The Economist

OCTOBER 29TH–NOVEMBER 4TH 2016

China's fight to control its history

The Trump-Putin bromance

AT&T and the future of TV

Hands off the Bank of England

Liberty moves north

Canada's example to the world

Contents

On the cover
Canada is uniquely fortunate in many ways—but its liberalism and tolerance hold lessons for other Western countries: leader, page 11. Why Canada is still at ease with openness, pages 19-22. Europe's new trade vetocracy: Charlemagne, page 51

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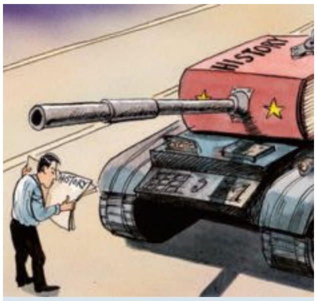
Brexit and the City The financial-services industry considers its future outside the European Union, page 52. Politicians who casually attack the Bank of England's integrity are playing with fire: leader, page 12. Economists measure the fallout of Brexit, page 53

Trump and Putin What explains the Republican nominee's fondness for Russia's president? Page 31

International Criminal Court South Africa and other countries are wrong to leave: leader, page 12. A terrible blow for the court and for a beleaguered country, page 42

Contents continues overleaf



China The Communist Party is struggling to keep control over its version of the past, page 29

AT&T and Time Warner Why the takeover should be blocked: leader, page 13. Changes in the television industry explain AT&T's bid for Time Warner, but that does not mean the deal makes sense, page 57

Goldman Sachs It is a company people love to hate—but in one respect Goldman Sachs is a model for its industry: leader, page 14. Both revered and reviled, the bank is fighting to stay relevant, page 63

Mapping the seabed Researchers have a plan to chart in detail the depths of the ocean floor, page 71

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Politics

In **France** the migrant camp at Calais was dismantled, with asylum-seekers sent to processing centres or to Britain, where many want to end up. Meanwhile, European Union officials met the Nigerian government to try to thrash out an agreement on sending failed asylum-seekers back to their countries of origin. A deal is sorely needed: the UN's refugee body said that 2016 has been the deadliest for migrants crossing the Mediterranean, with more than 3,800 dead or missing.

Justin Trudeau, the prime minister of Canada, cancelled a trip to Brussels to sign a **trade deal** with the EU because the Socialist-led regional parliament of Wallonia in Belgium was refusing to support it. The deal, which has been seven years in the making, is opposed by many Europeans who worry that it will water down rules on environmental standards and labour laws. At the last minute Belgium cobbled together an agreement.

At a NATO meeting, Spain was criticised for agreeing to refuel **Russian warships** at its enclave in Ceuta in north Africa. Others in the military alliance feared that the warships could help bomb Syria. Russia later withdrew its request.

Scrapping the vote

Hundreds of thousands of people in **Venezuela** protested against the country's authoritarian regime. The electoral commission had earlier blocked a referendum to recall the president, Nicolás Maduro, following court rulings that the collection of signatures at an earlier stage of the referendum process had been fraudulent. The national assembly, which the opposition controls, accused the government of conducting a coup d'état.

Donald Trump launched an attack on **Obamacare** after the government reported that the cost of an average health-insurance plan sold through government-run exchanges will rise by 22%. The three-month window for buying insurance on exchanges opens on November 1st, spurring a hefty rise in health bills for some voters a week before the presidential election.

America's election and tallying of the votes takes place on November 8th, but **early voting** in Florida, a key battleground state, got under way this week. Florida is one of 37 states that allow voters to cast their ballots before the official date of the election. Turnout was said to be brisk.

Out-of-court disagreement

The **Gambia** became the latest country to say that it is leaving the International Criminal Court, claiming that it is unfairly targeting African leaders for prosecution. Burundi and South Africa recently did likewise. The court was set up in 2002 to bring justice to those responsible for genocide, crimes against humanity and other war crimes.

Kurdish forces involved in the liberation of **Mosul**, Iraq's second city, from Islamic State, besieged Bashiqa, a town just 8 miles (12km) away. Meanwhile, Iraqi special forces were approaching Mosul's southern outskirts. Some 7,500 people are said to have fled so far.

The chief whip of the African National Congress, **South Africa's** ruling party, called on its entire leadership, including President Jacob Zuma, to resign. He says that fraud charges being brought against the finance minister, Pravin Gordhan, are politically motivated.

Ethiopia withdrew its troops from Somalia, where they had been fighting Islamist militants, blaming a cut in funding for the mission by the EU.

Israeli prosecutors charged 13 people with inciting violence after a wedding video showed scenes of right-wing Jews mocking the death, last year, of a Palestinian toddler in an arson attack in the West Bank.

Targeting the police

Militants in **Pakistan** killed more than 60 people at a police-training academy near the city of Quetta. The cadets were asleep when the attackers struck. IS claimed responsibility, but Pakistani authorities suggested a local Islamist group was to blame.

A group of 65 **Burmese** refugees who had been living in camps along the border with **Thailand** returned home voluntarily, the first repatriation to earn the approval of both governments. Thailand has long sought to send home some of the 150,000 Burmese refugees in the country.

South Korea's president, Park Geun-hye, apologised for sharing documents with a friend who had no official government position. Opposition lawmakers have accused the friend of using the president to secure donations for two foundations.

Chaos again erupted at **Hong Kong's** Legislative Council amid disputes over the swearing-in of two legislators who support self-determination for the territory. Thousands of people gathered outside the building to demand that the two should not take up their posts because they used derogatory language about China when they took their oaths.

A committee of **Japan's** ruling Liberal Democratic Party proposed to allow party leaders to serve for a maximum of nine years instead of six. If approved, the rule-change might allow Shinzo Abe to remain in power until 2021.

About 350 of the **Chinese** Communist Party's senior members held a four-day meeting at which they discussed ways of tightening discipline within the ranks. It is likely that the secretive gathering also debated plans for sweeping leadership changes next year. President Xi Jinping is certain to keep his job.

China accused America of trying to "stir up trouble" after a rapprochement between China and the **Philippines**, an ally of America. *People's Daily*, a mouthpiece of the Chinese Communist Party, cited as evidence the recent passage of an American destroyer near two islands in the Paracels.

Still facing headwinds

The British government at last made a decision on expanding airport capacity, giving the go-ahead for a third runway at **Heathrow**. The proposal, initially put forward in 2009 by the then governing Labour Party, is controversial. In 2010 a Conservative-led government cancelled the project and a final decision has been repeatedly put off. Theresa May, the prime minister, whose constituency will be affected by the expansion, had pledged to fight the plan; every mayor of London has also opposed it; and Zac Goldsmith, a London Tory MP, resigned his seat in protest. After years of taxiing, campaigners hope a third runway may yet fail to take off. ➤

Business

AT&T made an offer for **Time Warner**, in a deal valued at $109bn, underlining the push to establish giants in the media industry that combine distribution with content. If competition authorities approve, the acquisition will give AT&T possession of HBO and other premier cable channels, as well as a trove of films produced by Warner Bros. With its new assets, America's second-biggest wireless-telecoms firm wants to set up a rival to Netflix and Amazon, which have disrupted cable-TV with cheaper services that stream content over the internet.

In a deal that will create the world's biggest listed cigarette-maker, **British American Tobacco** offered to pay $47bn to take over **Reynolds American**. With sales of cigarettes declining around the world, tobacco companies are scrambling to develop vapour-based products such as e-cigarettes.

Mistry solved

In a surprise move, Cyrus Mistry was replaced as chairman of **Tata Group**, India's biggest conglomerate, by Ratan Tata, who had led the group for 20 years and now controls its holding company. Mr Mistry's defenestration followed investor unease about Tata's performance and a reported clash over the group's culture with Mr Tata, who is returning on an interim basis. Mr Mistry didn't go quietly, depicting his removal as "unparalleled in the annals of corporate history".

Britain's economy grew by 0.5% in the third quarter, which was much better than had been expected. The period covers the three months since Britain voted on June 23rd to leave the European Union. The manufacturing sector contracted in the quarter. Markets shrugged off the news.

A federal judge approved the $15bn settlement through which **Volkswagen** will compensate customers who bought cars that fail to meet pollution standards because it cheated in emissions tests. VW will offer to either buy back or fix the vehicles, though that fix has yet to be approved.

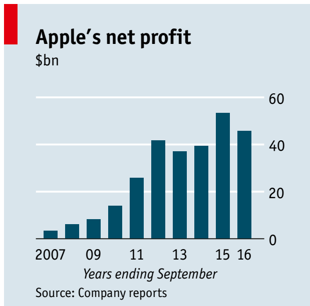
Tesla Motors made a surprise profit, its first since 2013. The maker of electric cars reported net income of $22m for the third quarter; in the same period last year it had made a loss of $230m. Revenues zoomed to $2.3bn.

Ericsson named Borje Ekholm as its new CEO. Mr Ekholm has been a board member at the struggling Swedish telecoms-equipment supplier for ten years, and will carry out his new duties from the United States, where he lives. The company recently issued a dire profit warning.

The full Monte

Monte dei Paschi di Siena, the most distressed bank in Italy's troubled industry, announced it would shed a tenth of its staff and a quarter of its branches as part of restructuring. It also confirmed that it would launch a debt-for-equity swap to kickstart its recapitalisation plan. This will happen in early December, when Italians vote in a contentious referendum on political reform that may unnerve markets if it fails.

Adding to its portfolio of hotels and airlines, **HNA**, a Chinese conglomerate, said it would take a 25% stake in **Hilton** for $6.5bn. It is buying the stake from Blackstone, which purchased the hotel chain in 2007. The private-equity firm has enlarged the business to more than 775,000 rooms worldwide, with Asia providing much of the expansion.



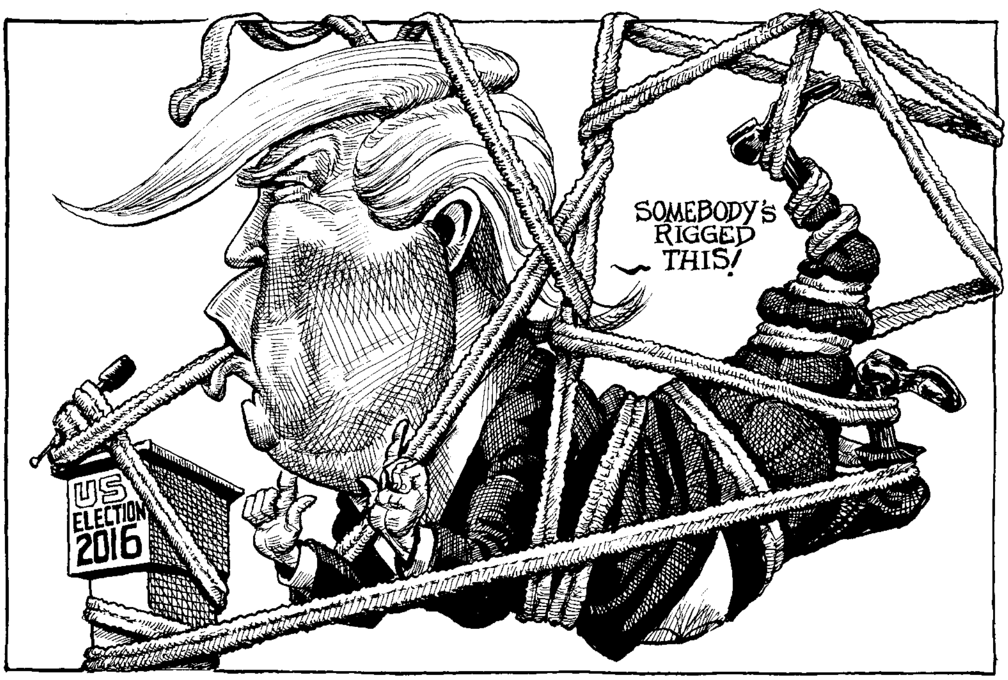
Apple reported net income of $45.7bn for the 12 months ending September 24th, which was down by 14% from its previous fiscal year. Sales of the iPhone have been slowing, and Apple's growth in China has tapered off. Still, the company reckons it will rack up sales of up to $78bn over the Christmas season, which would make this its best quarter ever.

There were signs this week that antitrust regulators were raising doubts about the wave of merger proposals in **agribusiness**, possibly delaying their completion. Syngenta reassured investors that its takeover by ChemChina would be completed, but said it does not now expect this to happen until early next year. And Bayer defended its planned acquisition of Monsanto as "entirely logical"; it expects its deal to close by the end of 2017.

The botnet battalion

A massive "distributed denial-of-service" attack caused hundreds of popular websites, including Netflix and Twitter, to go offline. The perpetrators **hacked devices**, such as webcams and home routers, amassing a botnet, or online force, that then bombarded a server in New Hampshire which is part of the internet-address system. Shortly after the attack, a Chinese electronics maker recalled some of its products, mostly webcams. The hackers' code is thought to have originated from an attack on Sony and Microsoft that frustrated online-gamers on Christmas Day in 2014.

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



Liberty moves north

It is uniquely fortunate in many ways—but Canada still holds lessons for other Western countries

WHO will uphold the torch of openness in the West? Not America's next president. Donald Trump, the grievance-mongering Republican nominee, would build a wall on Mexico's border and rip up trade agreements. Hillary Clinton, the probable winner on November 8th, would be much better on immigration, but she has renounced her former support for ambitious trade deals. Britain, worried about immigrants and globalisation, has voted to march out of the European Union. Angela Merkel flung open Germany's doors to refugees, then suffered a series of political setbacks. Marine Le Pen, a right-wing populist, is the favourite to win the first round of France's presidential election next year.

In this depressing company of wall-builders, door-slammers and drawbridge-raisers, Canada stands out as a heartening exception. It happily admits more than 300,000 immigrants a year, nearly 1% of its population—a higher proportion than any other big, rich country—and has done so for two decades. Its charismatic prime minister, Justin Trudeau, who has been in office a year, has welcomed some 33,000 Syrian refugees, far more than America has. Bucking the protectionist mood, Canada remains an eager free-trader. It was dismayed by the EU's struggle to overcome a veto by Walloons on signing a "comprehensive" trade agreement that took seven years to negotiate (see page 51). Under Mr Trudeau, Canada is trying to make amends for its shameful treatment of indigenous peoples, and is likely to become the first Western country to legalise recreational cannabis on a national level.

Go, Canada!

Irredeemably dull by reputation, less brash and bellicose than America, Canada has long seemed to outsiders to be a citadel of decency, tolerance and good sense. Charles Dickens, bewildered by a visit to America in 1842, found relief in Canada, where he saw "public feeling and private enterprise in a sound and wholesome state; nothing of flush or fever in its system." Modern Canada's social safety net is stronger than America's; its gun-control laws saner. Today, in its lonely defence of liberal values, Canada seems downright heroic. In an age of seductive extremes, it remains reassuringly level-headed.

Many of Canada's virtues spring from its history and geography and are not readily exportable (see page 19). It is easier to be relaxed about immigration when your only land border is protected by a wall the size of the United States. Appreciation for the benefits of trade comes more easily to countries next door to big markets. British Brexiteers might justifiably claim that they voted for exactly what Canada already has: control of immigration and the freedom to negotiate trade deals with any country willing to reciprocate.

Despite such luck, Canada suffers from some of the stresses that feed populism in other rich countries. It has experienced a decline of manufacturing jobs, stagnant incomes for most of its citizens and rising inequality. It, too, frets about a shrinking middle class. Canadians worry about Islamist terrorism, though the country has so far been spared a big attack. Some right-of-centre politicians, playing on fears that one will happen, indulge in Trumpian rhetoric. Yet Canada does not seem tempted to shut itself off from the world. What can other Western countries learn from its example?

First, Canada not only welcomes newcomers but works hard to integrate them. Its charter of rights and freedoms proclaims the country's "multicultural heritage". Not every country will fuse diversity and national identity in the same way that Canada does. Indeed, French-speaking Quebec has its own way of interpreting multiculturalism, which gives priority to the province's distinct culture. But other countries can learn from the spirit of experimentation that Canada brings to helping immigrants find employment and housing. Its system of private sponsorship, in which groups of citizens take responsibility for supporting refugees during their first year, not only helps them adapt but encourages society at large to make them welcome. The UN High Commissioner for Refugees has called on other countries to copy it.

Follow the moose

The second lesson is the value of knowing when fiscal austerity does more harm than good. Canada has been managing its public finances conservatively for the past 20 years or so. Now in charge of a sluggish economy, Mr Trudeau can afford to give growth a modest lift by spending extra money on infrastructure. His government has given a tax cut to the middle class and raised rates for the highest earners to help pay for it. These economic policies deserve to "go viral", the head of the IMF has said. Canada has a further economic lesson to impart in how it protects people hurt by globalisation. Compared with America, its publicly financed health system lessens the terror of losing a job; it also provides more financial support and training to people who do. And its policy of "equalisation" gives provincial and local governments the means to maintain public services at a uniform level across the country.

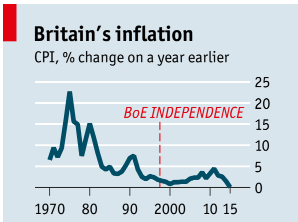
Perhaps most important, this mixture of policies—liberal on trade and immigration, activist in shoring up growth and protecting globalisation's losers—is a reminder that the centrist formula still works, if politicians are willing to champion it. Instead of folding in the face of opposition to liberal policies, Mr Trudeau and his ministers have instead made the case for them. Although free trade is not the hot-button issue in Canada that it is in America, they have been tireless in listening to critics and trying to take their concerns into account.

Canada is far from perfect. It remains a poorer, less productive and less innovative economy than America's. While championing freer international trade, Canada has yet to eliminate obstacles to trade among its provinces. For many liberals, Canada's emphasis on "peace, order and good government", enshrined in its constitution, is inadequate without an infusion of American individualism. But for now the world owes Canada gratitude for reminding it of what many people are in danger of forgetting: that tolerance and openness are wellsprings of security and prosperity, not threats to them. ■

The Bank of England

Hands off

Politicians who casually attack the central bank's integrity are playing with fire



FOR nearly two decades Britain's monetary policy has been independently set by the Bank of England, according to targets defined by the government. Removing direct control of interest rates from politicians, who were inclined to fiddle with them for electoral gain, has made for a better-run, more stable economy in Britain, as it has in many other countries.

Yet one of the aftershocks of the Brexit earthquake in June is that the Bank of England's independence has been called into question. There has been a growing chorus of criticism of the central bank, with increasingly senior pro-Brexit politicians calling for the government to boot out its governor and take back control of monetary policy. Such a course remains unlikely, for now. But the rhetoric is dangerous. The people chipping away at one of the remaining pillars of Britain's financial stability should lay off.

From the people who brought you Brexit

The feistiest criticism has come from overexcited Tory backbenchers, giddy from their referendum victory over "experts", among whom they include Mark Carney, the bank's governor. They were infuriated by his willingness during the campaign to spell out the economic risks of Brexit, which they said compromised the bank's political neutrality. They are now echoed by more influential figures. Michael Gove, a recently sacked cabinet minister, advised the "arrogant" Mr Carney to "ponder the fate of the Chinese emperors, overwhelmed by forces they could not control". William Hague, a former Tory leader, threatened that if central bankers in Britain and elsewhere did not soon raise interest rates, "the era of their much-vaunted independence will come…to its end." Most worryingly, the prime minister, Theresa May, warned in a clumsily worded speech that the bank's regime of low interest rates and quantitative easing (printing money to buy government bonds) had penalised the poor, vowing: "A change has got to come. And we are going to deliver it."

Enough. This newspaper has been ready to criticise the bank when it errs, as it did in its handling of the financial crisis of 2007. There is, rightly, a lively public debate about the policies of central banks, from America's Federal Reserve to the European Central Bank. Yet the present onslaught on the Bank of England is an attack not just on its policies but on its political neutrality and independence, which for 19 years have helped underpin Britain's status as a haven of relative stability.

This is a particularly dangerous time to launch such an attack. Sterling's loss of nearly a fifth of its value since the referendum shows how Britain has already been devalued in the eyes of the world. The City of London risks losing some, and perhaps a lot, of the financial-services business that has powered Britain's growth and provides a big chunk of its taxes (see page 52). And investors can hardly look to the opposition for reassurance: Labour has sent mixed signals, proposing a distinctly non-independent-sounding "people's quantitative easing" and promising to review the Bank of England's role.

None of this makes anyone keener to invest in Britain. It may well make Mr Carney more likely to jump ship (as a Canadian migrant he is, after all, a "citizen of nowhere", to use Mrs May's ill-judged slur on high-flying globetrotters). A few sensible types, including Philip Hammond, the chancellor, seem to realise that Britain does not need further shocks to its financial stability, and are trying to play down the row. He and Mrs May must now speak out above the din, saying loud and clear that the Bank of England's independence is beyond question. Having opted to leave the EU after a campaign that urged voters to ignore "experts", Britain needs all the expertise it can get. ■

The International Criminal Court

Back it, join it

African countries are wrong to leave

SOUTH AFRICA'S decision to stomp out of the International Criminal Court (ICC) is deplorable. It is inconceivable that Nelson Mandela would have done such a thing. Virtually all right-thinking liberals and lawyers in his country have condemned the move. In the name of standing up against the supposed anti-African bias of the court, South Africa has aligned itself with the autocrats of the continent and given succour to those who have committed appalling human-rights abuses. Its announcement on October 21st followed that of Burundi, which is under "preliminary examination" by the ICC for its president's bloody suppression of dissent; the Gambia, another nasty regime, followed suit this week (see page 42). It would be tragic if South Africa set in motion a domino effect that prompted ever more African countries to leave the court. A wave of withdrawals would reverse the progress towards greater rule of law across the continent and beyond.

The charge of anti-African bias laid against the court, mainly by a clutch of governments whose leaders are vulnerable to its vigilance, is understandable—but wrong. True, eight of the nine countries about which cases have been heard, or are under way, are African. And all those so far convicted have been African. But that is because African governments, mindful of ▸▸

the horrors of apartheid and the genocide in Rwanda, have been keenest to sign up to the court and have actively initiated cases. Indeed, most of the ICC's cases were referred to it by African governments themselves, while two (Libya and Sudan) were brought by the UN Security Council. The only exceptions to this pattern involve Kenya. The ICC indicted the current president and deputy president after at least 1,300 people were killed in post-election violence in early 2008. It was Kofi Annan, the UN's former head, a Ghanaian, who recommended that the ICC bring charges. After the cases against President Uhuru Kenyatta and his deputy were dropped a year ago, the court issued a "finding of non-co-operation", a polite term that included accusations of witness-tampering.

Jacob Zuma, South Africa's dire president, has already tarnished his country's reputation as a beacon of morality by his own entanglements with the law at home. Now he has added to the damage by disdaining the ICC abroad. He thinks it should, among other things, grant immunity to incumbent leaders. Leaving the international court may, Mr Zuma hopes, make it easier for him to fend off the remonstrations of his own courts, which may yet punish him for inviting Sudan's president, Omar al-Bashir, to cosy meetings in South Africa, despite his indictment by the ICC for mass murder in Darfur.

African leaders who seek to play the populist, anti-Western card to fend off the long arm of the law, whether domestic or international, are—so far, at least—the minority. They belong to the bad old Africa of the past. The good Africa, still happily in the ascendant, has rallied to the ICC. All the same, the ICC and its admirable chief prosecutor, Fatou Bensouda (a Gambian woman), do need to reassure African countries that it is impartial. Even governments that take human rights seriously jib at the way non-Africans seem to get away with murder.

Syria, a non-signatory along with most Arab countries, should obviously be in the ICC's sights, but Russia would block its referral in the UN Security Council. Last year's addition of Georgia to the list of places where war crimes are being investigated was timely. Of the ten other countries where "preliminary examinations" are under way but not yet close to a trial, half are outside Africa, namely Afghanistan, Colombia, Iraq, Palestine and Ukraine. It would be better still if big countries signed up to the court. But the United States has refused to do so, as have Russia and China.

