper urine-collection device, which he thought up himself. Then came the heavy tailor-made suit, pressurised to five pounds per square inch. The extra-vehicular suits for Apollo 11 were a real piece of work: 28 layers of nylon coated with Kapton and Teflon, built to withstand a temperature range of 500°F and assault from micro-meteorites. Each one cost $100,000. After the flight, he vacuumed the moondust out of them. He didn't keep any.

Dinner with Rockwell

For suiting-up he worked carefully to a checklist, as he liked to do even when he packed his suitcase. Checklists saved people. He was looking for fatal air-leaks, especially around the zippers, consulting the suit-pressure instrument panel he had made himself. (It was crude, but it did the job.) Carry-on items such as pens and snacks had already been put in the right pockets. He itemised for stowage the things astronauts liked to take up—wedding rings, flags and the like. Communication lines were connected, and over-gloves, boots and five-pound helmets locked on.

The biggest deal, three hours before lift-off, was to hook the astronauts to portable oxygen ventilators to reduce the nitrogen in their blood. Without that, they would get the bends on re-entry. Because the ventilators lasted only half an hour, he would carry out spares to the launch pad, walking behind the smiling, waving astronauts with his head down. He had no wish to be photographed; he was the back-up man.

Besides, his job was not over. Inside the spacecraft he had to fix the astronauts in their restraint straps and check they were comfortable. In the early years, bent over them like a surgeon with a patient in his white cap and overalls, he would wish them a "real good flight". Later on the close-out crew were not allowed to talk to the astronauts, so he used hand signals and smiles. His face and securing touch were Shepard's and Glenn's and Neil Armstrong's last physical contact with Earth before, as Glenn put it, "there are no more hands". But he made light of it. America's astronauts were as fine a group of fellows as you'd ever want to meet, and he never saw them nervous. Business as normal.

He was therefore quite embarrassed when fame brushed by. First, he was on "What's My Line?" on TV in 1963, where four celebrities had to guess what job he did. Then Norman Rockwell painted him, once suiting up John Young, and once right behind Armstrong, Buzz Aldrin and Mike Collins in "From the Earth to the Moon." When he asked why he had been put there, so close to those heroes, Rockwell said that was where he had always seen him.

For the TV show he had to go to New York City, his first visit, where he marvelled that the lights stayed on all night. For the Rockwell pictures he took a spacesuit to Stockbridge, Massachusetts in his car, so that Rockwell could capture all the colours. At dinner there he felt out of place with so many educated people, but luckily he knew to use the silverware from the outside. So he bluffed his way through.

Perhaps his best memento was the gold medal Glenn gave him after his orbits of Earth, with his initials, JS, on the back. Glenn took about ten up with him; the rest went to the president and other bigwigs. He felt "real proud" to get it, but kept quiet. So quiet that when, in his 80s, a long-abandoned Mercury space capsule was recovered from the seabed and he let slip at the barber's that he had put Gus Grissom in it, the whole shop looked at him in disbelief, before the barber went on snipping. ■

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