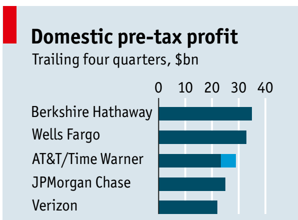
The wheels of justice move slowly

International justice is plainly imperfect, but is worth pursuing. Patience is in order. Tribunals for Yugoslavia, Rwanda and Sierra Leone, whose experience led to the creation of the ICC's permanent court, all took time to bear fruit. The ICC, though underfunded, has begun to speed up, and has established important new principles, including convictions for rape and destroying historic monuments in conflict, both now deemed potential war crimes. In any event, the ICC's purpose is to bring justice to voiceless victims, not to let the powerful off the hook, be they from Africa or any other part of the world. ■

Business in America

Vertical limit

AT&T's takeover of Time Warner should be blocked



ONE of the biggest problems facing America's economy is waning competition. In the home of free enterprise two-thirds of industries have become more concentrated since the 1990s, partly owing to lots of mergers. Fat, cosy incumbents hoard cash, invest less, smother new firms that create jobs and keep prices high. They are rotten for the economy.

Boosting competition should be a priority for whoever occupies the White House in 2017, and for Congress. Now a test case is waiting in the in-tray. AT&T, America's fifth-biggest firm by profits, wants to buy Time Warner, the second-biggest media firm. The $109bn megadeal isn't a simple antitrust case, because it involves a firm buying a supplier, not a competitor. But there is a strong case that it will limit consumer choice in a part of the economy that is rife with rent-seeking and extend a worrying concentration of corporate power. It should be stopped.

Dial M for monopoly

The business of what Americans watch and how they communicate has seen waves of change. In 1984 AT&T's national phone monopoly was broken up. In 1990-2010 the rise of the web and mobile phones led to manic dealmaking. Today people are buying fewer bundles of shows from traditional TV firms and instead viewing online, including through Netflix and Amazon (see page 57). They are watching their phones more and TVs less. AT&T, which makes 80% of its sales from "pipes"—mobile and fixed broadband and voice lines—says it wants to buy Time Warner, which owns HBO and Warner Brothers, among other assets, to bulk up in the media business.

Antitrust authorities have recently blocked "horizontal" telecoms mergers, in which a firm seeks to buy a rival. They stopped AT&T from buying T-Mobile in 2011, and Comcast, a broadband firm, from buying TWC in 2015. But they have been easier on "vertical" mergers, in which a firm ties up with a supplier—such as when pipe companies buy content firms. Comcast was allowed to buy NBC Universal, a broadcaster, in 2011, albeit with the condition that it made its content available to all its rivals and kept its pipes open to other content, so that customer choice was not hurt.

There are two reasons why trustbusters should now take a tougher line. First, the telecoms industry is already a rent-seekers' paradise. Americans pay at least 50% more for mobile and broadband service than people in other rich countries. For each dollar invested in infrastructure and spectrum, American operators make 28 cents of operating profit a year, compared with 18 cents for European firms. That reflects the lack of competition. AT&T and Verizon control 70% of the mobile market, and are the only firms that reach 90% or more of Americans with high-speed services. Half of the population has no choice of fixed-broadband supplier. The lack of downstream competition in pipes could distort competition in upstream content. ▸▸

A combined AT&T and Time Warner might seek to limit what any near-captive customers watch, for instance, thus denying other content providers viewers. Safeguards of the sort attached to the Comcast-NBC deal are not much use in practice. One way round them is "zero-rating" plans, in which pipe firms exempt some TV services from people's monthly data caps, making them more attractive. Another is altering the placement of content in on-screen menus in order to bury rivals' material. AT&T says this is not its aim, but why else would it pay a $20bn premium for Time Warner?

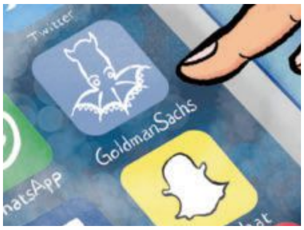
A second concern is that AT&T-Time Warner would have vast political and lobbying power, allowing it to bend rules over time, including any antitrust remedies that it agreed with regulators. It would capture 28% of the media-and-telecoms industry's pre-tax profits and 2% of all corporate profits, making it America's third-biggest domestic firm. Media and telecoms regulation is already intensely political, and AT&T today is no shrinking violet, being a vocal opponent of net neutrality, the rules that ensure that all online traffic is treated equally.

Precedent suggests that the trustbusters in the Department of Justice (under the auspices of the president), and not the Federal Trade Commission (a creature of Congress), will have the biggest say on the tie-up. This means the deal is being struck just as there is a change of leadership at the top. Those advising on the merger may be gambling that this makes the authorities unlikely to initiate a strong line on vertical mergers. That is all the more reason to be bold. Politicians and regulators may eventually resolve to open up the industry more, for example through "unbundling", which lets upstart firms use others' pipes. Until then they should block the AT&T-Time Warner deal and make clear that competition, not consolidation, is the way to get America's economy working better. ■

Investment banks

Too squid to fail

Goldman Sachs is a company people love to hate—but in one respect it is a model for its industry



IN ITS pomp, Goldman Sachs was in a class of its own. No Wall Street investment bank was as well-connected, as arrogant, as influential—nor as feared and derided: the "Great Vampire Squid" of *Rolling Stone* legend. It still has the best brand name in the business. But like the rest of its industry, it has not fully recovered from the near-death experience of 2008. Banks are the untouchables of global stockmarkets. Even the boss of one, Credit Suisse, has described them as "not really investable", and, sure enough, shares in many of the most prominent firms—Deutsche Bank, Citigroup, Bank of America—trade well below book value, suggesting they would be better off liquidated. Goldman's shares trade virtually at book value. But even it is a shadow of its former self.

Goldman, however, did not become a byword for financial acumen without acquiring some acute self-diagnosis skills. It is turning into an industry leader in another way: as an exemplar of the wrenching transformation banks need to undertake in order to survive and prosper (see page 63).

This might seem an odd moment to be writing the obituary of a business model that has delivered such prestige, power and privilege for the Wall Street elite. Banks' aggregate profits have long since recovered to pre-crisis levels, and the quarter for which results have just been published has been a particularly good one for those institutions still standing: Goldman reported its first double-digit return on equity for six quarters, and it did so by making money in its traditional trading and advisory businesses. The results seemed to vindicate those who have argued that the ever-thinner elite of global investment banks would eventually come good, as weaker rivals retrench and leave the field.

Far from it. The good quarter was a single swallow. Returns on equity and assets have not rescaled former peaks. Rather, they have fallen to a new, significantly lower, plateau. The industry remains squeezed between two secular trends that are not going to ease. One is towards the "disintermediation" of banks, a decades-long process accelerated by a technological revolution. This led Wall Street firms to seek profits as risk-takers rather than intermediaries. But that trend runs counter to the second: tighter regulation imposed in the wake of the crisis in 2008, to try to ensure it never happens again. This is eliminating whole lines of business, and, through the imposition of higher capital requirements, is making others less profitable.

Goldman sacks

An obvious response to this squeeze is the most brutal and immediate form of cost-cutting: redundancies and the elimination of any expense seen as discretionary. At Goldman the number of people engaged in trading shares has fallen from a peak of 600 in 2000 to just two today. Buried within recent upbeat earnings reports by the banks were announcements of more job losses, including at Goldman. A more profound response, however, is to go beyond retrenchment to recognise that banks are, at their core, technology companies, whose business is to push numbers down digital pipes. Money has long been primarily an electronic construct.

Goldman is ahead of the pack in embracing the changes this recognition implies. A plethora of new initiatives seeks to turn technology into its friend and take it into entirely new lines of business. In-house, it is automating and streamlining its traditional businesses, identifying 146 steps across 45 systems that can be simplified in an initial public share offering, for instance. This month it launched a new internet operation, named Marcus, to lend to consumers. It has incubated a number of tech firms. One, Symphony, offers a messaging platform, and dreams of rivalling Bloomberg. Another, Kensho, offers a kind of real-time cyber-encyclopedia to find correlations between world events and price-sensitive assets.

Some of these Goldman initiatives may come to be seen as faddish indulgences and fail—and they are mirrored by a scramble for new ideas at its peers. But the effort puts Goldman on the right side of an embattled industry that, unable to transform its operating environment, must transform itself. ■

Letters

Why they're right

A lot of what you said in your leader on trade and globalisation made sense, but those who oppose trade deals are not "wrong" ("Why they're wrong", October 1st). Free-trade deals have changed remarkably since the repeal of the Corn Laws in the 1840s. Accords such as the Trans-Pacific Partnership, the Trans-atlantic Trade and Investment Partnership and the Comprehensive Economic and Trade Agreement are more about protecting the interests of large multinational corporations than they are about reducing costs for consumers and promoting competition.

These deals expand intellectual property rights, increase patent protections and enable foreign companies to sue governments for alleged losses of potential profits in supranational courts through "investor state dispute settlements". This is what the protesters are most opposed to: noxious provisions that boost the economic power of large corporations at the expense of democratic governments, smaller businesses and individual citizens.

TOBY SANGER
Economist
Canadian Union of Public Employees
Ottawa

Globalisation is inevitable, but the current configuration favouring neoliberal politics and economics is not. It is entirely possible to integrate domestic economies in ways that do not favour capital over labour or inequality over equality. More social democracy would address that.

The case for free trade has rested on a confusion between two notions of efficiency: Kaldor-Hicks and Pareto. Free-trade agreements are Kaldor-Hicks efficient because they produce overall net gains to welfare, but they are not Pareto efficient in that they do not make some better off without making some worse off. Economists and politicians have been too quick to point to the former type of efficiency but ignore or downplay the latter, thus producing a backlash.

Something is Kaldor-Hicks efficient not only if it actually maximises net wealth but also when losers are compensated for their losses. Somewhere along the line economists and politicians forgot this part of the equation.

PROFESSOR DAVID SCHULTZ
Editor
Journal of Public Affairs Education
St Paul, Minnesota

Thailand's late king

Your portrayal of Thailand's late King Bhumibol Adulyadej as a tacit supporter of certain political groups couldn't be further from the truth (Obituary, October 13th, online and digital editions). King Bhumibol performed his duties as a constitutional monarch in a neutral manner and stood far above the turmoil of Thai politics. When politics threatened to spill over into bloodshed, King Bhumibol would step in and demand compromises that saved lives. The idea that he encouraged political movements is ridiculous.

Moreover, Thailand's *lèse-majesté* law is an extension of the country's libel laws. Its purpose is to protect the monarchy from defamatory statements. It does not exist to suppress freedom of speech. King Bhumibol was willing to accept criticism but was not in a position to change such laws, as legislative power lies absolutely with parliament.

It was also wrong to claim that King Bhumibol was made "semi-divine" through ceremonial and ritualistic means. Throughout his 70-year reign, the king worked tirelessly to improve the livelihoods of his subjects. They regarded him as a father figure, a man who cared about the suffering of others. He lived in a humble wooden house, drove a simple car, wore an inexpensive watch and dressed in simple attire. He met the people in the most far-flung places of his kingdom, taking photographs, sharing rice and tea while sitting on the floor and hearing about their problems. It was through his compassion and actions that King Bhumibol achieved his divine-like status among the Thai people.

Finally, the claim that it was in King Bhumibol's self-interest to urge Thai people to favour moderation over wealth is absurd. No mention was made of the several thousand royal projects that distributed his wealth mainly to assist rural people.

SEK WANNAMETHEE
Spokesperson of the Ministry of Foreign Affairs
Bangkok

Niche medicine

As a doctor I take issue with your arguments against the early approval of niche-treatment medicines, such as eteplirsen ("Bad medicine", October 15th). These used to be know as "orphan drugs" because they applied to a tiny proportion of the public with rare conditions. Your line of thought suggests that any new drug not passing phases one to three in clinical protocols is ineffectual. I concede that advances in pharmacology such as eteplirsen do not offer cures per se, but in many cases they have prolonged life.

The development of drugs for conditions that affect the masses, such as hypertension and diabetes, should be subject to the rigours of a randomised double-blind study before entering the market. But the poor unfortunates who have been dealt a losing hand by the genetic lottery should not be condemned to premature death because of a rigid bureaucratic monolith beholden to the status quo.

J.A. MCERLEAN
Farmington Hills, Michigan

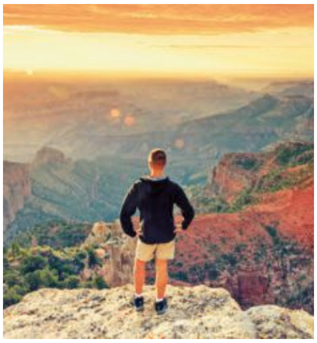
A sex act

I do not support nor do I admire Donald Trump. Having said that, I also do not admire Bill Clinton, whom you described as "dallying" with Monica Lewinsky in one sentence and then "canoodling" with her in another ("Hating Hillary", October 22nd). Webster's dictionary defines dallying as "to flirt or trifle with someone" and canoodling as "to kiss and cuddle amorously". Really?

Bill Clinton had oral sex in the Oval Office of the White House while serving as president of the United States. Not once, but on several occasions. His behaviour was not only lewd and offensive but also shocking. Your rendition of the matter suggests that the adage that boys will be boys still holds. I wonder if you would have used the same innocent adjectives if Bill had been a Republican president?

BECKY WSZOLEK
Dorset, Vermont

A gorgeous view



Richard Wynne criticised space tourism for being the plaything of "plutocrats" (Letters, October 15th). Yet all tourism started out aimed at the elites. Think of Lord Byron and the Grand Tour, spending a few months visiting Greece and southern Italy, seeing the sights and picking up the odd bit of statuary for one's country estate. The first Western explorers to reach the Grand Canyon thought that theirs would almost certainly be the only party of Europeans to visit such a remote location. Today it is a huge tourist destination. There are always people prepared to go one better than the neighbours when it comes to choosing where to go on holiday.

PETER DAVEY
Bournemouth, Dorset ■

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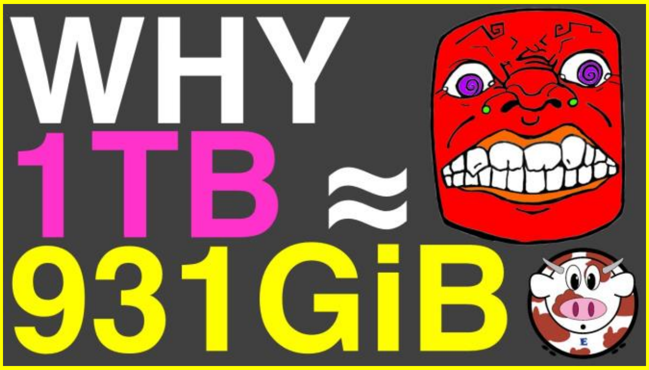
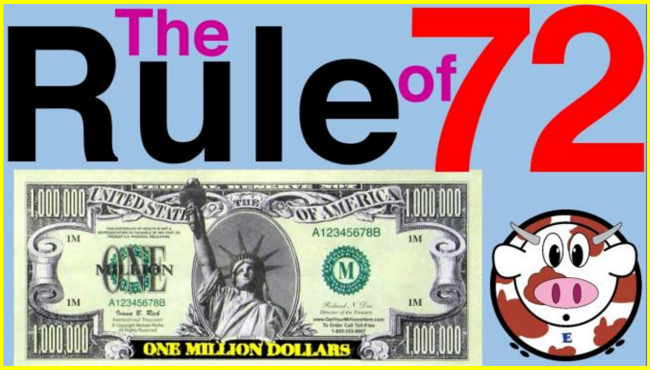
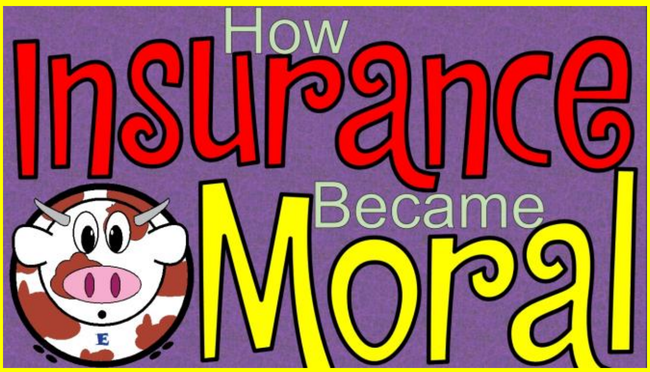
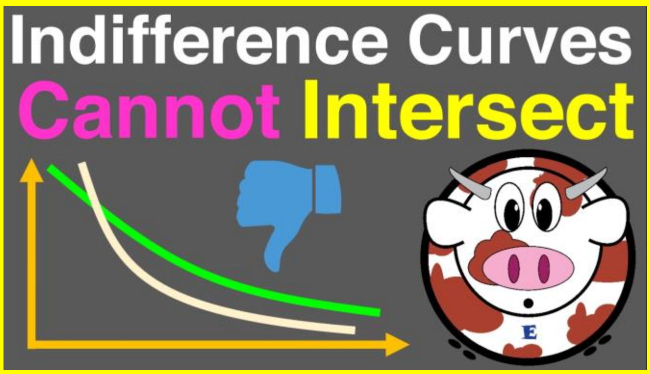








The last liberals

WINNIPEG

Why Canada is still at ease with openness

MOST people "would give anything to trade places with you," Dwight MacAuley, the province of Manitoba's chief of protocol, tells his audience. No one disagrees. In a packed hall in Winnipeg's century-old train station, 86 immigrants from 31 countries are becoming citizens of what Mr MacAuley characterises as one of the "greatest, freest, richest nations that has ever existed". Some crowned with turbans, others with hijabs, they sing "O Canada" and take the oath of citizenship in English and French. A local member of parliament, Robert-Falcon Ouellette of the Red Pheasant First Nation, drums an honour song. A Mountie in red serge stands at attention; afterwards he poses for pictures with the new Canadians.

Some 2,000 such events take place across the country every year. Fresh recruits keep coming (see chart 1 on next page). Canada admitted 321,000 immigrants in the year to June 2016, nearly 1% of its population; typically 80% of them will become citizens. It is contemplating an increase to 450,000 by 2021. A fifth of Canada's population is foreign-born, nearly twice the share in America.

The warmth of the welcome is as striking as the scale of the intake. Immigrants are encouraged to keep their cultures. Winnipeg's public schools have classes taught in Spanish and Ukrainian as well as French and Cree. Its Central Mosque is a few blocks down Ellice Avenue from the Hindu Society of Manitoba. The Juliana Pizza & Restaurant serves its "Greek/Jamaican food" just a bit farther on.

Canada's openness is not new, but it is suddenly getting global attention. It is a happy contrast to what is happening in other rich countries, where anger about immigration helped bring about Britain's vote for Brexit, Donald Trump's nomination and the rise of populist parties across Europe. And it has an appealing new face: Justin Trudeau celebrates his first anniversary as prime minister on November 4th. Mr Trudeau comes from Canada's establishment—he is the son of a former prime minister—but is not despised for it. A former high-school teacher and snowboarding instructor, his cheeriness played a large part in the Liberal Party's victory over Stephen Harper, a dour Conservative who had governed Canada for almost ten years.

Dancing across the water

Where Mr Harper was liberal, for example on trade, Mr Trudeau carries on his policies. Where the Conservative clenched, the Liberal loosens. Mr Trudeau is seizing the opportunity offered by low interest rates to ramp up investment in infrastructure. He will end a visa requirement for Mexicans that Mr Harper imposed and plans to legalise recreational cannabis. Mr Harper was close to being a climate-change denier; Mr Trudeau announced in October that he would set a price on carbon emissions. A month into the job he went to Toronto Pearson International Airport to welcome some of the 32,737 Syrian refugees admitted since he took office.

Mr Trudeau's domestic critics—so far a minority—deride him as "Prime Minister Selfie" for posing incessantly with fans and celebrities, sometimes (though not as pictured, above) with his shirt off. To European and American liberals he is a champion of embattled values and his country a haven with many charms (see chart 2 on subsequent page). "The world needs more Canada," said Bono, the activist and lead singer of U2, in September. When in Ottawa recently the IMF's chief, Christine Lagarde said she hoped Canada's pump-priming economic policies would "go viral". Mr Trump's "Super Tuesday" victories saw Google searches for "How to move to Canada" surge south of the border.

Canada is not exempt from stresses that are causing other rich countries to freak out. "All the pressures and anxieties that people are feeling around the world exist here," Mr Trudeau said in a recent interview with *The Economist*. But Canada seems to be coping with them less hysterically. In part, this is thanks to history. After Britain wrested control of Quebec from France in 1763 its new French-speaking subjects resisted assimilation. So did Canada's indigenous groupings: Inuit, First Nations and mixed-race *Métis*. Such resistance was sometimes met with oppression and cruelty, and Canada's treatment of its indigenous peoples has been atrocious in some times and places. But as Peter Russell, a Canadian historian, argues in a forthcoming book*, their "incomplete conquests" forced Canada's overlords into habits of accommodation that have shaped the country ever since. "Diversity is our distinctive national value," he says.

Canada's selective but eclectic taste in immigrants goes back a fair way, too. Clifford Sifton, the interior minister in the early 20th century, sought out farmers from Ukraine, Germany and central Europe in preference to British immigrants. His ideal was "a stalwart peasant in a sheepskin coat" with "a stout wife and a half-dozen children". This does not mean that the country was always all-welcoming. Canada "turned away boatloads of Punjabi and Jewish refugees" in the 20th century, notes Mr Trudeau; 100 years ago Chinese immigrants had to pay a head tax. But by the middle of the century Canada was admitting non-Europeans on a large scale and in 1962 it scrapped all ethnic criteria for immigrants. Five years later it introduced its points system, which scores would-be immigrants on the basis of such criteria as skills, education, work experience and ability to speak English or French.

As with people, so with goods. Canada's vocation for trade began in the early 17th century, when French fur traders established bases in what are now Nova Scotia and Quebec. "We have always been dependent on trade with the world," says Mr Trudeau. "So an anti-trade argument really doesn't get very far in Canada from the get-go." Exports plus imports account for 65% of Canada's GDP, more than double their share of the American economy. Nearly three-quarters of Canada's trade is with the United States.

This habit of openness has not made Canada immune to its costs. Factory employment dropped from almost 2m in 2000 to 1.5m in 2015, with some of those jobs moving to Mexico—Canada's partner, along with America, in the North American Free-Trade Agreement. South-western Ontario and the Niagara peninsula are as blighted by industrial decay as depressed parts of Pennsylvania and Michigan.

Nor does the national creed of tolerance carry all before it. Mr Harper flirted with Islamophobia: during the election campaign he called for women at citizenship ceremonies to unveil. Kellie Leitch, an MP who aspires to succeed him as head of the Conservative Party, wants to screen immigrants for "anti-Canadian values". Resentment against Chinese buyers who are driving up house prices in Vancouver can be tinged with racism.

Questions of identity are particularly complex in Quebec, where the Parti Québécois has called for a ban on burqas for those seeking public services. The French-speaking province prefers "interculturalism" to Anglophone talk of "multiculturalism", regarding its language and culture as the basis of its identity. Philippe Couillard, the province's Liberal premier, likens that core to the trunk of a tree, from which other identities can branch off. For Anglo-Canada, dominant within Canada but overshadowed by America, cultural diversity itself is the trunk.

When we were strangers

But though there are some misgivings, some 80% of Canadians think immigrants are good for the economy, according to a recent survey by the Environics Institute, a polling firm. An ageing workforce means that belief is likely to strengthen: as Prime Minister John Diefenbaker put it in 1957, "Canada must populate or perish". This is particularly true in the Atlantic provinces, where more Canadians die than are born and the median age exceeds that in the rest of the country by nearly five years. Nova Scotia, which received 200 refugees last year, has taken in 1,100 Syrians. Brian Doherty, himself an immigrant from Northern Ireland, hired four to work in the pubs he owns in Halifax, the province's capital. "They are a net asset to the economy, and believe me in this part of the world we need more of them," he says.

Two linked factors bolster this pro-immigrant feeling. One is a matter of geography. Refugees do not arrive by the hundred thousand in overloaded dinghies; impoverished children do not sneak across the southern border. Illegal immigration, which so enrages Mr Trump and his acolytes, is "hardly noticeable" in Canada, says Jack Jedwab of the Canadian Institute for Identities and Migration in Montreal.

The second is a matter of policy. Canada's points system gives the government a way to admit only the sort of people it thinks the country needs. This ability to regulate the influx fosters public approval. Immigrants are twice as likely to have university degrees as people born in the country, notes Mr Jedwab. Refugees jump through hoops, too. The Syrians that Mr Trudeau embraced were first subjected by Canadian officials to the sort of extreme vetting that Mr Trump might approve of.

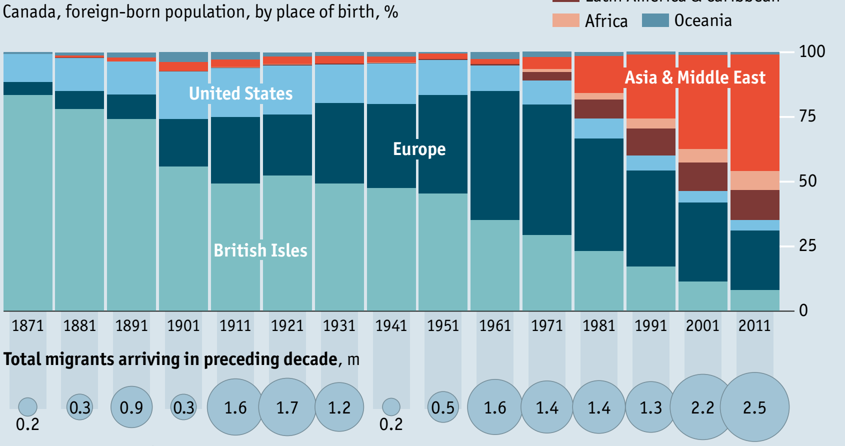
None of this guarantees success in their new home. Immigrants struggle, especially during their first years in the country, although their children do much better. They have lower incomes than natives, unless they are from Europe or English-speaking countries such as India. Employers are more likely to interview applicants with English-sounding names than foreign ones, an experiment in Toronto showed. Foreign qualifications may not be recognised. But the points system gives politicians a way at least to appear to be doing something about such problems. Mr Harper introduced an "Express Entry" system which greatly increased the number of points for people with job offers.

Another reason why Canadians are not worried about immigration is that they feel less insecure. Compared with the United States, Canada's losers are less wretched and its winners less obnoxious. As in other rich countries, income inequality has increased since the early 1980s, but it remains considerably lower than in the United States. Poverty has fallen sharply since the mid-1990s. Low-income men—Mr Trump's base in America—are less likely to die prematurely in Canada, which suggests they are less beaten down. In 2007 those in the bottom income quintile died 4.7 years earlier than those in the top. In the United States the gap was 12.1 years.

America spends a larger share of its GDP on social programmes than Canada does, but Canada is more generous with spending that acts as a safety net. Unemployment benefits replace a much bigger share of lost income than in America. Universal health care "makes a huge difference in creating a high level of public security", says the trade minister, Chrystia Freeland.

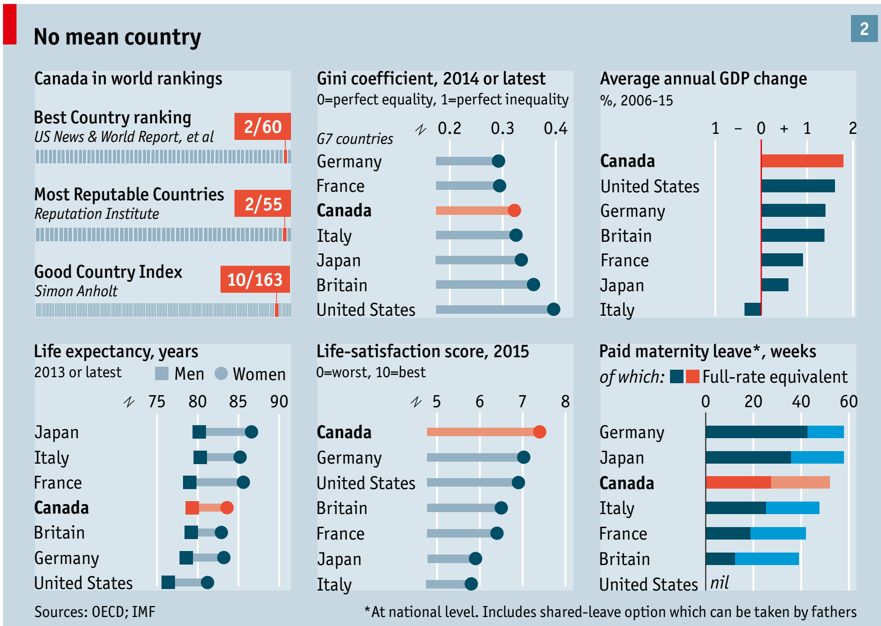
The long hello

Canada, foreign-born population, by place of birth, %



Source: Statistics Canada

*"Canada's Odyssey: A Country Based on Incomplete Conquests", University of Toronto Press, 2017.



Although the commodities boom, and the strong currency it brought with it, made life hard for manufacturers, it shortened the recession started by the global financial crisis. It also created lots of fairly high-paying jobs for low- and semi-skilled workers, mainly in western Canada. This kept inequality in check when it was rising elsewhere, notes France St-Hilaire of the Institute for Research on Public Policy, a think-tank. Now prices have fallen and the economy has slowed, she wonders whether inequality will creep back up.

Finding out it's real

Even if it does, Canada's fat cats are less reviled than those elsewhere. Its boringly profitable and well-regulated banks did not crash the financial system in 2008 and ask for bail-outs. Its conservatives have mostly been less ferocious tax-cutters and state-shrinkers than America's Republicans, though Mr Harper was an exception. "Our one percent gets it," says Ms Freeland, whose Rosedale-University riding (constituency) in Toronto contains one of the country's richest neighbourhoods.

Mr Trudeau acknowledges the country's economic anxieties—"There hasn't been enough growth, and the growth that there has been hasn't benefited the majority of Canadians"—but campaigned on the basis of solutions, rather than scapegoats. In government his answer has been, first of all, to redistribute income on a modest scale. He raised taxes on the top 1% of incomes to help pay for a middle-class tax cut. This year's budget subjected a universal child benefit to means testing, diverting cash from the rich to the bottom 90%.

Mr Trudeau's most eye-catching promise—and one which wrong-footed the New Democratic Party to his left—was to abandon Mr Harper's goal of a balanced budget. Instead, the government plans a deficit of 1.5% of GDP this year and aims to spend C$60 billion ($45 billion) over ten years to give Canada a much-needed infrastructure upgrade. The extra spending will provide a stimulus to the sluggish economy worth 0.2% of GDP this fiscal year. As Mr Trudeau admits, his room for manoeuvre was bought by the prudence of his predecessors, who left federal debt at just 32.5% of GDP. But if wise spending increases the economy's long-term growth, governments yet to come will have reason to thank him in their turn.

Barack Obama had similar ambitions for investment in the future; unlike him, Mr Trudeau does not have to deal with a hostile legislature. Nor does he need to shout down demagogues to promote trade deals. He fought hard to save the "comprehensive economic and trade agreement" (CETA) with the European Union, which was negotiated by Mr Harper. Canada is part of the Trans-Pacific Partnership negotiations with 11 other countries, and though Mr Trudeau has not committed to ratifying it he is thought to support it. In September he announced that Canada would explore trade talks with China.

Building bridges is not enough

Mr Trudeau has sought to allay scepticism about trade with what has fast become a hallmark of his government: incessant consultation. Ms Freeland boasts of holding one of the first formal dialogues by a trade minister with aboriginal communities. But there are issues ahead that consultation alone cannot solve. These include low productivity growth and an unimpressive record on innovation. Low interest rates have pushed house prices and consumer debt to alarmingly high levels. Beyond saying he will build more roads and tightening mortgage-insurance rules Mr Trudeau has so far given little clue about how he will deal with such problems.

Whatever he does he will upset people. The announcement of a national price for carbon angered some in energy-rich provinces; the approval of a liquefied-natural-gas pipeline has alarmed green voters. He faces hard bargaining with the indebted provinces over federal transfers to cover their rising health-care costs. Mr Trudeau, in other words, is about to suffer typical political wear and tear.

That will matter more to him, though, than to his country's standing. With an admirably Canadian mix of personal modesty and national pride, Mr Trudeau credits the country's stability not to "any particular government. It comes from Canadians themselves." Had Mr Harper won last year Canada would have remained open to trade (though probably less keen to strike a deal with China) and welcoming to newcomers (though Mr Harper would not have let in so many Syrian refugees). Rock-star encomia would have been scarcer, but the Canadian model would have endured.

Canadians do not take their openness for granted. A serious terrorist attack on Canadian soil, or a deep recession, could yet damage the dream. The country has seen "lone wolf" assaults, including an attack on parliament in 2014, and larger plots have been uncovered. But there have been no mass killings like that at the Bataclan in Paris. "We shouldn't have any smug sense of 'We would never do this'," says Jodi Giesbrecht, head of research at the Canadian Museum for Human Rights in Winnipeg. Nor do they see it as a model for all. "What works in Canada may not work elsewhere," cautions Michael Ignatieff, an unsuccessful Liberal candidate to be prime minister who now runs the Central European University in Budapest. "Many countries in the world are just dealt tougher hands to play." But the sight of a continuing liberal success might make playing those tough hands just a bit easier. ■

Also in this section

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India's Muslims

An uncertain community

DELHI

India's biggest minority grows anxious about its future

FOR a community of 172m, almost 15% of the population, Muslims at first glance appear oddly absent from the pages of India's newspapers. In fact, they crop up a lot, but not by name. Instead, reporters coyly refer to "a certain community". The clumsy circumlocution is a way of avoiding any hint of stoking sectarian unrest. The aim is understandable in a country that was born amid ferocious communal clashes and which has suffered all too many reprises. But the dainty phrase also hints at something else. Since India's independence in 1947, the estrangement of Muslims has slowly grown.

India's Muslims have not, it is true, been officially persecuted, hounded into exile or systematically targeted by terrorists, as have minorities in other parts of the subcontinent, such as the Ahmadi sect in Pakistan. But although violence against them has been only sporadic, they have struggled in other ways. In 2006 a hefty report detailed Muslims' growing disadvantages. It found that very few army officers were Muslim; their share in the higher ranks of the police was "minuscule". Muslims were in general poorer, more prone to sex discrimination and less literate than the general population (see chart on next page). At postgraduate level in elite universities, Muslims were a scant 2% of students.

A decade later, with most of the committee's recommendations quietly shelved, those numbers are unlikely to have improved. Indeed, since the landslide election win by the Hindu-nationalist Bharatiya Janata Party (BJP) in 2014, some gaps have widened. There are fewer Muslim ministers now in the national government—just two out of 75—than at any time since independence, even though the Muslim share of the population has grown.

India remains a secular country, yet some laws proposed by the BJP bear a disturbingly sectarian tint. One bill would allow immigrants from nearby countries who happen to be Hindu, Sikh, Christian or Buddhist to apply for citizenship, while specifically barring Muslims. Another would retroactively block any legal challenge to past seizures of property from people deemed Pakistani "enemies", even if their descendants have nothing to do with Pakistan and are Indian citizens. Courts have repeatedly ruled in favour of such claimants—all of them Muslim—but their families could now be stripped of any rights in perpetuity.

Far more than such legislative slights, what frightens ordinary Muslims is the government's silence in the face of starker assaults. A year ago many were shocked when a mob in a village near Delhi, the capital, beat to death a Muslim father of three on mere suspicion that he had eaten beef. Earlier this month, after one of his alleged killers died of disease while in police custody, a BJP minister attended the suspect's funeral, at which the casket was draped, like a hero's, with the Indian flag.

Earlier this month, too, newspapers reported a disturbing discrepancy between the fates of two men arrested for allegedly spreading religiously insulting material via social media. One of the men, a member of a right-wing Hindu group in the BJP-run state of Madhya Pradesh, was quickly released from custody after the customary beating. The arresting officers have been charged with assault; their superiors up to the district level transferred. In the other case, in the state of Jharkhand, a Muslim villager was arrested for posting pictures implying he had slaughtered a cow. Police claimed he died of encephalitis following his arrest. A court-ordered autopsy revealed he had been beaten to death. To date, no police officers have been charged.

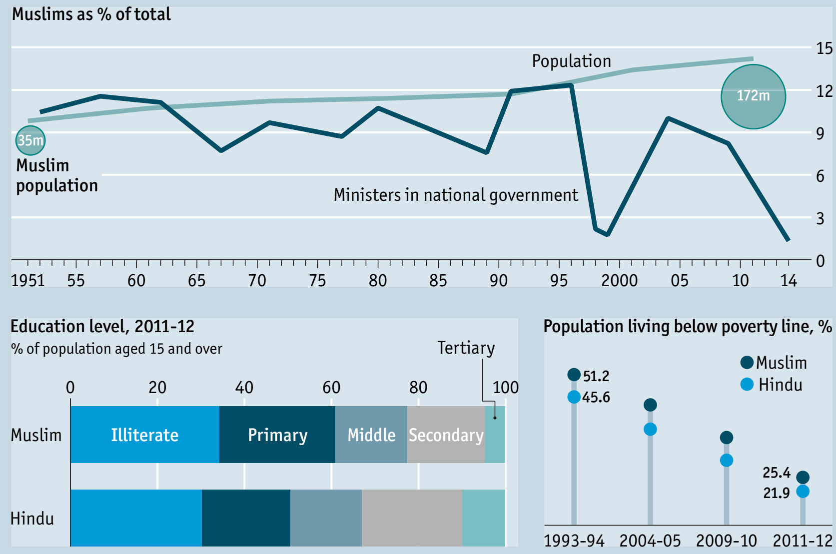
The BJP's handling of a popular uprising in India's only Muslim-majority state, Jammu and Kashmir, has also raised Muslim concern. Four months into the unrest, in which dozens of civilians have been killed and hundreds injured, with continuous curfews and strikes keeping schools and shops closed, the government still refuses to talk to any but the most supine local politicians. "You don't understand," snaps a cabinet minister, "It's a violent movement to build an Islamic theocracy. No democracy can tolerate that."

Omair Ahmad, a writer on Muslim affairs, scoffs at this. The problem, he says, is that Indian governments insist on treating Kashmir as a "Muslim issue" when the real question is one of democratic representation. Yet most Indian Muslims tend to toe the official line, either from a desire to appear loyal or because they genuinely feel only a faint bond with Kashmir.

The fact is that India's Muslims are divided, not only between dominant Sunnis and a large Shia minority but also between starkly different social classes and regions: ▸▸

Minority report

India



Sources: Trivedi Centre for Political Data, Ashoka University; Census of India; National Sample Survey Office; A. Panagariya and V. More, Deepak and Neera Raj Centre on Indian Economic Policies

a Muslim in Bengal is likely to share no language and few traditions with a co-religionist far to the south in steamy Kerala. The divisions may soon get deeper. Both India's supreme court and the national law commission, a state body charged with legal reform, are deliberating whether laws governing such things as divorce and inheritance should remain different for different religious groups, or should be harmonised in a uniform national code, as the constitution urges. Spotting another "Muslim issue", past governments have let conservative clerics control family law. As a result India, unlike most Muslim-majority countries, still allows men to divorce simply by pronouncing the word three times.

The BJP, however, is calling for sweeping reform, with Narendra Modi, the prime minister, painting the issue as a straightforward question of women's rights. Much as many Muslims heartily agree that change is long overdue, suspicions linger that the BJP's aim is less to generate reform than to spark inevitable protests by Muslim conservatives, so uniting Hindus in opposition to Muslim "backwardness".

This question may play out in elections this winter in Uttar Pradesh, India's most populous state, nearly 40m of whose 200m people are Muslim. The state has witnessed repeated communal clashes since the destruction by Hindu activists, in 1992, of a medieval mosque said to have been built over an ancient temple marking the birthplace of Rama, a Hindu deity. Many expect the BJP to play the "Muslim card" in an effort to rally Hindu votes.

There is hope: a similar ploy flopped last year in the neighbouring state of Bihar. Whatever the outcome, India's Muslims feel increasingly like spectators in their own land. "They called it a secular state, which is why many who had a choice at partition wanted to stay here," says Saeed Naqvi, a journalist whose recent book, "Being the Other", chronicles the growing alienation of India's Muslims. "But what really happened was that we seamlessly glided from British Raj to Hindu Raj." ■

Bailing out Mongolia

A wrong direction in the steppe

BEIJING

The government turns to the IMF for the second time in seven years

"THINGS really get messy when politicians see money," mused Tsakhiagiin Elbegdorj, Mongolia's president, earlier this month. He was discussing his country's request for an emergency loan from the IMF to help ward off a balance-of-payments crisis. The messiness might be avoided, Mr Elbegdorj added, if the IMF forced Mongolia to observe a little more budgetary discipline than it is used to.

Although sparsely populated and vastly endowed with mineral wealth, Mongolia has yet to set its economy on a stable footing. Squabbling and delays over big foreign investments in mining projects, along with low global commodity prices, have stemmed inflows of foreign currency, prompting the local currency, the togrog, to wilt. It has declined 17% against the dollar since late June. The government's lavish spending in expectation of big mining revenues, meanwhile, has boosted its debt to almost 80% of GDP, much of it denominated in dollars. The togrog's slide has prompted fears that the government will struggle to service its foreign debt.

When the IMF last came to Mongolia's rescue, in 2009, it seemed to be providing just the leg-up the country needed. Mongolian politicians and IMF officials took to a hotel ballroom in Ulaanbaatar in 2010 to celebrate the successful conclusion of a $242m bail-out. Champagne and optimism flowed freely. Mongolia's "determined policy implementation", the IMF said, had fostered "a remarkable economic turnaround". Foreign reserves were up; the budget deficit and inflation were down. Arrears on foreign debts had been paid, and confidence in the currency restored.

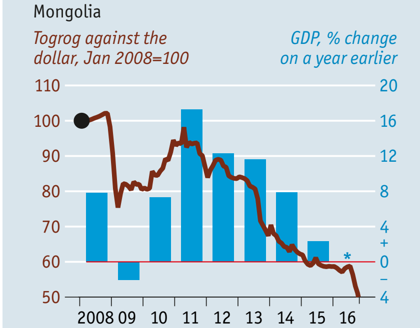
For the next three years Mongolia enjoyed double-digit growth. But the good times did not last. Growth dipped below 8% in 2014 and was just 2.3% last year (see chart). To succour the togrog and sap inflation, the central bank raised interest rates in August by 4.5 percentage points, to 15%, further slowing the economy. The budget deficit has swelled to around 20% of GDP.

In a parliamentary election in June, the Mongolian People's Party (MPP) triumphed over the Democratic Party (DP), which Mr Elbegdorj leads. The change in government provided a convenient opportunity for Mongolia to turn to the IMF again, says Julian Dierkes of the University of British Columbia. It will be easier for the new government to accept conditions imposed by the IMF early in its term, he says, when it can still blame the previous one for all the country's problems.

It remains unclear just how severe the IMF might be. If its proposed terms seem too onerous, Mongolia could always turn to China, which has extended it some credit in recent years and seems prepared to offer more. Many Mongolians fret, however, over the political and commercial leverage this would give their giant neighbour. Either way, Mongolia will find itself beholden to China. In spite of all the upheaval, the share of Mongolia's exports going to China has hovered steadily between 80% and 90% over the past six years. ■

Gobi-smacking

Mongolia



Sources: Thomson Reuters; IMF *2016 forecast, 0.04

Influence-peddling in South Korea

Gift horse

SEOUL

Allegations about the conduct of a friend of the president prompt outrage

PARK GEUN-HYE's presidency, soon entering its fifth and final year, may well be remembered for its apologies. The first was a tearful televised address in 2014 to atone for her government's botched response to a ferry accident in which over 300 were killed. On October 25th Ms Park apologised again, this time for sharing advance drafts of dozens of speeches with a confidante, Choi Soon-sil, who has no government position.

A day earlier JTBC, a local cable-television network, said it had retrieved presidential files and e-mails from a computer discarded by Ms Choi. Ms Park said that she had sought her friend's opinion only early on in her presidency, before her staff had hit their stride, but the media have been portraying Ms Choi as the eminence grise of her administration, pulling strings behind the scenes.

The revelation is the latest twist in a political drama that has embroiled Ms Park's conservative government and gripped the nation. Daily press reports and social-media chatter present new claims about Ms Choi's influence over Ms Park, and how Ms Choi is alleged to have exploited it. If the latest footage put out by TV Chosun, a conservative outlet, is to be believed—of a dressmaking studio where Ms Choi appears to be directing presidential staff—she even exerted authority over Ms Park's wardrobe. In an interview from Germany this week with *Segye Ilbo*, a newspaper, Ms Choi confirmed that she had edited some of Ms Park's speeches. She apologised, but denied any other wrongdoing.

In early October prosecutors launched an investigation into claims that Ms Choi and Ahn Chong-bum, one of the president's secretaries, had "arm-twisted" some of South Korea's biggest conglomerates into paying 80bn won ($72m) to two new non-profit groups promoting Korean culture overseas, the Mir and K-Sports Foundations. Executives at the Federation of Korean Industries, a business lobby that helped set up the two outfits and raise money for them, are being questioned. Ms Choi, who is sought by prosecutors, is accused of having siphoned off funds for her private use, including to cover training expenses for her daughter, Chung Yoo-ra, who hopes to compete in dressage at the Tokyo Olympics in 2020.

Ms Chung's education has also become a focus of popular anger, and the subject of a separate investigation: an opposition MP has alleged that Ewha Women's University, among the country's most prestigious, gave Ms Chung undeserved grades. Other critics say it changed its rules to help her gain admission in early 2015 (it suddenly began offering extra points to applicants with gold medals in equestrianism). The university's president, who resigned on October 19th, had also been dogged by months-long protests (one of which is pictured) against a scheme to set up a college of continuing education with government funding, which some believe Ewha won through ties to Ms Choi. ▸▸

Ewha takes all sorts

Politics in the Maldives

Sibling rivalry

MALE

The president falls out with his brother

THE president of the Maldives, Abdulla Yameen Abdul Gayoom, has fallen out with all manner of people in his three years in office: two successive vice-presidents, both turfed out of office; his first defence minister (ditto); the failed assassins who bombed his yacht last year (he blamed one of the deposed veeps); Mohamed Nasheed, his predecessor but one, who says the president is turning the Maldives into a dictatorship; and the Commonwealth, a club of former British colonies, which has questioned his democratic credentials. But his newest adversary is by far the most surprising: Maumoon Abdul Gayoom, his half-brother and another former president, who was the country's strongman from 1978 to 2008.

The dispute between Mr Yameen, as the current president is called, and Mr Gayoom, the former one, centres on the Progressive Party of the Maldives (PPM), which Mr Gayoom founded in 2011 (for most of his presidency, political parties were banned). The party nominated Mr Yameen as its presidential candidate in 2013, but Mr Gayoom remained head of the party. The two seemed to get on well enough until June, when Mr Gayoom opposed a bill to allow the government to lease islands for development as resorts without competitive bidding. His son, an MP, voted against it, and was expelled from the PPM for his pains. The same day Mr Gayoom's daughter, Dunya Maumoon, resigned as foreign minister.

Mr Gayoom has refused to endorse Mr Yameen as the PPM's candidate for the next presidential election, in 2018. Mr Yameen's supporters dragged the dispute into the courts, where Mr Gayoom has been dealt a series of reversals. This week an appeals court affirmed a ruling from a lower court stripping Mr Gayoom of leadership of the party and handing it instead to Mr Yameen. Mr Gayoom says he will appeal to the supreme court.

The rift between the brothers could perhaps be mended. Mr Gayoom has not publicly criticised Mr Yameen; Mr Yameen, for his part, insists Mr Gayoom "is my beloved brother. So I cannot talk ill of him." The opposition has asked Mr Gayoom to join them, but he has ignored their pleas so far.

Mr Yameen has weathered plenty of adversity, as the long list of his opponents attests. Media reports in August about moves to oust him came to nothing. But the only person with more experience navigating Maldivian politics is Mr Gayoom. The elections in 2018 might even pit brother against brother.

The allegations of the manipulation of admissions have stoked particular ire in South Korea, where the state-administered university-entrance exam is "the only way to climb the social ladder", says Kwon Jong-seong, a South Korean blogger. Many of the country's unemployed youth see a system in which the privileged get ahead while more deserving but less connected youngsters struggle. When the daughter of the chairman of Korean Air, a local airline, threw a public tantrum over macadamia nuts in 2014, South Koreans seethed about the culture of impunity at its big family-owned businesses. Now the feeling is that political power at the highest level is protecting such privilege, says Mr Kwon; Ms Park's supporters, many of them middle-class, "feel betrayed".

Ms Park's approval rating has slumped to 26%, its lowest since she took office in 2013. Disaffection with her handling of South Korea's stuttering economy is a big reason. But on social media discussion of almost any subject now concludes with a hashtag that translates "And what about Choi Soon-sil?" Following the JTBC report, MPs in Ms Park's own Saenuri party began to call for an independent probe into the charges of abuse of power; one spoke of "contempt for the country's democracy". After the president's apology, "impeachment" was the most-searched word on Naver, South Korea's biggest web portal.

Influence-peddling is "systemic and endemic" in South Korea, says David Kang of the University of Southern California. Every former South Korean president of the past three decades has been hounded by corruption scandals: Roh Tae-woo went to jail for having accepted hundreds of millions of dollars in bribes; the sons of Kim Young-sam and Kim Dae-jung went to prison for graft. Roh Moo-hyun, who made a counter-corruption drive a centrepiece of his presidency, jumped to his death in 2009 as charges of wrongdoing mounted against him. Many suspect a recent crackdown on gift-giving to officials will do nothing to stop high-level graft.

Ms Park says her dealings with Ms Choi have been conducted "with pure motives"—to improve the workings of her office. It is ironic, then, that the scandal that has ensued seems to have brought her administration almost to a standstill. ■

Pakistan's business climate

If you want it done right

SIALKOT

How a small Pakistani city became a world-class manufacturing hub

PHOTOGRAPHY is fiercely restricted inside Khawaja Masood Akhtar's factory in Sialkot, a small city in northern Pakistan. His products—top-of-the-range footballs—must be zealously guarded until the time comes for his customers, big international sports brands, to unveil their offerings for the new season. Until then the latest ball designs are subjected to a battery of tests in windowless laboratories. They must endure everything from hard poundings from mechanised boot studs to repeated dusting with fungus spores. The quality of the factory's output is so high that Adidas chose it as one of only two in the world to manufacture the balls used in the World Cup in 2014.

Pakistan has precious few globally competitive exporters, but a good number of them are clustered in Sialkot, an out-of-the-way city of fewer than 1m people in north-eastern Punjab. It supplies the world with all sorts of sporting gear, from hockey sticks to judo suits, as well as leather goods and surgical instruments. Sialkoti *Lederhosen* are all the rage in Bavaria. The city's 8,000-member chamber of commerce says Sialkot exported $2bn-worth of goods last year, or 9% of the country's total exports of $22bn.

Sialkot's success is especially surprising as it was cut off from its natural economic hinterland, the Kashmir Valley, when the subcontinent was split between India and Pakistan in 1947. Yet it is doing much better these days than the rest of the country. Its exports have remained reasonably steady for the past two years, even as those of the country as a whole have fallen by 12%. How are firms from such a backwater thriving, ask the exporters of Lahore and Karachi, while they struggle?

Pakistani businesses tend to blame the government for the country's feeble export performance. Domestic and foreign investors alike are put off by the breakdown of law and order in Karachi, the commercial capital, and the storm of Islamic militancy across the rest of the country (a suicide attack on a police training college on the outskirts of the city of Quetta claimed over 60 lives this week). Manufacturers must endure crippling shortages of electricity in the summer and gas in the winter. Antiquated land administration and customs systems make buying property and exporting goods tiresome. It can take almost three years to settle a commercial dispute. Pakistan ranks a lowly 144th out of the 190 economies assessed in the World Bank's latest "Doing Business" report.

Mr Akhtar, however, dismisses these "lame excuses": any half-decent entrepreneurs, he insists, should be able to find their own solutions to such problems. That is what the businessmen of Sialkot have done, at any rate: instead of waiting for politicians to stump up for local infrastructure, they have built it themselves. The Chamber of Commerce set up the country's first privately financed dry port, where goods can clear customs before being shipped to a conventional port. It later charged members a special fee to raise funds to contribute towards the resurfacing of the city's once-appalling streets. Local businesses also funded the construction of the city's airport, the only private one in the country. It boasts both the longest and hardiest runways in the region, and handles 53 flights a week. That helps bring in foreign buyers who do not fancy the wearisome drive from Lahore. Some of the investors in the airport are now on the verge of launching their own airline.

As well as determination, Sialkot's businessmen have had their fair share of luck. The city happens to specialise in niche products, which are relatively insulated from competition from China. The nearby towns of Wazirabad and Gujrat, once known for their cutlery and electrical goods respectively, have struggled against a tide of cheap Chinese exports. But even Sialkot is not immune to competition. Local manufacturers lost their grip on the world market for badminton rackets when they failed to anticipate the switch from wood to aluminium and graphite. If anything, however, that has only made the Sialkotis more vigilant. The local business community is now trying to set up a technology university in the city. ■

Keeping her eye on the ball

Banyan | A shrimp among whales

As the threat from the North grows, South Korea finds itself in a lonely place

FOR hundreds of years Korea was China's vassal state. Then it came under the heel of imperial Japan at the start of the 20th century. After Japan's defeat in 1945 the Soviet Union occupied northern Korea. That led to the creation of the implacably hostile North Korea, an existential threat to the South ever since. America has acted as the South's guarantor, keeping tens of thousands of troops there since the Korean war ground to a bloody halt in 1953. The South swings between resenting the American presence and worrying that it might come to an end.

South Korean officials, in short, have long had plenty to worry about. But their angst these days is unusual in its intensity. Life in Seoul may be carrying on as normal, with pop-up food stalls doing brisk business and rock bands performing lustily in open spaces, but the nuclear-armed North, 60km (35 miles) up the road, is looming especially large in policymakers' minds.

The threat from the North has always been tangible. For years, its commandos would slither across the demilitarised zone to launch unnerving attacks, such as the one in 1968 that targeted Park Chung-hee, South Korea's strongman, in the presidential Blue House in Seoul (it failed). More recently, in 2010, a North Korean submarine sank a South Korean naval vessel, the *Cheonan*, killing 46 seamen. Nor is the nuclear threat new. North Korea's nuclear programme has been decades in the making. Its first, shocking nuclear test was ten years ago—half a lifetime for the young couples grazing at Seoul's food stands.

Yet in recent months something has changed. Kim Jong Il, whose regime was responsible for the first test and who died in 2011, had only a rudimentary nuclear device, useful mainly for blackmail. Under his son, Kim Jong Un, the programme has rapidly gathered pace, with two nuclear tests this year alone. The North has also conducted 21 missile tests this year, including one from a submarine—a first. The ability to miniaturise a tactical nuclear weapon on a working missile could be just two or three years away, with an intercontinental ballistic missile capable of hitting California possible in five years' time. Chun Yung-woo, a South Korean former national security adviser, talks of "growing outrage…after five tests, a change of mood, a sense of urgency."

Once, it was possible to hope that the North's isolated regime would implode under its own contradictions before it gained a proper nuclear capability. But the spread of informal markets and, for some North Koreans, a measure of prosperity may have strengthened the regime's chances of survival. A consensus in Seoul is forming that Mr Kim now aims to dictate events on the peninsula—including the ability to demand that the Americans leave. One senior foreign diplomat in Seoul says that for the first time he hears people wondering openly whether there will be a major conflict on the peninsula in their lifetime.

Officials under President Park Geun-hye (daughter of Park Chung-hee) direct their frustration at China. For most of her nearly four years in office, Ms Park has wooed China's dictator, Xi Jinping, partly to promote economic ties, and partly in hopes of making China acknowledge South Korea's concerns over the North. In particular, if China enforced existing UN sanctions on North Korea, the regime would be feeling the pain—nine-tenths of all North Korea's trade is with its giant neighbour.

As she leaned to China, relations with Japan grew bitter over issues to do with colonial history. Recently, though, she has leaned the other way. China has not allayed South Korea's concerns. Indeed it has loudly criticised Ms Park's go-ahead for an American high-altitude missile-defence system in her country. As for South Korea's economic relationship with China, it too has changed. Mutual opportunities are now overshadowed by competition as China develops the same industries that are central to South Korea's economy, such as shipbuilding and steel.

Meanwhile, South Korea's relations with Japan seem to be improving fast. Late last year Ms Park and Shinzo Abe, Japan's prime minister, sought to settle once and for all the matter of the Korean women, some of them still alive, who were forced to work in Japanese military brothels during the war. The two sides are even exchanging intelligence about North Korea.

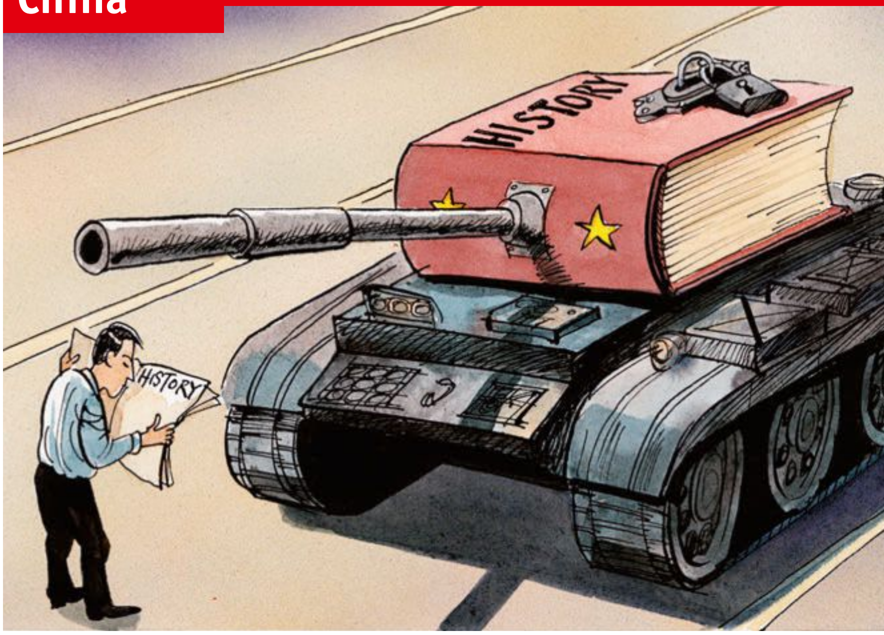
Ms Park's government has also been trying to persuade America to punish China for failing to rein in the North. America could blacklist Chinese state enterprises and banks doing business with the North, for instance. (It has just announced sanctions on one Chinese firm, but only after the Chinese authorities themselves had moved against it.) That would immediately exclude the miscreants from global payments systems and trading networks. But America is reluctant. After all, tensions in the South China Sea are already headache enough, while it wants to co-operate with China on other topics, such as climate change.

That leaves South Koreans worried about the commitment of their American ally. Donald Trump's threats to pull American troops from South Korea have hardly helped. A President Hillary Clinton would certainly reassure. But the nagging fear of an eventual American withdrawal, perhaps as part of a power-sharing agreement with China in Asia, still gnaws at South Korea.

Thinking some unthinkables

Meanwhile, the North Korean threat grows. There is talk of urging the Americans to shoot down the missiles North Korea keeps testing in breach of UN sanctions, despite the risks to the South of retaliation from the North. There is even a revival of the debate about South Korea developing its own nuclear weapons—a majority of South Koreans polled are in favour.

Scratch a South Korean, says the foreign diplomat, and he will be unsure of America's commitment, ready to believe that Japan might turn aggressive again, resentful that China ignores his country's concerns and alarmed by a dangerous North Korea. South Korea, he adds, "looks a fundamentally lonely place." ■



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30 A parking nightmare

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History

Nihil sine Xi

BEIJING

China is struggling to keep control over its version of the past

THE Chinese Communist Party likes to describe threats to its grip on power in barely comprehensible terms. Over the past three decades, it has struggled against the menace of "bourgeois liberalisation" (leaving many wondering whether there is an acceptable proletarian kind) and fought against "peaceful evolution" (exceedingly dangerous, for some reason, unlike "reform and opening up"). Now Xi Jinping, China's president, is waging war against "historical nihilism", a peril as arcane-sounding as it is, to his mind, grave. As a state news agency recently warned, there is a "seething undercurrent" of it in China. Failure to stamp it out, officials say, could lead to Soviet-style collapse.

Days before the party's 350 or so most senior officials gathered in Beijing this week for a secretive conclave (as they normally do in the autumn), a party website published a compendium of Mr Xi's public remarks on the nihilist problem (intriguingly headlined: "Xi Jinping: There Can Be No Nothingness in History"). *People's Daily*, the party's main mouthpiece, marked the start of the meeting with a commentary laced with references to the lessons of history, including the collapse of the Soviet Communist Party.

In party-speak, historical nihilism means denying the "inevitability" of China's march towards socialism (the country is currently deemed only to be in the early stages of it). It is a term that came into vogue among party officials after the crushing of the Tiananmen Square protests in 1989. Jiang Zemin, who was then party chief, declared that historical nihilism was one of several ideological vices that had "seriously eroded" the party. Other, more obvious ones, included yearnings for freedom and democracy. By reviving Mr Jiang's rhetoric on nihilism, Mr Xi is signalling that the party could again face regime-threatening danger unless it tightens its grip on the way history is told.

Against the flow

So what are the nihilists doing that so troubles China's leaders? Mr Jiang's main concern was a television series broadcast in 1988 called "River Elegy", which had portrayed China as a country weighed down by a long history of backwardness and inward-looking conservatism. The documentary programmes had prompted energetic debate among intellectuals about how to reform China that helped foment the following year's unrest.

No reflection on history has stirred the public in recent years as much as "River Elegy" did in the build-up to Tiananmen. But there has been a steady stream of articles chipping away at the party's account of history. Some have appeared in officially published journals; the more revelatory ones have circulated in *samizdat* form in print and online. They have included a Chinese journalist's investigation of the famine of 1958-1962 during which tens of millions died, and accounts of the horrors of the Cultural Revolution in the 1960s and 1970s.

Mr Xi sees such writings as a challenge to the legitimacy of party rule. Already in 2013 the party issued secret orders (subsequently leaked) that its members must be on guard against historical nihilism. The following year Mr Xi said an important reason for the Soviet party's collapse had been historical nihilism, including attacks on Lenin and Stalin. Mr Xi sees Mao's legacy as being under similar assault.

A journal specialising in historical critiques, *Yanhuang Chunqiu*, recently became the most prominent victim so far of Mr Xi's campaign. To the horror of its liberal fans, the magazine was taken over in July by hardliners; its feisty staff resigned. In 2014 *Yanhuang Chunqiu* had published articles that daringly disputed the party line on historical nihilism. One of them said the party should focus on fighting those trying to reawaken the "old dreams of the Cultural Revolution"—in other words, take on diehard Maoists instead.

Mr Xi has enlisted the judiciary to help him. On October 19th the supreme court called a press conference to give its views on recent legal cases that state media have linked with historical nihilism. In one case a historian, Hong Zhenkuai, was told by a court to apologise for challenging the party's story of how five Communist soldiers had jumped off a cliff during the second world war rather than surrender to the Japanese. Mr Hong said two of them may simply have slipped. Another case involved little more than black humour: JDB Group, a beverage-maker, and Sun Jie, a blogger, were ordered by a court in September to apologise for their tweets referring to a war hero who burned to death during the Korean war. Mr Sun had called him "barbecued meat". JDB had jokingly offered to ▸▸

provide free drinks at Mr Sun's barbecue restaurant, should he open one. At the press conference, a supreme-court official said those guilty had attempted to "unravel core socialist values".

There have been other examples, too: a blogger who was detained for several days in 2013 for retweeting a claim that the cliff-leaping soldiers had bullied local civilians; four others who were hauled in that year for questioning the frugality of Lei Feng, another model soldier (two of them were later jailed for publishing these and other online "rumours"); and a television anchor, Bi Fujian, who was fired for poking fun at Mao at a private party.

Mr Xi has justified his vigilance by quoting the words of a Chinese reformist in the 19th century: "To annihilate a country, you must first eradicate its history". Mr Xi takes that as a warning that rewriting history can cause catastrophe. When it comes to wiping out history, however, the party itself has been trying dangerously hard. ■

Parking

The other car problem

WENZHOU

Fast-growing cities face a difficulty they did not foresee: parking

IT IS barely eight in the morning and the two levels of a hospital's car park are already full. A queue of backed-up vehicles snakes around the corner and onto a major street, causing a traffic jam in downtown Wenzhou, a coastal city. "Reverse, reverse, reverse," barks an attendant, blowing on a whistle and pointing this way and that as he guides one car out to let another in. Tempers flare amid a cacophony of horns. A young man, Yang Linfeng, seems untroubled by the chaos as he walks back to his car. In for his annual physical, he says he knew exactly what to expect: he came an hour early just to find a parking spot.

Similar scenes play out around China every day. Whether at hospitals, near schools and offices or outside popular restaurants and shopping malls—just about anywhere people congregate—parking has become a major aggravation of urban life. It is in some ways a good problem for China, a sign of growing prosperity. Car ownership is expanding by about 10% a year, even as the economy slows.

But it also suggests a flaw in the country's approach to building cities. In their rush to construct roads and housing to accommodate the 400m people who have moved to cities from the countryside over the past two decades, officials have paid insufficient attention to many basics such as drainage and green spaces. As the country's parking headache shows, making up for these oversights is not easy.

In March parking was identified as a priority in the prime minster's annual report to parliament. Little wonder: the government reckons China has a shortage of roughly 50m parking spaces. Its target is 1.3 parking spaces per car, the norm in richer countries (including residential parking). In China's biggest cities, the ratio is 0.8. Smaller cities have just 0.5 spaces per car.

Frustration is spreading. In an official survey conducted over the past two months, nearly two-thirds of respondents said that parking had become "unbearable". By contrast, only about a third said they lived in places with frequent traffic jams, a problem for which China is much more notorious. The two nuisances can be related. The harder it is to find a place to park, the more cars circle around and around. Illegally parked cars spill onto the pavement and crowd out pedestrians.

One solution might be to build more car parks, but this is not straightforward. Many apartment blocks were built before car ownership became common, so neighbourhoods have limited space to build places to park. As one joke goes, bachelors used to need an apartment and a car before being able to find a wife; now, they need a flat, a car and a parking space. Some cities have started to experiment with making parking spaces a prerequisite—not to get married, but to buy a car. Would-be car owners must first show they have a space, an approach that Japanese cities have used successfully.

The morass illustrates how a government that many perceive as all-powerful can find itself constrained. Cars jostle for cheaper roadside spots, leaving more expensive ones beneath office buildings underused. The Institute for Transportation and Development Policy (ITDP), a think-tank in New York, found that the occupancy of car parks in two major new commercial buildings in Guangzhou, a southern city, never exceeded 58%.

It would help to charge more for roadside parking, nudging drivers to use underground car parks. But officials fear higher prices may cause public anger. It is easily aroused. After Beijing officials increased roadside parking fees in 2011, there were dozens of assaults on attendants. Residents often protest when owners of their apartment blocks raise parking prices.

Another good idea would be stricter enforcement of no-parking zones, which would curb superfluous parking demand in busy areas and encourage people to use public transport. However, policy co-ordination is poor. The ITDP says there are six municipal agencies or departments in Guangzhou with responsibility for some aspect of parking management.

Many cities are investing huge sums in public transport, as well as making some effort to raise roadside parking fees and crack down harder on illegal parking. In Wenzhou, an officer walks methodically up a line of cars parked under a no-parking sign next to a tall commercial building. He writes out a fine for each one and takes photos for use as evidence. But the car park inside the building is two-thirds empty.

An attendant there clearly doubts the efficacy of fines. "People here have so much money that they don't know what to do with it," he quips. "So they donate it to the traffic department." ■

Looking out for willing donors

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Trump and Putin

My brilliant friend

ATLANTA

What explains the Republican nominee's fondness for Russia's president?

IN JANUARY 1933, after months of rebuffs, the American poet Ezra Pound finally secured a meeting with Benito Mussolini, his idol, in Rome. Flicking through his admirer's poems—and possibly distracted by the presence of a pretty young English teacher—Mussolini politely described them as *divertente*, or amusing. Pound chose to interpret this nicety as evidence of il Duce's genius and appreciation of his own; his ruinous devotion to him intensified. In perhaps the weirdest subplot of America's wild presidential election, an offhand comment by Vladimir Putin seems to have had a similar effect on Donald Trump.

This is a season of conspiracy theories. In certain corners of the internet it is an item of faith that Hillary Clinton enabled the attack on Benghazi, to cover up illicit arms sales to terrorists. Analysis of Mr Trump's attitude to Mr Putin can veer into the thrilleresque too. Yet there is a pattern in his remarks that, as polling day nears, deserves scrutiny. Tracing it lays bare his slipshod policymaking, even if his motives remain opaque.

The "bromance", to use Barack Obama's term, was fuelled by Mr Putin's reference, in December, to Mr Trump as *yarki*, or colourful, which he mistranslates as "brilliant". But Mr Trump's obeisances began even before this imaginary compliment. In a stark example of his habit of disparaging America, he compares Mr Putin's strength and leadership favourably with Mr Obama's, deflecting complaints about Russia's human-rights record with the gibe that "our country does plenty of killing also." Recently, he said that, should he win the election, he might fix a meeting with Mr Putin before his inauguration. (That would evidently be their first, despite his intimations that they have talked before. For example, after the Miss Universe pageant in Moscow in 2013, Mr Trump claimed Mr Putin "could not have been nicer.")

Lieutenant-General Keith Kellogg, one of his national-security advisers, optimistically describes this approach to Mr Putin as "Reaganesque": "You can't talk down to him," he says. Major-General Bert Mizusawa, another adviser, maintains that Mr Trump's praise for the Russian president's strength "doesn't mean he agrees with all of his policies". If his warmth were confined to generalities, that rationale might seem plausible. The trouble is that—even allowing for his ignorance and incoherence, as when he seemed to imply that Russia had not invaded Ukraine—his statements have touched on specific, vital issues, often alarmingly.

Such as NATO, probably Mr Putin's greatest bugbear. To remind, Mr Trump has said the alliance is "obsolete", upsetting Europeans by casting doubt on its mutual-defence commitment. It might depend, he has said, on an embattled nation's defence expenditure. Or consider his record on Ukraine, another of Mr Putin's preoccupations. Mr Trump has countenanced the idea of easing the sanctions imposed after Russia's illegal seizure of Crimea, an annexation he has indicated he may recognise. He denies any role in the machinations at the Republican National Convention that blocked a pledge to provide weapons to Ukraine from the party platform; but, says Rachel Hoff, a delegate who was at the relevant meeting, members of his team were "absolutely" responsible.

According to Lieut-General Kellogg, Mr Trump "wants to leave his options open" on Ukraine, considering it unwise "to start from an adversarial position": his much-vaunted negotiating prowess is a catch-all excuse for otherwise indefensible pronouncements. The fanciful goal is to "make a great deal for our country", in Mr Trump's words, in which old enmities will be buried and Russia helps see off Islamic State. (Bilateral deals are Mr Putin's favourite form of engagement; doing them with Western businessmen-politicians is one of his specialities.) If that is his purpose, Mr Trump is being uncharacteristically selfless, because his chumminess has no obvious electoral benefit. Unlike some of his other unorthodox views, such as his protectionism, beyond a few extreme nationalists who misguidedly revere Mr Putin there are far more votes to be lost than won by cosying up to him.

Indeed, the risks for Mr Trump have risen as the campaign progressed, and even as he has finessed other awkward commitments. After Mike Pence said that "provocations by Russia [in Syria] need to be met with American strength," Mr Trump disagreed—preferring to slap down his running-mate rather than rebuke Mr Putin for his barbarities in Aleppo. Astonishingly, he appeared to invite Russia to raid his opponent's e-mails ("dry humour", says Major-General Mizusawa). Yet he disputes the judgment of American intelligence agencies that Russian hackers, authorised by the country's "senior-most officials", were behind the intrusion into the Democratic National Committee's servers. "Our country has no idea," he insists.

All this led a former overseer of the CIA to label Mr Trump an "unwitting agent" of the Kremlin. Madeleine Albright, a former secretary of state, chose Lenin's phrase: she called him a "useful idiot."

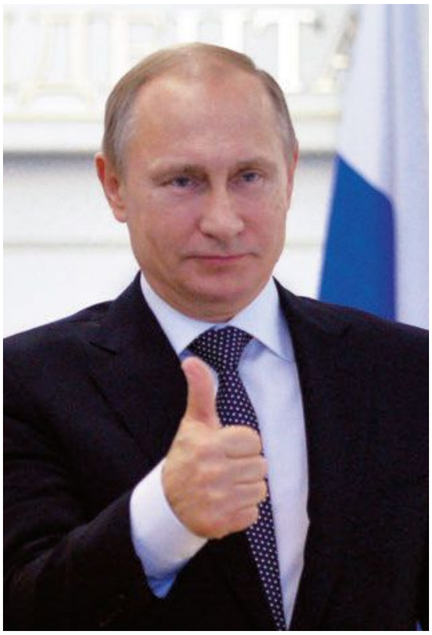
Cui bono?

What is going on? A popular view is that Mr Putin, whose aversion to Mrs Clinton is plain, is trying to lever Mr Trump into the White House, just as he supports isolationists in Europe. Witness the strategically timed publication of hacked e-mails by WikiLeaks and others. That may overstate the Kremlin's ambition, assigning it greater clout than it wields: "We're making them ten feet tall", worries Fiona Hill of the Brookings Institution. Rather than altering the election's outcome, reckons an American administration official, the aim may be to spread uncertainty about the process. That would avenge American criticism of Russian elections, discredit future admonishments and sully democracy itself. This race, Dmitry Kiselev, Mr Putin's chief propagandist, recently assured his TV audience, "can't be called free and democratic".

So much for Mr Putin; how about Mr Trump? He may feel a natural affinity for a fellow authoritarian, who shares his indifference to truth and his tastes for earthy language and humiliation as a political tool. His conciliations have also been linked to the alleged leanings of his staff. Some of those connections turned out to be flimsy, such as the Kremlin-friendly unknown named as an adviser by Mr Trump but soon disavowed by his campaign. One was substantial: Paul Manafort, the campaign manager who quit in August amid controversy over his ties to Viktor Yanukovych, the disgraced ex-president of Ukraine who has been given refuge in Russia.

Mr Trump's business interests have cropped up as well. In 2008 Donald junior told eTurboNews that "Russians make up a pretty disproportionate cross-section of a lot of our assets." Possibly he was thinking of condominium sales ("I guess probably I sell condos to Russians, okay?", his father has allowed); or of the Russian and ex-Soviet financiers involved in some Trump-branded properties. But the income from such projects is relatively small: most of Mr Trump's revenue comes from older developments. He says he has no investments in Russia, which such records as are publicly available seem to confirm, nor any Russian loans. His most lucrative contact may have been the sale of a mansion in Palm Beach to a Russian tycoon.

In the past, however, the Trumps longed to break into the Moscow property market. And, for all their unfamiliarity with geopolitics, they have grasped the rudiments of Russian capitalism. "It is a question of who knows who," Donald junior noted, adding that "what it is they want to happen is ultimately what happens." Mr Trump's campaign did not respond to questions about his business plans, so whether that insight might inform his Russian stance is unclear. So is where—on a scale from seismic scandal to venality to naive narcissism—it belongs. Still, as Mr Trump said of someone else, his stubborn, illogical devotion to Mr Putin has made it seem as if "there is something going on with him that we don't know about." ■



Time for active measures

From DC with love

Naming without shaming

What is the right response to Russia's attempt to interfere with the election?

DONALD TRUMP may pretend to think that the hacking of the Democratic National Committee's (DNC) e-mail system in July could have been carried out by a 400-pound nerd sitting on his bed; but on October 7th the director of national intelligence, James Clapper, and the Department of Homeland Security made official what had long been suspected. Their statement expressed confidence that the Russian government had "directed the recent compromises of e-mails from US persons and institutions, including from US political organisations", and that the "thefts and disclosures" were "intended to interfere with the US election process".

A well as the DNC attack, there have been a spate of others, all aimed at showing Hillary Clinton in a poor light, all distributed by either WikiLeaks or the lesser-known DC Leaks. The hacker groups behind the scams are fronts for Russia's FSB and GRU spying agencies and, according to Mr Clapper, could have been authorised only by officials at the most senior level. But what to do about it?

Despite the seriousness of the charge (the hack by China's PLA on US Steel, Iran's Islamic Revolutionary Guards on American banks and by North Korea on Sony all pale by comparison), the decision to point the finger of blame unambiguously in Russia's direction was not straightforward for the Obama administration. When it comes to responding to cyber-attacks, attribution is the first problem. First-rate cyberpowers, such as America, have developed sophisticated techniques for identifying perpetrators by analysing what are known in the business as "sources and methods".

But government-backed hackers know they can retain at least a degree of deniability if their accuser is reluctant to come up with the evidence. As Adam Segal of the Council on Foreign Relations argues, it is difficult to assign responsibility without revealing intelligence capabilities that will, in turn, allow foes to improve their defences and make spying on them harder. Although the American government had attribution information about the North Korean attack on Sony, it declined to put that information into the public domain for fear of exposing the National Security Agency eavesdropping capabilities which had produced it. Yet last year America backed a UN report on cyber-attacks which stated that, "accusations of organising and implementing wrongful acts brought against states should be substantiated."

Having declared on October 11th that the president "will consider a response that is proportional" and unlikely to "be announced in advance", the administration now finds itself in a tricky spot. Soon after, Joe Biden, the vice-president, declared on NBC's "Meet the Press" that America would be sending Mr Putin a message "at a time of our choosing and under circumstances that have the greatest impact". When asked whether the American public would know when the message had been sent, Mr Biden said: "Hope not."

That appears to rule out new sanctions. Instead, it suggests that a covert, offensive cyber-operation may be in the works. That might mean going for Mr Putin by exposing compromising information about his accumulation of wealth—or at least communicating to him the threat of possible exposure unless he calls his hackers off. But unlike Russia, America cannot hide its activities behind proxy groups, particularly now it has made a specific threat. Nor does

Mr Putin embarrass easily—he shrugged off the revelations in the Panama Papers as a Western plot to smear Russia.

There is an even bigger problem. As Mr Segal points out, offensive cyber-operations of the kind Mr Biden was hinting at run directly counter to the norms of behaviour that America claims to be working with other states to establish. There is also the danger that such a well-trailed counter-attack would elicit escalatory retaliation from Russia, which might be more destructive than anything Fancy Bear or Cozy Bear could achieve, such as an attack on critical national infrastructure. A Kremlin spokesman described Mr Biden's threat "as borderline insolence" and vowed that Russia would strike back. The uncomfortable reality is that the playbook for responding to cyber-attacks is still a work in progress. ■

The Affordable Care Act

Crunch time

WASHINGTON, DC

Big rises in premiums will cause most pain away from the exchanges

FANS of the Affordable Care Act, Barack Obama's health-care law, should spend November biting their nails. The first reason is the presidential election: Republicans want to repeal the law. The second is that the three-month window when Americans can buy insurance, if they are not already covered through their employer, opens on November 1st. Many will shop on government-run marketplaces, or "exchanges". On October 24th the health department confirmed that buyers will pay a lot more this year. How they react will determine the future of the law—and not just because it may swing their votes.

The average benchmark "silver"—ie, middling—plan sold on the exchange will cost 22% more for 2017. This steep increase partly reflects the fact that insurers have been charging far too little. Many were caught out by the sickliness of exchange customers, and have made big losses as a result. Some, like Aetna, have left most exchanges (in five states, only one insurer now remains). But despite this turmoil, insurance for 2017 will cost roughly what the Congressional Budget Office predicted it would when the law passed.

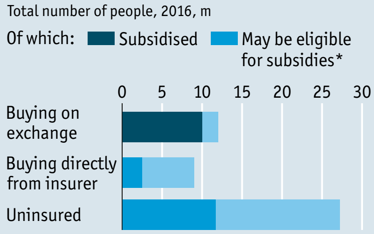
Federal subsidies, offered to those earning less than 400% of the poverty line (which works out as $47,520 for individuals), will shield many buyers from the full effect of higher prices. Of the 12m people who bought insurance for 2016 on the exchanges, 10m received subsidies. Obamacare caps their costs. So long as some insurers stick around—which they should, as price rises return them to profit—federal cash will shore up this part of the market.

That is the good news, as far as the law is concerned. The bad news is that 9m people buy coverage directly from insurers, without going through the exchanges or receiving any subsidies (see chart). And these folk, whose premiums help to finance care for everyone, on or off the exchanges, must also pay more. If the healthiest among them decide to forgo insurance, premiums will rise further next year. The only thing stopping them from doing so is a fine for going without insurance, which is small compared with the cost of coverage.

Who gets what and why

America's individual health-insurance market

Total number of people, 2016, m



Sources: CBO; Department of Health and Human Services; Kaiser Family Foundation

*Includes Medicaid

If healthy people stop buying, insurance will become prohibitively expensive for those who do not qualify for subsidies. Obamacare has already raised prices for many in this group. By banning insurers from turning away customers with pre-existing health conditions, for example, it pushed up premiums. In 2015 households earning $70,000 or more spent 75% more on insurance, on average, than in 2010, despite the fact that coverage rose only slightly in this income bracket. That is before rising deductibles are accounted for.

This helps to explain the ferocity of opposition to Obamacare. In most states, insurers will now have to tell all their customers about price rises or discontinued coverage by November 1st, just days before voters go to the polls. Expect disciplined Republicans in tight House and Senate races to talk about little else between now and November 8th. ■

The campaigns

On the trail

Gettysburg redress
"All of these liars will be sued after the election is over."
Donald Trump, at Gettysburg, on the women who have accused him of sexual assault.

Weapons of mass destruction
"Peanut-buttering is better than fire-bombing."
A woman in Wisconsin was arrested for smearing peanut butter on the cars of people she believed were Trump supporters. Stevens Point City Times

From Russia with love
"We are unable to accommodate your request to visit a polling station."
Texas and two other states have refused Russian requests to observe voting. Texas Tribune

Don't bake
"She's not coming over to your house! You don't have to like her."
Oprah Winfrey found a novel way to sell Hillary Clinton to voters. Politico

Let Donald be Donald
"He delivers his own speeches…He's the guy who's running for the White House, and he has the privilege to say what he wants."
Kellyanne Conway, Mr Trump's campaign manager, gives up managing. CNN

Son of a gun
"Boy you people, you do really like your guns."
Mr Trump gets a standing ovation for defending the Second Amendment.

Candidate in the hat
$3.2m
The amount spent by the Trump campaign on hats. Washington Post

Bully pulpit
"I'll get myself in trouble and say something like, 'I'd like to take himself behind the gym if I were in high school'."
Vice-President Joe Biden campaigns.

Fight club
"Did you see where Biden wants to take me […]? He wants it. I'd love that."
Mr Trump responds.

Mansplaining
"Sometimes a lady needs to be told when she's being nasty."
Congressman Brian Babin backs his candidate. Alan Colmes Show

These boots are made for walking
"On November 8th, we nasty women are gonna walk our nasty feet to cast our nasty votes to get you out of our lives."
Senator Elizabeth Warren, campaigning with Hillary Clinton, counters.

The presidential election

Making a U-tahn

SALT LAKE CITY

No third-party candidate has won a state since 1968. Could that be about to change?

WITH the Gothic spires of the Salt Lake Temple looming behind her, Diane, who works for the Mormon church, grimaces as she considers her political choices. "Well, Trump wants to be king, not president. And Hillary lacks integrity. I would vote for Mickey Mouse before I voted for either of them." The only candidate she can stomach is Evan McMullin, a 40-year-old Mormon who served in the CIA.

Mr McMullin announced his candidacy as an independent in August. He began with near-zero name recognition and made the ballot in just 11 states. Yet recent polls put him in a dead heat with Hillary Clinton and Donald Trump in his native Utah. An Emerson College survey on October 19th gave him a four-point lead, and betting markets put his chances there around 30%. No third-party candidate has won a state since the segregationist George Wallace swept the Deep South in 1968.

Before the campaign of 2016, Utah seemed the least likely place in the country to give a Republican headaches. Republicans have won it by at least 18 percentage points in 12 straight general elections; both George W. Bush in 2004 and Mitt Romney took over 70% of the vote. The main source of the party's dominance is the state's Mormon population. They make up over 70% of the electorate, and lean more Republican than any other religious group.

Mormons were not always stalwart Republicans. Before the 1960s, Utah's politics were more balanced. But the Democratic Party's support of abortion rights alienated Mormon voters, and they were strongly influenced by conservative figures like Ezra Taft Benson, who served as secretary of agriculture under Dwight Eisenhower before returning to Utah and leading the Mormon church. In 1974 Benson declared that any Mormon who "was living the gospel and understood it" could not be a liberal Democrat. In devout Mormon circles, the Democratic Party remains taboo. Crystal Young-Otterstrom, the chair of LDS Democrats, said that when she first switched from being a Republican, she told her parents and friends she was a communist because, "that was easier, somehow".

Nonetheless, Mormons have developed a unique brand of conservatism. Last year the church helped pass a law that prohibited discrimination in housing and employment on the basis of sexuality. Utah has accepted over 60,000 refugees since the end of the Vietnam war; in recent years it has had one of America's highest refugee-resettlement rates. Yet the Mormon aspiration to "secure to each individual the free exercise of conscience, the right and control of property, and the protection of life", plus the emphasis on each individual being responsible for their own fortune, have kept them in the Republican fold.

Mr Trump's relatively weak showing in Utah is partly explained by the strength of the state's economy. Utah's unemployment rate is only 3.4%, 1.6 points below the national average. The poverty rate is 2.3 points below the nationwide mark, and incomes are more equal than in any other state. But it mostly reflects Mormon values, which include decency, kindness and humility. The emergence earlier this month of an 11-year-old tape, which showed Mr Trump bragging that he could grope women and get away with it, caused several prominent Utah Republicans, including the state's governor, Gary Herbert, to drop their support. Jon Huntsman, a former governor who had surprised many by endorsing the Republican nominee, went a step further and urged him to drop out of the race. And the *Deseret News*, a newspaper owned by the Mormon church, broke an 80-year tradition of neutrality to implore Mr Trump to quit.

Even before October, though, this election was unusual for the role played by the usually apolitical Mormon church. It responded to Mr Trump's proposed ban on Muslim immigration by posting on its website two quotes about religious liberty from Joseph Smith, the faith's founder. "Many members of the Mormon church feel like refugees, having been chased from place to place," says Jeff, a church employee. "Many of us have done missions to foreign places and fallen in love with the people there." A walk around the campus of Brigham Young University, a place so Mormon that even the sodas in the campus store are caffeine-free, revealed stickers and luggage tags on students' backpacks and cars that read "I <3 Okinawa", "Eu amo o Brasil" and "Guangdong Soccer League".

Do Mr Trump's struggles in Utah signal the end of its long run as a near-one-party state? Greg Hughes, the Republican Speaker of the Utah House of Representatives, who continues to support Mr Trump, says the Republican Party will remain dominant. It currently boasts 87 lawmakers in Utah's legislature to the Democrats' 17. "No matter what happens, I just don't think there's going to be such a big impact down-ticket," he says. Richard Davis, a professor at Brigham Young University, isn't so sure. "Once people start disassociating from their usual party, it will probably be easier for them to do so in the future."

If Mr McMullin does triumph, the effects will reverberate far beyond Utah. It is conceivable, though vanishingly unlikely, that he could become president: if no candidate secures 270 electoral votes, the House of Representatives would pick the victor from the top three finishers, and he might emerge as a compromise candidate. Far more plausibly, he could pave the way for future challenges to America's political duopoly. Although Ross Perot took 19% of the vote in 1992, he did not come close to winning any states. Mr McMullin's surge suggests that third-party candidates should focus on cultivating a strong regional base. In a close election, that could potentially make one a kingmaker. ■

Election brief: Education

Little changes

NEW YORK

George W. Bush and Barack Obama made school reform a priority. The next president will look elsewhere

FOR a president, making education policy can be like running a school with thousands of unruly pupils. He can goad states and coax school districts, offering gold stars to those who shape up. But if a class is defiant he can do little. Just 12.7% of the $600bn spent on public education annually is spent by the federal government. The rest is split almost equally between states and the 13,500 school districts. Many presidents end up like forlorn head teachers. America spends more per child than any big rich country but its pupils perform below their peers on international tests.

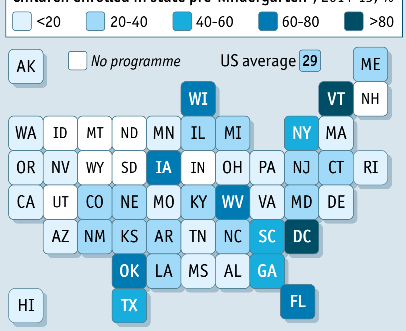
Despite the constraints, George W. Bush and Barack Obama both used the regulatory power of the federal government to spur reform. Through the No Child Left Behind (NCLB) Act of 2001, the Republican president launched a flurry of standardised tests, sanctioning schools whose pupils failed to progress. Through his "Race to the Top" initiative, announced in 2009, the Democratic one offered cash to states in exchange for reforms such as higher standards and evaluating teachers based on pupils' results. Similar policies were implemented by 43 states in exchange for federal waivers from the testing mandates of NCLB. Mr Obama has also championed charter schools, the part-publicly funded and independently run schools hated by teachers' unions.

But the era of regulation-driven school reform is now coming to an end, for two reasons. The Every Student Succeeds Act (ESSA), passed in December as a replacement for NCLB, hands back power to states over standards and tests, making it hard for a future president to seek to micromanage school reform. And in any case, neither Donald Trump nor Hillary Clinton are inclined to imitate the past two presidents. Mr Trump is "totally against" and "may cut" the Department of Education. Declaring that "it is time to have school choice", in September he pledged to give states $20bn to fund school vouchers for parents of poor children.

Mrs Clinton has also been keen to defer to states. This is partly because she knows ESSA shrinks her room for manoeuvre. But she has also made a political calculation. Unlike Mr Obama, she is backed by teachers' unions. They oppose tying teacher evaluations to pupils' results and want to keep the caps on charter schools in place in the 23 out of 43 states that permit them. Mrs Clinton has been studiously ambiguous on such limits, to the regret of reformist Democrats, who note that in most cities charter schools outperform ordinary public schools. Though she has sent Tim Kaine, her vice-presidential nominee, to mollify funders of charters, they are braced for a change of tone. Charters will still expand, but they will receive less federal support. "We reformers have had a big tailwind under Obama, which we're unlikely to have under Clinton", says Whitney Tilson, an investor and education philanthropist.

The Democratic candidate's wish to neutralise the toxic politics of school reform has another, less cynical cause. She wants to focus on what comes before and after school, the "bookends" of pre-school and higher education. America "has fallen off the pace when it comes to early childhood education", says Steve Barnett of the National Institute for Early Education Research, at Rutgers University. About half of all three- to four-year-olds are enrolled in pre-school, less than in many poor countries (see page 55) and one of the lowest shares in the OECD. And yet the country is third-highest in the club of mostly rich countries for the share of net income spent on child care. In 31 states a place at a child-care centre is more expensive than at a public university. America is the only country in the OECD without universally guaranteed maternity leave.

Children enrolled in state pre-kindergarten*, 2014-15, %



Source: National Institute for Early Education Research *4-year-olds

Both Mr Trump and Mrs Clinton have pledged to do something about all this. Asked last year about federal funding for pre-school, the Republican said, "well, I don't like it". But in September, prodded by his daughter, Ivanka, Mr Trump said he wanted to allow the costs of child care to be deducted from income taxes and to introduce six weeks of paid maternity leave.

Mrs Clinton can point to a longer commitment to early childhood development. As first lady of Arkansas in the 1980s she set up one of the country's first schemes to help poor parents educate their toddlers at home. Today she says she will introduce 12 weeks of guaranteed paid family leave, and ensure that child care costs no more than 10% of a family's income, in part by offering a tax credit. She also wants to use federal funds to provide pre-school for all parents who want it for their children.

As most children know, nice things cost money. Mrs Clinton has not given a detailed plan for how to pay for her early childhood policies. Much will depend on whether Democrats take Congress. But this is increasingly a bipartisan cause. Of the 42 states that provide funding for pre-school education, most have Republican governors. Georgia, Oklahoma and Florida have led the way in offering near-universal coverage (see map).

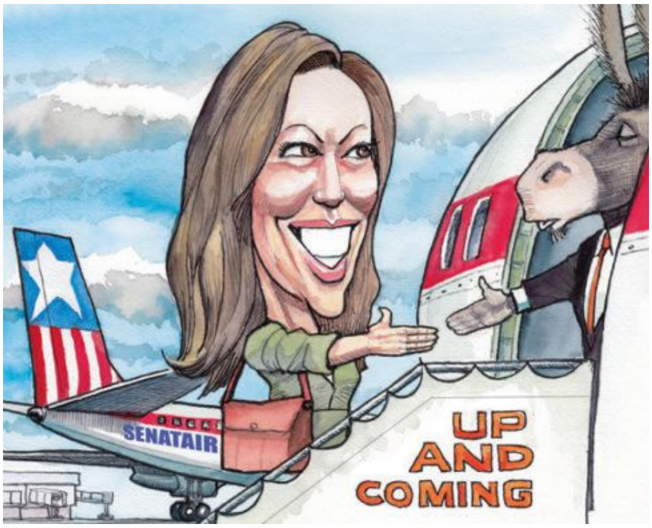
The results at the state level, however, suggest realism is required. According to a study led by Dale Farran of Vanderbilt University, Tennessee children who attended that state's scheme performed no better (and in some cases worse) in school tests than similar children who did not attend. Ms Farran argues that some "states are so busy ramping up pre-K that they are not paying attention to what is actually going on in classrooms". She argues that grafting a year of pre-school onto poorly performing public school systems will not help children, especially those whose parents actively help them learn outside of class.

Better results can be found in cities such as Tulsa and Boston. Then there is New York, which Mrs Clinton has cited as a model. Since 2014 it has expanded the number of free all-day pre-school slots for four-year-olds from 19,000 to 71,000, one of the fastest roll-outs anywhere in the world. Richard Buery, the deputy mayor in charge of the scheme, argues that its success requires well-trained staff, a rigorous curriculum—and money. The average wage of a child-care worker in America is less than that of a dog-walker. In New York the cost per child for a year of pre-school is $12,000, more than twice as much as in Tennessee. "Doing it on the cheap will get you universal child care but not high-quality pre-K", says Mr Buery.

What of the other bookend? Mrs Clinton wants to make tuition at public universities free for many more students. She is also mulling whether to offer financial rewards to universities that increase the entrance and graduation rates of poorer students. She may appoint a university president as education secretary. Even as an era of activist schools policy ends, the federal government still has bold plans to improve education. ■

Lexington | Meet Kamala Harris

California's tough, technocratic attorney-general will be a star of the next Senate



IF THE Democratic Party were a business, investors would mutter that it has a succession crisis. Its presidential nominee is 69 years old, and its leaders in Congress—Representative Nancy Pelosi and Senator Harry Reid—are both 76. That pin-up of the campus left, Senator Bernie Sanders, is 75. The young thruster set to lead Senate Democrats after January, Charles Schumer of New York, is 65. Nor is the galaxy of Democrats outside Washington thick with dazzling stars: after several bruising elections, the party currently holds just 18 out of 50 governors' mansions.

Talk to thoughtful Democrats about the future and one name inspires more hope than most: Kamala Harris, the attorney-general of California and, barring a meteor-strike between now and November 8th, that state's next member of the Senate. Insiders noticed when Ms Harris, 52, was endorsed by President Barack Obama, even though, under a run-off election system used in California, her opponent is a long-serving Democratic congresswoman, Loretta Sanchez.

Ms Sanchez has ascribed this snub to race solidarity between her opponent and the president, sniffing: "She is African-American, he is too." In fact, Ms Harris and Mr Obama share bonds more subtle than similarly complex life-stories (the attorney-general's parents, an Indian-born cancer researcher and a Jamaican economist, met at the University of California, Berkeley, and divorced when she was young). Both began political careers in places where success required coalition-building across party lines: Mr Obama in the fusty, cronyish Illinois state Senate, and Ms Harris in the lock-'em-up world of elected public prosecutors, starting as a district attorney for San Francisco, before becoming head of law enforcement across California in 2010.

A recent weekday found Ms Harris at John Muir Elementary School in San Francisco. As happy playground shrieks drifted through the windows, she faced TV cameras to unveil her fourth annual report on chronic school truancy. A populist firebrand would not have lacked for material. Surrounded by Victorian houses snapped up by tech millionaires, stoking local resentments, John Muir serves mostly poor families from other, less gentrified neighbourhoods. Ms Harris began studying truancy after learning that 94% of San Francisco's murder victims under 25 were high-school dropouts. Research showed that three-quarters of young children who often miss days at kindergarten later fail California's maths and reading tests in third grade. Pupils who fail those tests are in turn four times likelier to drop out of high school, and those who drop out are eight times likelier to end up in jail. Chronic truancy is much more common among black children, moreover. Yet as she explained her findings, the attorney-general did not thunder about racial injustice or inequality. Instead she noted that high-school dropouts cost the state more than $46bn a year in public-safety and public-health spending. Letting children miss school offers taxpayers a poor "return on investment" and deprives California of a skilled workforce, Ms Harris argued. It stops government being "efficient and effective".

That technocratic tone does not surprise a long-standing ally, Lateefah Simon. When the pair first met, Ms Harris was a young city lawyer, working on sex-trafficking cases. Ms Simon was just out of her teens, a radical activist working with troubled young women, and, she recalls proudly, "known for bringing hundreds of young girls into police commission meetings, shutting them down." Ms Harris finally advised her that systems change under pressure from the outside and the inside: "Kamala said to me, you can't always win with a bullhorn." When Ms Harris became district attorney she hired Ms Simon to run a programme for low-level, non-violent drug offenders. Though strikingly cheap, it drew national attention for preventing 90% of its graduates from reoffending. Ms Simon explains how Ms Harris would tell youngsters their chances of going to jail or dying if they did not change course. Then she would offer help with everything from housing to remedial education and apprenticeships—even dentistry cadged from a local university, after she read research linking job prospects to bad teeth. Ms Simon calls her old boss both "data-driven" and tough: "If you hurt a woman, she wants you in jail."

More than a decade later, Ms Harris still puts her faith in data, as she cites crises that Republicans and Democrats alike know need to be addressed, in fields as diverse as criminal justice, immigration, the costs of higher education or the drugs epidemic that is as cruel a scourge in conservative rural states as it is in inner cities. Over a stop for iced coffees on the campaign trail, she says transparency is the key to building trust among people, and then between communities and government. To that end in 2015 her department began releasing torrents of statistics about arrests and deaths in custody across California. Nor is keeping the trust of the police forgotten: Ms Harris's department publicises data on law-enforcement officers killed or assaulted on duty.

The case for the prosecutor

Washington sceptics may dismiss Ms Harris as a typical Californian progressive. It is true that her campaign ads boast of suing big banks for fraud. She also has a distinctly paternalist streak. Greeting an eight year old in his classroom, the attorney-general solemnly coaches him: "We shake hands and look each other in the eyes." Asked by a little girl about favourite foods, Ms Harris replies: "I like French fries, but I *love* spinach."

But Ms Harris is a prosecutor to her core, who approaches voters as she would 12 jurors of different backgrounds: "You have to point to the facts." Contemplating a country where millions feel displaced by change, she yearns to see another approach to politics tried: "to give people an image of what the future looks like, and to paint that image in a way that they can see themselves in it." Fierce, charming and eloquent, Ms Harris may be a big part of the Democratic Party's future too. ■

Venezuela

Fighting their chains

CARACAS

A lurch towards dictatorship, massive protests and no sign of regime change

THIS time, the protests were nationwide. From Maracaibo in the west to Ciudad Guayana in the east, hundreds of thousands of Venezuelans filled the streets to call for an end to the authoritarian left-wing regime led by Nicolás Maduro. More than 100 people were arrested and one policeman in the state of Miranda died. "This government is never going to leave through an election," said María Gil, a masseuse who joined the throng in Caracas, Venezuela's capital. "All that is left is protest." David Mujica, a street trader, agreed that voting "changes nothing".

Both protesters branded Mr Maduro a "dictator", a term Venezuelans have been using more freely after the events of the past fortnight. On October 21st, days before voters were to go to polling stations to register their signatures in favour of holding a referendum to recall the president from office, the process came to an abrupt halt. Five criminal courts in five separate states declared that the conduct of an earlier stage in the process—the submission of signatures from at least 1% of the electorate—had been fraudulent. That is nonsense. The opposition submitted 2m signatures in April, ten times the minimum number. The electoral council, which is supposedly independent but kowtows to the regime, had said that 1.4m of those were valid. The five courts did not explain their reasoning.

The government, which is presiding over the deepest recession in Venezuela's history and acute shortages of food and medicine, has given up all pretence that it will work with any institution that it does not control. It has ignored the national assembly, which is dominated by the opposition. The legislature still summons ministers to explain plans or provide information, but none ever appears. On October 14th, the president passed next year's government budget without sending it to the assembly, in violation of the constitution. A compliant supreme court, stuffed with pro-government cronies, waved it through. The court has vetoed every law that parliament has passed this year.

Now the assembly is in open revolt. On October 23rd, after the suspension of the referendum, it met in emergency session to declare that a coup had taken place. A pro-government mob entered the parliament building during the meeting, in a clumsily stage-managed attempt to demonstrate to television viewers that a popular "revolution" continues. Some of the intruders were armed. The assembly has since declared that the president may have abandoned his duties and should therefore stand trial. No one thinks this will happen. The constitution does not explicitly provide for the possibility of such a trial, and Mr Maduro would not show up if it did.

The squelching of the recall referendum is a signal that the regime has made a decision about how to deal with the crisis. Some in the socialist *chavista* movement—founded by Mr Maduro's charismatic predecessor, Hugo Chávez—are thought to have argued for allowing a recall vote in 2017, past the date when it would have triggered a fresh presidential election. If Mr Maduro had lost next year, a near certainty given his 20% approval rating, the vice-president, currently Aristóbulo Istúriz, would have taken over from him.

Hardliners privately argued for holding no referendum at all. The governors of the five states whose courts blocked it are thought to be among their number. That decision seems to mean that they intend to stick with Mr Maduro, at least until the next presidential election in 2018. Some now wonder whether that election will be held.

Talk is expensive

Mr Maduro's favourite word at the moment is "dialogue", robotically invoked in his interminable speeches. He paid a surprise visit on October 24th to the pope, who has been trying to arrange a meeting between the government and the opposition. The effort seems to be working in the government's favour. A senior opposition official, Jesús Torrealba, appeared at an awkward photo-call alongside a representative of the ruling party and a papal envoy. The government suggested that they had reached an agreement to begin formal talks at the end of October.

That was an exaggeration. Most opposition leaders have no intention of sitting down with a regime they regard as illegal. Henrique Capriles, who nearly defeated Mr Maduro in a presidential election in 2013, has made clear his refusal to attend any talks. "We are fighting against the devil," he says. The episode has been a gift to Mr Maduro, who can now present himself as open to dialogue, and the opposition as divided and intransigent.

The opposition has now responded by ▸▸

issuing an ultimatum. If Mr Maduro fails to restart the recall process, it will call for a march on the presidential palace on November 3rd. But there is little prospect that protest alone can dislodge the regime.

The stance of the army, long the arbiter of power, remains crucial. The opposition is trying to sow dissension by calling on the armed forces to uphold the constitution. But the tactic is unlikely to succeed. Underpaid junior officers might be receptive, but the top brass, which controls most sectors of the economy, will not be.

On October 25th Vladimir Padrino López, the defence minister, delivered a rare television speech, dressed in full combat uniform. The army, he said, has no political allegiances. But then he showed just how firmly it backs the bankrupt regime, ending his address by paying homage to Chávez, who devised the economic policies that have impoverished the country. "Long live Chávez," he cried, fist raised high. ■

Brazilian sport

Something new to cheer

SÃO PAULO

Why rugby could be the next craze

WHEN Charles Miller, son of an English railway engineer posted to Brazil, returned to São Paulo from a British boarding school in 1894, he brought back a football—and popularised a game that would help define Brazilian identity. Miller's other sporting import, rugby, had less appeal. It was played at a few posh boarding schools and almost nowhere else. But now rugby is beginning to find a mass audience.

Asked which sport would grow most, more Brazilians picked rugby than any other in a survey conducted in 2011 by Deloitte, a consultancy. Since then its popularity has shot up as if propelled by a well-taken conversion kick. Some 60,000 Brazilians are thought to play rugby, far fewer than the 30m who play football or the 5m-10m who take part in volleyball—but up from 10,000 five years ago. The national team, the Tupis, named after a family of indigenous peoples, draw audiences of 10,000 to stadiums and 7m to television screens. (The league is still amateur.) Highlights from European games pop up on the São Paulo metro's in-train television.

Rugger's return to the Olympics at the Rio de Janeiro games last August, after a 92-year hiatus, spurred interest. The sport's good governance helps win fans in a country beset by corruption scandals. The Brazilian Rugby Confederation (CBRU), which replaced an amateurish association in 2010, is run like a business. Its chief executive, Agustin Danza, holds an MBA and answers to a 12-member board. In November last year a non-profit group gave the CBRU Brazil's first sport-governance trophy. The volleyball federation has sent five scouts to learn its management tricks.

Sponsors have taken note. The Tupis now have two dozen, including Unilever, a consumer-goods giant, and Bradesco, a Brazilian bank. The CBRU's budget has swelled from 1.3m reais in 2011 to 18m reais ($6m). Mr Danza has used the money to lure coaches from rugby powerhouses like New Zealand and Australia. His objective is to qualify for the World Cup in 2023.

It will take plenty of training. Brazilian women came a respectable ninth in the Olympic seven-a-side tournament, but the men came last. They are ranked 36th in the world. Argentina, Brazil's rival in all things sporting and otherwise, is ninth. Mr Danza (himself Argentine) is banking on support, and cash, from the sport's global governing body. He is hoping that World Rugby will soon name Brazil as one of its priority markets. With more exposure and money, the amateur league could turn professional.

The CBRU is trying broaden the sport's appeal—and talent pool—beyond the upper class. "In my day the team was all pale posh guys," recalls Jean-Marc Etlin, a financier and former Brazil forward. Thanks to programmes that promote the sport in state schools, his son's team-mates on the under-19s national side now include players from poor backgrounds.

The biggest obstacle to rugby's popularity remains Brazilians' obsession with football. "Every other sport is peripheral," sighs Mr Etlin. Mr Danza thinks football's woes, including sleaze in the federation and the national team's underwhelming performance (by Brazilian standards), give rugby an opening: "When the footballers disappoint, Brazilians start looking for someone else to cheer." ■

Nicaragua

Fourth time unlucky

MANAGUA

Daniel Ortega could win a fair election. But he is fighting dirty

MANAGUA, Nicaragua's capital, is not throbbing with campaign fever. With days to go before presidential and parliamentary elections on November 6th, political posters are nowhere to be seen. Campaigning, when it happens, is low-key. Yadira Ríos, the vice-presidential candidate of the Independent Liberal Party (PLI), has taken to obstructing rush-hour traffic at a roundabout just to get noticed. "We have a small budget," she says from a garage forecourt as drivers honk at her 20-odd supporters on the road, "so we do this".

Their antics will be in vain. Daniel Ortega, a former guerrilla commander who first won the presidency in 1985, is almost certain to win a third consecutive term, and his fourth overall. According to one recent poll, he will win 65% of the vote. That endorsement owes something to the president's success in managing the economy and reducing poverty. But it also comes from an undemocratic suppression of the opposition to him and his Sandinista National Liberation Front (FSLN).

The election is, in effect, a one-party event. Mr Ortega's main political foe, Eduardo Montealegre, was removed as the PLI's leader by the Ortega-friendly supreme court in June. A month later 16 PLI deputies were expelled from parliament for refusing to accept the authority of the new leader, Pedro Reyes, who is thought to have close links to Mr Ortega. Mr Reyes then decided not to run for president and presented José del Carmen Alvarado, as the PLI's new candidate. He and his running mate, Ms Ríos, are leaders of a neutered party.

European Union observers criticised the latest presidential election, in 2011, for a "lack of transparency and neutrality". The multiparty system, declared Mr Ortega on a visit to Cuba in 2009, "is nothing more than a way to disintegrate the nation."

He would have little trouble winning a fair election. Nicaraguans are still grateful to him for leading the overthrow of the dictatorial Somoza family in 1979. Although Nicaragua is the second-poorest country in the Americas, social programmes instituted by the FSLN government (and financed with oil supplied on favourable terms by Venezuela) have helped reduce the poverty rate from 43% in 2009 to 30% in 2014. The murder rate is lower than in neighbouring Honduras and El Salvador. GDP growth exceeded 4% for the fifth consecutive year in 2015. Public finances are sound.

Why, then, does Mr Ortega fight dirty? No one is sure. One analyst suggests that his seven years in a Somoza-regime prison made him mistrustful and inflexible. Since becoming president for the second time in 2007 he has become more like his former jailers. He has increased the army's responsibilities and allowed officers to hold government posts. In 2014 he took direct command of the police. Local leaders are under his thumb. "Municipal governments have to consult with the central executive on all important decisions," says Elvira Cuadra of the Institute for Strategic Studies and Public Policy, a think-tank in Managua.

Now 70 years old and thought to be ailing, Mr Ortega is trying to entrench his family's power. His running mate is his 65-year-old wife, Rosario Murillo, the government's chief spokesperson. That has angered Nicaraguans who remember the 43-year rule of the Somoza dynasty, a sentiment the opposition is trying to exploit. Ms Murillo is "a witch," shout Ms Ríos's roundabout-obstructing supporters.

Nicaragua may be heading into rockier times. Venezuela's PetroCaribe programme, under which Nicaragua buys oil on very easy repayment terms, is threatened by the benefactor's economic collapse. In the first six months of this year loans fell by 37%. A bill in the United States Congress would cut off another important source of cash by barring international financial institutions from lending money to Nicaragua unless it holds fair elections.

Mr Ortega is trying to placate foreign critics. He has started a dialogue with the Organisation of American States about strengthening democracy and has signalled that he may talk to the opposition after the election. That will matter only if it leads to a real political thaw. But the omens for Mr Ortega's fourth term as president are not encouraging. ■

Bello | Ciudad Juárez trembles again

A Mexican security success story faces a new test

IN PUERTO DE LA PAZ, a settlement of hardscrabble houses and shacks in the western suburbs of Ciudad Juárez, a new three-storey community centre offers taekwondo, five-a-side football and classes in baking and giving beauty treatments. It is one of 49 such centres in poorer parts of this sprawling industrial city jammed against Mexico's border with Texas. Intended to offer young people alternatives to organised crime, they are a sign of change in a place that became known as "the world's most dangerous city".

There are other changes. Restaurants and bars are full. "There are parts of the city that are heaving with nightlife where a few years ago you wouldn't have seen a soul," says Nohemi Almada, a lawyer and activist. The local economy is booming. Factories lining Juárez's urban highways, making everything from car parts to wind turbines, sport job-vacancy signs.

Between 2008 and 2011 Juárez descended into hell. It felt the knock-on effects of the offensive against drug mobs launched by Mexico's then-president, Felipe Calderón. "Here the war on drugs was a massacre," says Ms Almada. "We all grew used to seeing bound corpses in the street." A city of 1.4m people suffered more than 300 murders a month. Extortion, kidnapping and carjacking became endemic. The nadir came in January 2010, when gunmen slaughtered 15 students at a birthday party. A chastened Mr Calderón went to Juárez and promised help.

Nowadays the city is touted as a success story. Murders fell steeply, to 311 in the whole of 2015. Three things were behind the turnaround. First, the federal government poured money into the city. Some of it went into community centres, parks and sports centres. Another chunk transformed the local police, whose officers are now better educated, trained and

paid, says a local official. The Chihuahua state government has set up a task force of detectives and prosecutors.

The second factor was community mobilisation. Representatives of business and professional associations formed a security round-table in 2010, which still meets. They have drawn up security indicators and hold the authorities accountable for meeting targets, pressing them to co-ordinate closely, says Arturo Valenzuela, a surgeon and member of the group.

The third factor has little to do with the government. The violence in Juárez surged when rivals battled the Sinaloa drug mob for control of the city, an important drug export route. Each side made alliances with youth gangs and elements in the security forces. Sinaloa appeared to win, ending the war.

Enrique Peña Nieto, who replaced Mr Calderón in 2012, has continued the effort in Juárez, but has tried only fitfully to reproduce its success elsewhere. Having initially played down security issues, Mr Peña now faces mounting alarm among Mexicans, who worry that half a dozen of the country's states have become ungovernable because of organised crime, corruption and social conflicts. Such concerns prompted Mr Peña to replace the attorney-general this week.

After falling for the first two-and-a-half years of Mr Peña's presidency, the national murder rate has risen sharply this year. Businesses complain of the mounting cost of extortion and highway robbery. Because of the weakness of government forces, armed vigilantes now operate in 20 states, according to Eduardo Guerrero, a security consultant. "Everything is very reactive, and there is a lack of foresight regarding the knock-on effects of interventions," he says of government policy.

There is nervousness in Juárez, too, because of a rise in murders this year. Some blame the uncertainty among the criminal classes prompted by the election of a new state governor and new mayor, and the tensions between them. Others point to the recapture in January of Joaquín "El Chapo" Guzmán, the head of the Sinaloa mob, who has escaped twice from prison. Awaiting extradition to the United States, he is being held in the turreted bulk of a federal prison in the Chihuahua desert, just outside Juárez. The government is taking no chances: a dozen army vehicles, some with guns mounted, guard the prison entrance.

Mr Guzmán's arrest appears to have triggered a renewed battle for territory among rival drug gangs that may be behind the resurgence of violence. On average, half of murders are linked to organised crime, reckons Mr Guerrero. That bodes ill for Mexico. Juárez shows that a concerted political effort and community involvement can bring improvements, at least for a time. But across too much of the country, the basics of the rule of law—an effective police force and a capacity to prosecute crimes—are still missing.

Middle East and Africa

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Off-grid solar power

Africa unplugged

GAKENKE

Small-scale solar power is surging ahead

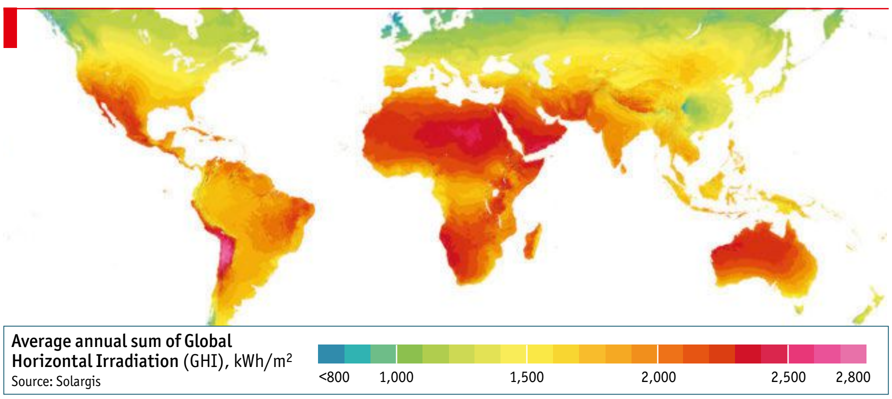
A FEW miles down a rutted dirt road, and many more from the nearest town, a small farmhouse stands surrounded by dense green bush. On the inside of one wall gangly wires reach down to a switch and light that are connected to a solar panel. Readers in rich countries may well consider electric lighting mundane. But in northern Rwanda, where fewer than one in ten homes has access to electricity, simple solar systems that do not rely on the grid—and use a battery to store electricity for use at night—are a leap into modernity. A service once available only to rich Africans in big towns or cities is now available for just a few dollars a week. People are able to light their rooms, charge a smartphone and listen to the radio. In a few years they will probably also be watching television, powering their irrigation pumps and cooling their homes with fans.

In short, poor people in a continent in which two of every three people have no access to power may soon be able to do many of the things that their counterparts in rich countries can do, other, perhaps, than running energy-hogging appliances such as tumble dryers and dishwashers. And they will be able do so at a fraction of the cost of traditional sources of energy while also acting as a testing ground for technologies that may even make their way back from poor countries to rich ones.

Off-grid solar is spreading at an electrifying pace. An industry that barely existed a few years ago is now thought to be providing power to perhaps 600,000 households in Africa. The pace of growth is accelerating in a continent that, more than any other, is rich in sunshine (see map). Industry executives reckon that over the next year the number of home-power systems on African roofs will grow by 60-100%. M-Kopa, the market leader, has installed 400,000 systems and, at its current rate of growth, may add another 200,000 to that number over the next year. Smaller rivals such as Off Grid Electric, Bboxx and Azuri Technologies may well double their client base over the same period.

This fast pace of growth suggests that, if sustained, off-grid connections will within a few years outstrip the rate at which people are being connected to the grid, leapfrogging power lines in much the same way that mobile phones bypassed fixed-line telephone networks. This promises not just to improve millions of lives but to help deal with a chronic shortage of power that, the World Bank reckons, trims about two percentage points from Africa's annual economic growth.

Extending electricity grids across Africa might seem a better alternative. But, for the moment, it is unrealistic. Rwanda, one of Africa's most densely-populated countries, found that it costs an average of $880 to link a house to the grid. Yet even that figure is misleading since it changed its policy to concentrate on connecting only those homes that are already close to existing power lines. Before this change it cost an average of about $2,000 per connection, about ten times the cost of an off-grid system. The Africa Progress Panel, a group of experts led by Kofi Annan, a former UN secretary-general reckons that more than 600m people are not connected to grids and that to wire them up, investment in electricity infrastructure would have to rise to about $55bn a year from the current $8bn. On current trends it would take until 2080 to link all Africans to the grid. ▸▸



Just a few years ago the idea that "off-grid" systems could fill the gap seemed preposterous: the market was dominated by charities giving away solar-powered lanterns that could produce a few hours of light at night. But as technology and venture capital firms have entered the market, the industry has quickly evolved, helped by three developments.

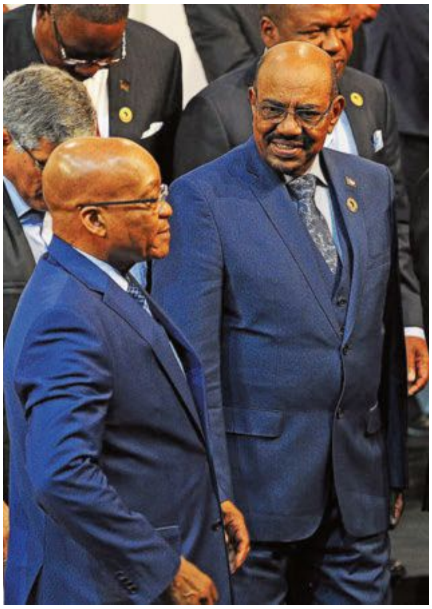
The first has been an 80% fall in the cost of solar panels since 2010, according to the International Renewable Energy Agency to as little as 52 American cents per watt of capacity. A more important innovation has been the "pay-as-you-go" business model, based on selling electricity as a service rather than selling solar cells. A bevy of companies have sprung up offering to install systems and then charge customers a weekly or monthly fee. This allows poor households to have part-use of solar systems costing as much $250 that they would struggle to buy outright. Many firms have connected their systems to mobile phone networks so that they can bill customers using mobile money and cut them off the moment a payment is missed (some are building in Wi-Fi routers to offer internet connections, too). Default rates are anyway low because many rural Africans already spend some $100-$140 a year on kerosene lamps and candles, and another 15-25c each time they charge their phones.

The third big change has been in the development of devices that use less electricity. The most important of these are light-emitting diode (LED) bulbs, which provide illumination with about 20% of the energy of conventional bulbs. But energy savings are also spreading to phones, televisions, fans and radios. Azuri Technologies is taking this a step further by building intelligent solar systems that learn how their users typically use energy. The system then uses this information to ensure it never leaves them in the dark. If a cloudy day reduces the amount of power it collected then it will imperceptibly dim the lights and television to keep them running.

The biggest constraint to faster growth is a shortage of finance, since most off-grid firms are putting up the money for new installations, but are only getting paid back by their customers over time. A second constraint is production. Mansoor Hamayun, the CEO of Bboxx, laments that he can't make systems quickly enough. "It's not about a lack of demand…we run out of stock frequently," he says.

To be sure, home solar will not solve all of Africa's power problems. Current systems can already light up small shops and service businesses such as hairdressers—Lumos Global reckons that about a quarter of its systems are used in hospitals and businesses. Several firms are working on scaling them up to to provide power to small factories and farms. But even so, off-grid power will not displace the traditional sort when it comes to big industries.

For the moment many policymakers in Africa see the two technologies as competing and fret that off-grid power companies will eat into the customer base of state-owned electricity monopolies. Instead they should encourage the competition that is lifting the burden of rural electrification from the state while allowing it to concentrate its investment in improving power supplies in those areas where it can be used to power industrial growth. ■



The International Criminal Court

Exit South Africa

JOHANNESBURG

A terrible blow for the court, and for a beleaguered country

UNDER Nelson Mandela's government, South Africa championed the creation of a court to try the world's worst criminals. Out of apartheid and the Rwandan genocide came a boon for international justice. "Our own continent has suffered enough horrors emanating from the inhumanity of human beings towards human beings," Mr Mandela said ahead of the Rome statute adopted in 1998, which established the International Criminal Court (ICC). So strongly felt was this mission that South Africa incorporated the ICC's founding treaty into its own domestic laws.

But under President Jacob Zuma the country has taken a radically different turn. On October 21st South Africa's government filed notice of its intention to quit the ICC (the process will take a year). This puts South Africa in the company of Burundi, which said it was leaving after the ICC began investigating the wave of killings that followed President Pierre Nkurunziza's decision to cling to a third term. Other African countries may follow suit. The Gambia, another human-rights abuser, says it will do so. Kenya, Uganda and Namibia have made similar threats.

South Africa's explanation for leaving rings hollow. Its official notice complains that its obligations under the Rome statute clash with conventions around diplomatic immunity for heads of state and hinder its ability to broker "peaceful resolution of conflicts." This was the case when Sudan's president pitched up in Johannesburg for an African Union summit last year. Under the ICC rules, South Africa was obliged to arrest Omar al-Bashir, who is wanted by the ICC on genocide charges for the deaths of hundreds of thousands in Darfur. Instead Mr Zuma (pictured, left) welcomed him. Mr Bashir bid a hasty retreat back to Khartoum when civil-society groups took the South African government to court in an attempt to force his arrest.

Many South Africans, including the liberal opposition and human-rights bodies, see the decision to leave the ICC not as a triumph for pan-Africanism but as another moment in the country's descent under Mr Zuma, who has repeatedly shown little respect for the law. Even the leftist Economic Freedom Fighters (EFF), which roundly criticises the ICC for bias against Africans, has condemned the move as irresponsible.

The timing is also questioned, with Mr Zuma and his government facing a string of legal challenges. Two lower courts have ruled that the government broke the law by failing to arrest Mr Bashir. The Constitutional Court was due to hear an appeal next month, though the justice minister now says it will be withdrawn. There are also questions over the process of leaving the ICC. The opposition Democratic Alliance has launched a court challenge arguing that the move is unconstitutional because the government failed to seek approval from Parliament.

Meanwhile the president, beset by a battered economy, violent student protests and factional disputes within his party, has his own legal woes. Earlier this year Mr Zuma was found to have violated the constitution in a row over expensive improvements to his house. He now faces the potential reinstatement of corruption charges linked to an arms deal. At the same time the country's respected finance minister, a rival of Mr Zuma, is due in court on spurious charges. George Kegoro of the Kenya Human Rights Commission reckons that South Africa's move to withdraw from the ICC is a response to Mr Zuma's political problems: "Impervious to the country's political history…the South African leadership is marching the country to a legal wilderness, where South Africa will be accountable for nothing." ■

African economies

The oil effect

IMF numbers tell a tale of two Africas

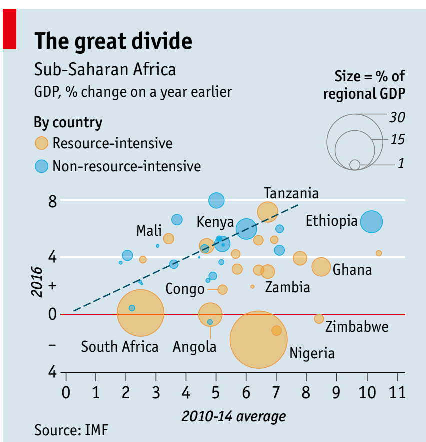
HOW are sub-Saharan African economies doing? It depends on where you look, says the IMF in its latest survey of the continent, which was published this week. Regional growth will slow to just 1.4% this year, the most sluggish pace for two decades. Things look grim in Nigeria, which is mired in recession. But the Ivory Coast, a short flight away, is thundering along at a growth rate of 8%. Similar contrasts are found across the continent. Better to talk of two Africas, says the IMF, moving at different speeds.

The big divider is resources. As commodity prices have slumped, so too have the fortunes of big exporters. As a group, resource-rich countries will grow on average by 0.3% of GDP, says the IMF. Take oil-rich Angola, once the fastest-growing country on the continent: it will not grow at all this year, and is wrestling with inflation of 38%. Commodity-exporting countries saw the value of their exports to China almost halve in 2015. Public debt is rising sharply. Exchange rates are falling. Private consumption has collapsed.

Things look very different in countries which are less resource-dependent. They will grow at 5.6% this year, the IMF reckons. They have been helped by falling oil prices, which makes their imports cheaper. They are stronger in other ways. In east Africa, for example, a wave of public investment in infrastructure has boosted demand.

Governments cannot set commodity prices. Nor can they stop drought, which has hit agriculture in countries such as Ethiopia and Malawi. But their decisions do make a difference. Nigeria's disastrous attempt to prop up its exchange rate hurt far more than it helped. Investors in Mozambique were unimpressed when the country revealed hidden debts in April. Growth in South Africa has slowed to almost zero amid political wrangles. Now is the time to get the policies right, urges the IMF.

The numbers should be read warily: GDP figures are only ever a best guess, and the large informal economy in most African states makes the calculation even harder. Talk to traders in Uganda, for instance, and you will hear a story very different from the IMF's rosy forecast of 5% growth. The overall lesson, though, is clear. If you rely on commodities, diversify—or face the consequences. That is easier said than done. Look to east African countries, hailed for their innovations in mobile banking, which are now touting a fresh source of riches: oil and gas. ■



Iraq

Tightening the noose

NAWARAN

Iraqi and Kurdish troops fight their way towards the heart of the caliphate

HARASSED by sniper fire and slowed down by the suicide bombers of Islamic State (IS), Kurdish and Iraqi forces have taken heavy casualties as they fight their way towards Mosul, Iraq's second-largest city and the place where the jihadists first announced the creation of their "caliphate" two years ago.

Villages freshly captured by the Iraqi army and Shia militias on the roads leading to Mosul show signs of the jihadists' hasty retreat. Weapon caches are abandoned, pots of uneaten food still sit on stoves and medical clinics have been pilfered for supplies. But there are signs, too, of the defences dug by IS to evade air strikes: deep, wide subterranean tunnels with room enough to sleep and eat, their entrances concealed inside one-storey buildings.

The operation to retake Mosul began on October 17th. Since then an awkward coalition of Iraqi and Kurdish forces has swept across the vast, sun-baked plains of Nineveh to seize a string of villages to the east, north and south. As *The Economist* went to press, some units were within 6km (4 miles) of the city.

Kurdish and Iraqi troops, supported by American-led air strikes, Western special forces and American artillery guns, have inflicted heavy casualties on IS. Residents in Mosul say the city's hospitals are full of wounded IS fighters returning from the front. "It's pretty significant (resistance)," said Lieutenant-General Stephen Townsend, the commander of American-led forces in Iraq. "The Iraqis expected this and they're fighting through it."

Less expected has been IS's ability to attack its enemies on other fronts. On October 21st about 100 well-organised IS fighters infiltrated the oil-rich city of Kirkuk and engaged security forces in running street battles that lasted three days. Experts say the attack is a portent of what lies ahead. They suspect IS will return to the shadows to wage a bloody guerrilla war against the Iraqi state once the city falls.

If the battle in the countryside around Mosul has been fierce, then commanders expect an even bloodier fight once their troops enter the city. Intelligence reports indicate that hundreds of IS fighters have moved to Mosul in recent weeks to reinforce the 4,000 to 8,000 fighters estimated to be inside already.

IS has had two years to prepare its defences. Its fighters have rigged the city with explosives, mined and booby-trapped roads, filled trenches with oil they can set alight as the Iraqis advance and dug a network of tunnels deep underground. There are also fears that the jihadists will use the 1m-1.5m civilians trapped in the city as human shields to slow the offensive. Officials say there is every indication IS will fight rather than flee. If so, some think the battle could last until February.

Solid intelligence about the location of IS positions inside the city will be key to limiting the damage. To encourage informants, troops have erected a number of mobile-phone masts near the front line and phone operators have given residents 60 minutes of free credit. "It's still dangerous to make calls," said Mahmoud, a Mosul resident who was too scared to give his real name. "They're searching people for SIM cards because they're worried about spies." The UN fears IS may have executed dozens of people as the militants retreat from surrounding villages.

While militarily the battle has largely progressed according to plan, fissures have begun to emerge among the region's powers. The main source of friction stems from Turkey's role in the fight (see next article). Limited for the time being to occasional ar- ▸▸

tillery fire from a ridge to the east of the city, Turkey's involvement has infuriated the Shia-dominated government in Baghdad.

Another emerging problem is the absence of order in newly liberated areas. Many blame a dysfunctional government for the ease with which IS captured Mosul and the surrounding countryside two years ago. At a checkpoint on the outskirts of Qayyarah, 60km (40 miles) south of Mosul, a frustrated colonel in the Iraqi air force pointed to thick columns of smoke still billowing from an oil refinery that IS fighters had set on fire as they retreated from the town in August. Mixed with noxious fumes from a burning sulphur plant, the smog has put hundreds in hospital.

"This is a disgrace," said Colonel Khalid Jasim al-Jabardi, who had been sent from Baghdad to report back on progress at the front. "The mayor is still in Erbil, millions of dollars have been sent but there's still no electricity, no food, no water. People are starting to say that life under Daesh [IS] was better. If the same happens when Mosul falls then we will have big problems. Perhaps not Daesh, but another terrorist group will emerge." ■

Medical marijuana in Israel

Light-up nation

JERUSALEM

The tech sector prepares for booming global demand

ISRAEL'S right-wing government is adamantly opposed to the legalisation of cannabis for recreational use. But it is also rather lax when it comes to medical marijuana. The health ministry is currently licensing a new list of 100 or so doctors who will be allowed to prescribe the drug for a growing list of medical conditions, and is allowing regular pharmacists to stock it. In August the agriculture minister announced that local cannabis growers will soon be allowed to export medical marijuana.

Israel has a number of advantages. It has booming agricultural and medical technology sectors, a strong record in creating start-ups and a large venture-capital industry to fund them. In addition, marijuana research in Israel, which has been going on since the 1960s, has a head-start over America, where both the medical community and pharmaceutical companies are heavily restricted by laws which are only now being slowly reviewed. Although a growing list of American states are allowing legal marijuana use, both for medical and recreational purposes, there are very few clinical trials of the suitability of various strains and active ingredients for treating illnesses. By contrast, in Israel extensive data are already being compiled, not only on the more traditional use of cannabis for pain-relief but also for a wide variety of other conditions and disorders, ranging from Alzheimer's disease to Tourette's syndrome.

Three private funds have already been formed to raise investment for cannabis-related start-ups. Saul Kaye, the CEO of iCAN, a venture fund and technology incubator, says there are already 36 Israeli companies doing clinical research on cannabis. The big tobacco companies, which are hoping to profit from the expected boom in marijuana, are also interested in Israeli technology. Altria Group, owners of Philip Morris, bought Green Smoke, which specialises in e-cigarette manufacture, for $110m in 2014. Earlier this year it invested $20m in Syqe Medical, developer of an inhaler for vaporised marijuana.

Local dope-smokers still run the risk of arrest for possessing even tiny quantities. They hope that once hundreds of acres are under cultivation for export in the Negev Desert, and weed becomes a major crash-crop, the legal environment will also find itself in an altered state.

Turkey's intervention in Syria and Iraq

Erdogan's war game

JARABLUS

The Turkish president is pushing into both his southern neighbours

TWO months after Turkish tanks flanked by Syrian insurgents wrested it from Islamic State (IS), the border town of Jarablus, in Syria's north, is slowly getting back on its feet. Schools have reopened. Aid has begun to trickle into the area, as have thousands of people from neighbouring villages and some 7,700 Syrian refugees returning from Turkey. "Finally we have enough food," says Aminah Hardan, a young mother of nine who arrived in Jarablus from Aleppo in early 2013, only to watch IS take over the city months later. The militants, she says, once asked her husband to whip her for not wearing a *niqab*. Since the Turks rolled into town, she has swapped it for a yellow headscarf.

For years, Turkey's president, Recep Tayyip Erdogan, has urged his Western allies to help him carve out a buffer zone in Syria's north to provide refugees with a haven and anti-regime insurgents with a bridgehead. He now has what he wished for. With Turkish troops and their Syrian proxies in control of an area stretching from Jarablus to Azaz, some 90km (55 miles) west, Mr Erdogan has killed two birds with one stone. He has pushed IS militants far enough from the border to lower the risk of rocket attacks against Turkish towns. And he has stopped the People's Protection Units (YPG), a Kurdish militia backed by America but regarded by the Turkish government as a terrorist group, from linking its eastern and western cantons.

Turkish and rebel forces intend to push further south. Earlier this month they easily overran the town of Dabiq (see next article). They now plan to march on al-Bab, where the fighting is expected to be much more intense. Mr Erdogan says they may soon head towards Raqqa, the jihadists' capital. All this may become a drain on resources. Turkey cannot make much more headway without additional troops, says Can Acun, a researcher at SETA, a pro-government think-tank.

Some of the rebels in Jarablus would eventually like to take the fight to the regime of Bashar al-Assad. "For us, the most important thing is to break the siege of Aleppo," says Fikret, a young fighter. They may not get their wish. Having grudgingly accepted that Mr Assad is not going away, Turkey is no longer in the business of regime change in Syria. Focused instead on its backyard, it has struck a bargain with Russia, analysts say. "Russia will let Turkey keep the Jarablus pocket, and in exchange Turkey will pull back the opposition from Aleppo," says Behlul Ozkan, an assistant professor at Marmara University. "This makes Turkey dependent on Russia. If it acts against Russian interests, Russia can make problems for it in Syria."

Even if the increasingly unpredictable Mr Erdogan has reconciled himself to Mr Assad's rule in Syria, his ambitions extend rather further than Jarablus. Over the past ►►

couple of weeks, he has repeatedly claimed a century-old right to intervene on his southern periphery. "From now on…we will not wait for terrorist organisations to come and attack us," Mr Erdogan said in a speech on October 19th. "They will not have any place to find peace abroad." Turkish jets struck YPG positions in Syria just hours later, a new front in a war with Kurdish insurgents, the PKK, who are linked to the YPG. The bombing killed up to 200 fighters, the army said.

Over the objections of his Iraqi neighbours and American allies, Mr Erdogan has also clamoured for a greater role in the offensive against IS in Mosul, citing a duty to protect his fellow Sunnis from Shia militias. His talk of an incursion is probably bluster, designed to sustain a wave of nationalist frenzy that Mr Erdogan seeks to ride to a new constitution and an executive presidency next year. "For that rhetoric to have any weight, you need to have 50 times as many troops and tanks on the ground in Iraq," says one analyst. But Mr Erdogan may surprise. "We know this business in this region," the president warned the West in his speech. "You are foreigners here. You do not know." ■

Islamic State's loss of Dabiq

Apocalypse postponed

But the defeat of the jihadist group may revive realism among Sunnis

THE fate of a small rural town in northern Syria might seem inconsequential when faced with a multinational assault on the group's main stronghold, Mosul. But few places were more central to the image of Islamic State (IS). The jihadists lauded Dabiq as the locus, as cited in an obscure Hadith, or saying of the Prophet Muhammad, of the battle of the end of days; in their vision it would be the site of an apocalyptic showdown between the self-styled caliphate's faithful and Western crusaders. It named its glossy English-language e-zine after the town, and beheaded its victims, including Peter Kassig, an American aid worker, in its foothills. As the day of reckoning approached, observers reported that IS had fortified Dabiq with 1,200 fighters.

In the end, IS went with barely a whimper. The jihadists folded before the advance of Turkish-backed rivals after just a day's battle. IS's "caliph", Abu Bakr al-Baghdadi, had foretold of the capitulation in a dream, explained apologists. IS's propagandists even pre-empted the fall with the launch of a new English title, *Rumiya*, deferring the end-of-days battle until IS reaches Rome.

IS's eschatology—the theology of death, judgment and the end of the world—has always been flexible. Experts see it more as a recruitment tool than a tenet of faith. "Opportunistic apocalypticism," is what one French scholar, Jean-Pierre Filiu, has called it. Mr Baghdadi seemed more interested in state-building than doomsday. He called himself caliph, an earthly ruler, rather than a mythological *mahdi*, or messiah. But theological hype helped whip up impressionable Muslims abroad, like Mohammed Emwazi, a London dropout who executed Mr Kassig and others. "Apocalyptic motifs helped recruit people unfamiliar with the tradition. Europeans fit into that category," says David Cook, an American professor and author of "Contemporary Muslim Apocalyptic Literature". In the words of Ibn Khaldoun, classical Islam's greatest and most cynical historian, "The Arabs obtain power only by relying on a religious movement."

Traditionally, Sunni Islam—the dominant sect—sought to prop up the world order. The notion of upending it was a Shia belief, offering Islam's battered minority a hope of redemption. At the appointed hour, their 12th imam, who disappeared in 941 to avoid the persecution Sunni despots had inflicted on his 11 predecessors (pictured below), would return as *al-mahdi al-muntadhar*, "the awaited saviour", and vanquish the oppressors.

But during this century Sunnis have come to see the world differently. Western armies upturned the old order of Islam's Iraqi heartland, replacing Sunni masters (a minority) with non-Sunni ones (the Shia majority). Sunni confidence has turned to despair. Jihadists like al-Qaeda had scant time for the apocalyptic, but as successive waves of *jihad* floundered and the Sunni lot worsened, some Sunnis adopted some of Shia Islam's more fantastical thinking. "Millennial traits were always there in Sunni Islam but undeveloped in any great detail," says Robert Gleave of Exeter University. After America killed Abu Musab al-Zarqawi, al-Qaeda's leader in Iraq, in 2006, and put his jihadists to rout, a despondent remnant unearthed references buried in canonical compilations of Muhammad's sayings. They turned up *alamat al-saa*, "signs of the hour", including the race to construct sky-high buildings, the rising of the sun in the west and an army brandishing black banners in the east—all signs that Zarqawi's devotees claimed to discern. Accompanying the *mahdi*, Jesus would return, they claimed, bearing a bloody lance.

By contrast, as Iraq's Shias grew accustomed to power, their own apocalyptic impulse waned. "When we suffered, we prayed for the imam," says a taxi driver in Baghdad's teeming Shia shantytown, Sadr City. "Now that victory is here, we've forgotten him." In Iran, laymen and low-level clerics have still found the notion of apocalypse useful in taking on establishment clerics. When challenged by ayatollahs, Mahmoud Ahmadinejad, the Islamic Republic's ex-president and the only layman to have held the job, would convene his cabinet in Jamkaran, one of the bling-emblazoned sites where the 12th imam is expected to return. But on the whole, Shias have tempered their talk of extra-worldly deliverance. Even Muqtada al-Sadr, a lowly but firebrand Iraqi cleric, renamed his Mahdi Army the Brigades of Peace.

Now that Dabiq has failed to deliver, might jihadists ditch their more nihilistic ideas? Precedent suggests that, for some, failure will only redouble their flights of fancy. But from the pavements of Cairo to Karbala, Mr Cook detects a decline in apocalyptic publications. Under tighter surveillance, the more hysterical might have gone underground or found a home on the deep web. But many Sunni Iraqis are as appalled by IS's brutality as anyone else. Preachers in Baghdad say a new realism is taking hold. Better, perhaps, that the appointed hour is postponed. ■

Waiting for the end

Also in this section

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Migration in France

The end of an ugly affair

CALAIS

France's squalid migrant "Jungle" has been dismantled, but what of its residents?

"SIX places left for Rouen!" calls the official in a red jacket, approaching the queue of refugees hoping to board coaches. "Where's that?" asks Dilo, a 24-year-old Afghan, his belongings stuffed into a small zip-up bag. The official pulls out a plastified map of French regions, and points to Normandy. "Near Paris? OK," Dilo agrees. His name is recorded, a green wristband fitted, and he is shepherded with other volunteers through the hangar which serves as a processing centre, and on to the waiting coach outside. As it pulls away, the advertising slogan on this tourist bus comes into view: "Follow your dreams".

For the 8,000 or so refugees, most of them from Sudan, Afghanistan and Eritrea, who had made the camp in the Calais dunes their home, there are few dreams left. Many had hoped to reach Britain, across the English Channel. But the construction of ever-higher walls topped with razor wire around the undersea tunnel and now the port (financed by the British government), along with heavy French policing, has sealed the route. "I've tried so many times, but it's impossible," says Jan, a 29-year-old Afghan, clutching a cricket bat. He is now heading for Normandy too.

The French effort to clear and close the camp, announced a month ago by President François Hollande, was always going to be delicate. There is deep French frustration that the British government was not prepared to be more welcoming to refugees, whatever its legal rights to deny entry. Britain has taken in some 200 unaccompanied children, out of the 1,400 or so found to be living in "the Jungle", as the Calais camp is known. As a general rule, Britain will not take adults, who under EU rules are supposed to apply for asylum in their country of arrival. This week British officials were in the camp to assess which children qualified.

Yet, despite moments of tension, the initial clearance was orderly. After three days, 5,596 migrants had left in coaches bound for reception centres across France. Over 1,200 children were in a provisional reception centre in Calais, though aid workers said up to 200 others were still without shelter. Many of those queuing for coaches seemed accepting, even eager. "I've decided to stay," says Hassan, wearing an NY baseball cap, who made it to Calais from Sudan via Libya and Italy, and had hoped to reach Britain. What does he feel about settling in France? "Merci beaucoup."

As the tents emptied this week, small diggers moved in. Refuse workers pulled apart the wood-framed shacks, loading piles of blankets, flip-flops and charred frying pans on to a dump. Bulldozers were kept at bay until migrants had left. Riot police encircled the areas being cleared. Fires broke out, flattening whole sections of the camp, including the "high street", where an "Afghan kitchen" offered chicken and falafel. Things could yet get tense once the voluntary departures come to an end.

Calais has long taken on a broader meaning. The shocking sight of a muddy, foul-smelling camp in the heart of rich Europe has come to symbolise the continent's ambivalence to the refugee crisis. In theory, the EU was supposed to share responsibility for the asylum-seekers who arrived en masse from Syria, via Greece, last year. In practice, Germany has been by far the most generous, with 477,000 people applying for asylum in 2015 alone—over five times the number of refugees who applied for asylum last year in France, and next to just 39,000 in Britain.

Playing politics with people

France, in reality, has found itself to be a country of transit rather than a destination, and as such a reluctant gatekeeper for the British. Around Calais, exasperation about the camp has stirred support for the far-right National Front. It has also been exploited for broader political ends ahead of France's presidential election next spring. Both Alain Juppé, the leading aspirant on the centre-right, and Nicolas Sarkozy, a former president hoping to run again, have threatened to tear up the Le Touquet agreement which gives Britain the right to conduct border checks at Calais. "We cannot accept making the selection on French territory of people that Britain does or doesn't want," Mr Juppé has declared.

Even if the camp is cleared without mishap, bilateral tensions will remain. Some refugees will indeed make a life in France. According to Pascal Brice, head of the French Office for the Protection of Refugees and the Stateless (OFPRA), 70% of those who applied recently from Calais were given asylum. Last year, OFPRA chartered coaches to bring Syrian refugees from Germany. Migrants housed in towns such as Cergy-Pontoise, near Paris, have learned ▸▸

French and begun to settle. Yet others will disappear, heading for Paris, or back to the northern coast. In 2002, a refugee camp in Calais, at Sangatte, was closed by Mr Sarkozy, then interior minister, only for the Jungle to emerge. Today, camps near Calais—in Dunkirk, or Saint-Omer—have already sprung up along the coast.

Back in the Jungle, the mood is one of resignation. Silent and alone on the top of a dune, Ibrahim watches the demolition below. Behind him is his own condemned shack, a structure of wood and tarpaulin, on which he has painted “London Hotel”. With the diggers closing in, he has given up hope of reaching United Kingdom’s capital, and cleared out his home. He carries its contents in a small back-pack. Sudan, his former home, is a long way away. What does he feel? “Nothing.” ■

Regional inequality

A tale of more than two cities

CATANIA

Regional inequalities within euro-zone countries have widened

THE beautiful but rubbish-strewn streets of Catania, Sicily’s second-biggest city, are a world away from swanky Trento, in the country’s richer north. About a quarter of Sicilians are “severely materially deprived”—meaning that they cannot afford things like a car, or to heat their home sufficiently—compared with just 5% in Trento. Italy is not unique. In many places, the divide within countries appears to be getting worse.

According to an analysis by *The Economist*, the gap between richer and poorer regions of euro-zone countries has increased since the financial crisis. Our measure of regional inequality looks at the average income per head of a country’s poorest region, expressed as a percentage of the income of that country’s richest part. The weighted average for 12 countries shows that regional inequality was declining in the years leading up to the financial crisis of 2007-08, but has increased since then (see chart).

The poorest area in Slovakia, the euro zone’s most geographically unequal economy, now has an income per person of just 28% of the richest, a slight fall from before the crisis. In Calabria, Italy’s poorest region, income per person as a share of the country’s best-off part, the province of Bolzano, was 45% in 2007 but is only 40% now. Elsewhere poor regions of the euro zone have seen income falling in both relative and absolute terms.

An exception is Germany: in its once-communist east, excluding Berlin, GDP per person reached 67% of that in former West Germany last year. (Most of the catch-up took place in the early 1990s, but continues more slowly.)

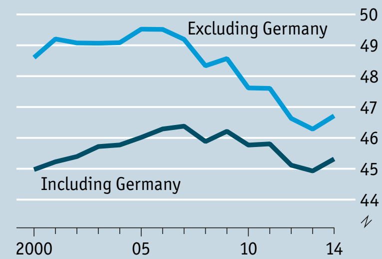
Deindustrialisation is partly to blame. Most of the euro zone’s 19 members have fewer manufacturing jobs than in 2008. Manufacturing employment is high in many of Europe’s poorer countries, but they have lost international competitiveness in part because of an overvalued euro. Tight public spending also plays a role. Since 2008 the number of civil servants in the euro zone has fallen by about 6%. This has often hurt needy regions most. Cuts in welfare benefits also hit harder. A paper by Luca Agnello, Giorgio Fazio and Ricardo Sousa, three economists, found that austerity led to higher regional inequality in 13 European countries between 1980 and 2008.

This suggests that the problem will continue: public funds will be tight for years to come, while weak public spending on education and infrastructure will crimp future growth. Even if the euro zone starts to grow strongly again, the geographical scars will be plain to see.

For richer, for poorer

Euro zone, income per person of poorest region as % of richest

Weighted average* for 12 countries



Sources: Eurostat; *The Economist* *By population

Inequality and education

Germany’s Sandernistas

BERLIN

Anxieties about social justice may come to dominate the election next year

THE refugee crisis is not the only issue that could decide next autumn’s election of the Bundestag. If Germany’s three left-wing parties get their wish, social justice may become just as contentious. The Social Democrats (who currently govern as junior partners under the chancellor, Angela Merkel), along with the Greens and The Left, which descends from the Communist Party in the former East Germany, are hoping to form a leftist coalition on this issue to unseat Mrs Merkel in 2017. Their dream is to spark a Bernie Sanders-like movement that—this being Germany, not America—could sweep them into power. So they have begun reciting a menacing-sounding metaphor: the “scissors” (ie, the gap) between rich and poor will keep widening unless they get to run the country.

Whether or not the divide between haves and have-nots is increasing is debatable. Compared with the 1990s, income inequality is higher as measured by the Gini coefficient. But it peaked in 2005 and has since remained broadly stable. Within the EU, Germany is a middling country in terms of income inequality, behind a few more egalitarian countries, such as Sweden, and well ahead of more unequal societies in southern and eastern Europe, as well as Britain. But when it comes to the distribution of wealth, Germany is near the top of the inequality scale, behind only Austria in the euro zone. The top 10% of German households own about 60% of the country’s wealth, whereas the bottom 20% own nothing, or are in debt (this is largely explained by Germans renting homes more than owning, and by relying more on government pensions).

Whether all of this amounts to a crisis depends on one’s vantage point. The Institute of Economic and Social Research (WSI), which is affiliated to the trade unions, concludes that Germany has a big problem. The Cologne Institute for Economic Research, which has ties to employers’ organisations, argues the opposite. Nonetheless, the perception of growing inequality is widespread. And according to a study in 2013 by the Allensbach Institute, a polling outfit, 69% of Germans think that income and wealth are unfairly distributed. But they may in fact be confusing actual inequality with something else: declining social and economic mobility. The WSI has found that moving either up or down has become harder since the 1990s, and much trickier in eastern Germany. Compared with other countries, intergenerational mobility (children ending up in a different class from their parents) is low.

Much of the problem lies in the education system. In Germany success at school and university is more strongly correlated with the education of parents than elsewhere in Europe. There has traditionally been little emphasis on pre-school education, even though it has long-term benefits, especially for children from poor families. And Germany, like Austria, has an unusual school system that sends pupils, usually after the age of ten, either on an academic track or a blue-collar career path.

The Allensbach study found that what ►►

Germans mean by "social justice" is a fair chance of success and fair (but not equal) rewards for achievement. They are also concerned about young people not being overburdened by providing for the old. Brute redistribution ranked lowest as a definition of the term. As such, just promising to soak the rich—by calling for new wealth taxes, say, as the leftists are doing—misses the point. It makes more sense, for any political party, to invest in better schools and, as the centre-right parties argue, to keep the employment motor humming. That may be why, even taken together, Social Democrats, Greens and The Left would not be able to win a majority of the Bundestag if voting took place today. Like Mr Sanders, they may be doomed to succeed by raising the issue but letting somebody else, most likely Mrs Merkel, find the solution. ■

Spanish politics

Back again

MADRID

How much can Mariano Rajoy do?

EVEN Pablo Iglesias, the leader of the leftist Podemos party, this week recognised that one of the political qualities of Mariano Rajoy, Spain's conservative prime minister, is patience. Having endured seven years as opposition leader, Mr Rajoy won power in a landslide in 2011 and had to pick up the pieces of his country's housing bust. His fiscal curbs and a raft of financial and labour-market reforms speeded up a vigorous economic recovery, but were unpopular. Together with corruption scandals in local government, that cost Mr Rajoy his majority in an election last December. His People's Party (PP) remained the largest party, but in a newly fragmented parliament.

Since then, Spain and Mr Rajoy, reduced to an impotent caretaker, have waited for more than 300 days. No party has been able to assemble a parliamentary majority. A second election in June boosted the PP (from 123 seats in December to 137 out of 350) but failed to break the deadlock. Then after a wrenching internal struggle and faced with a third election at which they would probably lose more seats to the PP, the opposition Socialists at last agreed to abstain. That should allow Mr Rajoy's new government to be approved in a parliamentary vote expected on October 29th.

How much the prime minister can achieve with his powers restored is unclear. Mr Rajoy has the support of Ciudadanos, a new liberal party with 32 seats. To approve a budget, and the further belt-tightening required to meet the targets agreed with the European Commission for the fiscal deficit (to 3.1% of GDP next year, from a target of 4.6% this year), the prime minister will have to try and scrape up votes from Basque nationalists or rely on further Socialist abstentions.

This is new territory for a Spanish government. The PP has the fewest seats of any ruling party since democracy was restored in the 1970s. Accustomed to steamrollering laws through, Mr Rajoy acknowledged that he will now have "to earn governability…day by day". He has some cards: he can threaten to call a fresh election, and can only be overthrown if the opposition unites around an alternative.

Apart from the economy, the most pressing issue facing the new government is Catalonia. Its regional government plans to hold a referendum on independence next September. Mr Rajoy, backed by Ciudadanos, refuses even to talk about that. Catalans could still be dissuaded if offered more autonomy, as the Socialists propose. But confrontation looks likely.

A minority government will test the opposition, too. The Socialists fear ceding to Podemos the mantle of opposition to Mr Rajoy. Having flirted with a post-modern politics of the centre, Mr Iglesias has retreated towards the hard left.

Many Spaniards dislike Mr Rajoy, but they want a government and the signs are that they want their politicians to co-operate. Last year the rise of Podemos and Ciudadanos prompted many commentators to write the obituary of the two traditional parties. In the new world of minority government, Mr Rajoy and the Socialists will still be the key players. And patience may continue to gain its reward. ■

A shoe in, not a shoo-in

Energy efficiency

Populism tastes best hot

Toasters and kettles are no longer within the EU's grasp

EARLIER this year David Coburn, who sits in the European Parliament for the UK Independence Party, a Eurosceptic group, came up with an eccentric argument for leaving the European Union: the quality of his morning toast. He claimed that EU regulation meant toasters had only "the power of one candle or something", leaving his bread "all peely-wally" rather than nicely roasted. Brexiteers cheered: yet another example of croissant-scoffing continentals meddling with British traditions, such as burning bread to a crisp.

In fact, the EU does not regulate the energy consumption of toasters—and on October 25th it appeared to abandon any plans of doing so. According to internal documents from the European Commission, toasters, kettles and hairdryers are unlikely to be included on a list of new products covered by the Ecodesign Directive, which sets rules on improving the energy efficiency of appliances.

Such rules are wildly unpopular, and not just with grumpy Brits. On its website, the right-wing Alternative for Germany party sells incandescent lightbulbs (which the EU has phased out) as a rather dimly lit protest gesture. Even in Denmark, some newspaper readers were urged to rush out and buy powerful vacuum cleaners "before it's too late" when the EU included them in the directive two years ago.

But although the commission's decision will delight Eurosceptics, consumers may be less happy. The Ecodesign Directive makes products more energy-efficient. ▸▸

This means that their appliances—whether fridges, vacuum-cleaners or televisions—are cheaper to run over their lifetime, even if the product is initially more expensive. According to the commission's latest report, energy consumption for the average product covered by the directive will be around 18% lower by 2020 than it would have been without it. The energy savings are equivalent to around 165m tonnes of oil per year—more than half of Germany's energy consumption, and half of the European energy-savings target for 2020.

Greener types argue that the commission's decision not to include more appliances on the list could deprive consumers and firms of up to €10bn ($11bn) of savings by 2030. Apart from failing to regulate toasters and kettles, they also worry that the EU's more cautious approach could delay the revision of existing standards that have either been overtaken by advances in efficiency or were set too low to start with.

Jean-Claude Juncker, the president of the commission, is not known for backing down easily in the face of opposition. Yet he appeared to be particularly concerned by the backlash against the energy-efficiency policy. This hints at how sensitive the EU has become to populist discontent, which is now fairly mainstream: according to the latest poll Brussels is trusted by barely a third of Europeans. From free trade to migration to household appliances, the EU's policies seem as appetising as a piece of burnt toast. ■

The impact of Brexit

Britain shoots Ireland, too

DUBLIN

Where Britain's departure from the EU will hurt most

ON OCTOBER 25th John Bruton and Bertie Ahern, two former Irish prime ministers, appeared before a committee in Britain's House of Lords to discuss the impact of Britain's decision to leave the European Union on its western neighbour. Both men were sombre. Brexit, said Mr Bruton, might deal Ireland's economy an even heavier blow than Britain's—even though, as he added wryly, "we had no say in that decision." Since 1973, when both countries joined the EU's precursor, the European Economic Community, Irish businesses have become intertwined with British ones, said Mr Ahern. Unpicking those ties would be "devastating".

The first blow has already fallen, says Fergal O'Brien of IBEC, a business lobby group. As sterling has weakened, exports to Britain have become less competitive, and imports from Britain cheaper. Britain takes two-fifths of Irish-owned firms' exports, and a similar share of all agricultural exports. Beef and dairy farmers are struggling, and several of Ireland's mushroom farms, which export four-fifths of their produce to Britain, have already closed. The pain will worsen as sterling's fall and Brexit-induced business uncertainty hit demand in Britain, says Mr O'Brien. "When your partner shoots itself in the foot, you're bound to suffer too."

Once Britain actually leaves the EU, Irish firms will face further difficulties. Those thinking of exporting generally start with Britain, points out Alan Barrett of the Economic and Social Research Institute, a think-tank in Dublin. And many Irish workers gain experience and training

across the Irish Sea. Post-Brexit, Irish firms will struggle to break out of their small domestic market and will recruit from a shallower talent pool. Distribution and supply chains criss-cross both islands. If customs checks and tariffs were reintroduced, those links would have to be broken. Trade would fall further as rules on everything from food labelling to environmental standards diverged.

Ireland's government is particularly worried about the border between Northern Ireland, part of the United Kingdom, and the southern Republic. For decades Northern Ireland suffered civil conflict between Republicans, who fought for a united Ireland, and Unionists committed to remaining in the United Kingdom. The Good Friday peace agreement of 1998 committed the British and Irish governments, and Northern Ireland's devolved administration, to removing controls on the north-south border.

This has facilitated business, political and cultural links—as has the "common travel area"—a long-standing agreement that citizens of both islands can move freely between them. Brexit could "wake a lot of sleeping dogs", says Noel Whelan, a political analyst in Dublin. Unless Britain stays in the EU's single market and accepts free movement of people—which seems unlikely—the north's stability is at risk.

One mooted solution is to impose customs and immigration controls not between the two countries but between the two islands. British officials would set up in the Republic's ports and airports; Northern Irish residents would show passports to travel to the rest of the United Kingdom. That might be less unpalatable than reinforcing the north-south border. But that border will soon divide the EU from Britain, points out Dara Murphy, Ireland's minister for European affairs, and the EU will have to agree to any deal the British and Irish governments might make. Ireland's main concern, he says, is to ensure that both Britain and the rest of Europe understand the risks Brexit poses to peace and prosperity in both parts of Ireland.

The Irish government is seeking to salvage what it can. IDA Ireland, the national investment agency, is redoubling its efforts to sell Ireland's well-educated workforce and low corporation tax to foreign investors. Financial services offer the most promise, says Feargal O'Rourke of PWC's Dublin office. Irish consultants are touting the notion that banks based in London could keep the "passport" that entitles them to do business across the EU by moving a chunk of their activities to Ireland, which would be less disruptive than full-blown relocation. Some talk of Ireland gaining as many as 20,000 jobs from this.

Given the many ways in which Brexit will damage Ireland, these jobs would be merely a consolation prize. But there is no room for bitterness. The less Brexit harms Britain, the better for Ireland, points out Johnny Fallon, a political commentator—and that means Ireland must try to persuade the rest of Europe to grant Britain generous exit terms. "Some in Europe would be very happy to see post-Brexit Britain collapse," he says. "Not Ireland. We're very eager to see Britain hold up." ■

Charlemagne | The age of vetocracy

If the European Union can't do trade, what can it do?

IN HAPPIER days for the European Union the arcana of international trade policy were a matter for harmless eccentrics, while the intricacies of Belgium's constitutional arrangements were reserved strictly for masochists. Not in today's Europe, where crises strike in the most unexpected places. Behold the fiasco of the Comprehensive Economic and Trade Agreement (CETA) with Canada. Last-minute stonewalling by the Socialist-led parliament of Wallonia, the French-speaking bit of Belgium, meant that Justin Trudeau, Canada's prime minister, had to hold off visiting Brussels for a summit on October 27th to sign the trade and investment deal which has been seven years in the making. As *The Economist* went to press the federal government had succeeded in winning the Walloons round. Thus did a regional parliament representing 3.6m people nearly thwart the will of governments representing 545m.

The debacle has many fathers. Wallonia's Socialists, out of national office for the first time in decades, are troubled by fringe leftists and keen for attention. The Flemish, their richer (and more trade-friendly) partners in Belgium's awkward federal construction, have long pushed for decentralisation that has now come back to bite them. The European Commission, which negotiates foreign trade on behalf of EU governments, should have foreseen that a "next-generation" deal such as CETA, replete with special courts for investors and complex provisions on the mutual recognition of standards, would attract next-generation opposition.

But the contingencies of CETA slot into a broader pattern. From regional parliaments to national referendums and restive constitutional courts, numerous spoilers have been hindering what should be routine European business. The EU is supposed to provide a forum in which governments can mediate their differences and forge compromises. But referendums are impervious to negotiation; regional parliaments are answerable only to their voters. Instead obscure politicians, like Paul Magnette, the indomitable minister-president of Wallonia, can extract concessions as ransom for their political hostage-taking, or simply hog the limelight. As regions or countries transfer their pathologies upwards to Europe, the EU risks sliding towards what Americans call a "vetocracy".

What's worse, trade is the one thing the EU is supposed to be able to do well. The Treaty of Rome, signed in 1957, granted Brussels the exclusive right to negotiate trade deals on behalf of governments. Since then the EU has concluded such accords with more than 50 countries; dozens more are in the pipeline. By the commission's reckoning, one-seventh of the European workforce depends, directly or indirectly, on external trade (and all citizens benefit from cheaper goods). Last week Donald Tusk, who chairs summits of EU leaders, warned that failure on CETA would mean the EU could never strike a trade deal again. Not only would that choke off an important source of growth; it would make it difficult to see exactly what the point of European co-operation is.

The mess over CETA is in part collateral damage from the row over the Transatlantic Trade and Investment Partnership (TTIP), a bigger and more vexatious EU-America agreement. Protesters transferred their outrage seamlessly from one to the other, dismissing cuddly Canada as a Trojan horse for rapacious American multinationals seeking to trample on European standards. The investment-protection provisions of the two deals (supposedly the main Walloon grievance) proved another source of trouble. Even after they were watered down, Europe's governments forced the commission to declare CETA a "mixed" deal, meaning it required ratification by each national parliament (and, in Belgium's case, five regional assemblies) rather than the European Parliament alone. If TTIP is ever signed—which now looks increasingly unlikely—it will surely face the same tortuous fate.

Deals that do not carry a transatlantic whiff may fare better. As Jean-Claude Juncker, the commission president, noted in frustration last week, the EU has recently concluded an agreement with Vietnam, a country not noted for its dedication to human rights, without a whisper of protest. Talks with Japan, too, are quietly approaching the finishing line.

Yet the EU's credibility as a trade negotiator rests on its ability to speak for its members. Without that, the world's largest consumer market starts to lose its allure. The agonising course of CETA will not quickly be forgotten by potential partners. If boning up on the niceties of Belgian regional politics, or the details of national referendum laws, becomes a prerequisite for negotiating with the EU, they will start to wonder if it is worth the bother.

Worthwhile Canadian initiative

More worrying is the damage to the EU's self-esteem. The club is trying to get over its funk about Britain's vote to leave by pushing something called the "Bratislava roadmap", a policy blueprint of sorts for the months ahead. If its initiatives do not amount to much, it is at least an attempt to demonstrate that Brexit will not paralyse ordinary decision-making. Plainly, the Walloons did not get the memo. Striking a trade deal with a friendly partner like Canada should have been about as easy as it gets for the EU.

Few can take heart from this embarrassment. Eurosceptic governments that have sought to take back powers from Brussels, like Hungary and Poland, certainly did not have trade in mind. Trade-phobic leftists who cheered the plucky Walloons should remember that the next referendum or parliamentary vote might be turned against one of their own causes, such as generosity to refugees. In fact, the only politicians with cause for celebration are those who argue that the EU itself is past its sell-by date. True to form, Marine Le Pen, leader of France's National Front, denounced the "totalitarian" EU for attempting to squash Wallonian democracy. Though it has squeaked through, CETA will leave an unhappy legacy. ■

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Brexit and the City

From Big Bang to Brexit

The financial-services industry considers its future outside the European Union

THE City of London is fretting about Brexit, especially about talk of a "hard Brexit" that takes Britain out of the European Union's single market. That raises doubts about the future of passporting, which allows financial-services providers to trade across the EU without separate regulatory or capital requirements. Another concern is that the government's plan to start the formal process for Brexit by the end of March will mean that Britain may be out of the EU as early as 2019, yet banks must plan two or three years ahead. Hence the latest warning from Anthony Browne, chief executive of the British Bankers' Association, that banks may start shifting jobs to Europe early next year.

It is a nice irony that such jumpiness should coincide with this week's 30th anniversary of Big Bang, the deregulatory step that largely created today's City (hugely helped by the expansion of Canary Wharf). Before Big Bang, says one financier, the City was backward and parochial, and there were real fears that it might lose out not just to New York but to continental Europe. It was Big Bang that underpinned London's dominance of European finance. And it is Brexit that may now challenge it.

There is no disputing the importance of financial services to the British economy. TheCityUK, a lobby group, says 1.1m people work directly in the business, rising to 2.2m if jobs in supporting infrastructure are included. Two-thirds of them are outside London. Financial services contribute some 12% of the national tax take. Banking is the country's biggest single export. Financial and related services generate an annual trade surplus of £55bn ($67bn).

Yet many Brexiteers are unfazed by bankers' threats to decamp. They say that as finance goes global, passporting will no longer matter. Nowhere else in Europe could replicate London, whose competitors are New York, Singapore and Hong Kong. The City expressed similar fears of job losses after Britain's decision not to join the euro, which proved empty. And they argue that London is a huge asset for the EU, not just Britain; European companies and banks need it, so their politicians will not damage it.

This seems complacent to those working in the City. Take passporting. There are many kinds of passport, from asset management to insurance to banking. For some sectors, like hedge funds and general insurance, passporting may not matter much. But as a report from Open Europe, a think-tank, notes, it is critical for investment banking. Some banks are established in more than one place already: Citibank has a separately capitalised subsidiary in Dublin. But most are not. The EU accounts for a fifth of their business; if they lose the passport, they must set up elsewhere (estate agents already report inquiries about space in Frankfurt). That could cost billions, when profit margins are tiny.

As for claims that nowhere else can compete, London will surely remain Europe's biggest financial centre. But finance is not static. Young people in the fast-expanding "fintech" business could shift almost anywhere. There are many rival places for financial services to go, from Frankfurt to Amsterdam to outside Europe. Morgan Stanley's first overseas office was in Paris, not London. JPMorgan Chase has warned that Brexit might lead to 4,000 job losses; HSBC has talked of transferring 1,000 staff to Paris. Oliver Wyman, a consultancy, estimates in a report prepared for TheCityUK that a hard Brexit could immediately cost as many as 75,000 jobs in all, a significant hit. Mark Boleat of the Corporation of London reckons a third of lost jobs might go to the continent, a third to New York—and the rest could just disappear.

Nor is there much sign of other countries backing the City. The financial-services industry is hardly popular across Europe, where it is widely blamed for the financial crisis. Other governments itch to pinch parts of London's business. Clearing and settlement is a prime example. London handles the bulk of clearing of trades in euros, but the European Central Bank has long wanted to repatriate this to Frankfurt. An earlier attempt was rebuffed by the European Court of Justice, but Brexit may deprive London of judicial protection. Profits from clearing matter a lot to the London Stock Exchange.

Are there alternatives to passporting? Some have suggested relying on regulatory equivalence or mutual recognition. The ar- ▸▸

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gument is that post-Brexit Britain starts with the same rules as the EU, so regulators should give banks the same freedom. But this would work only if Britain follows all future EU regulations despite having no say in them—and Brexiteers are keen to tear up red tape, starting with the EU's foolish cap on bank bonuses.

Migration is another worry. The industry needs to hire staff from the rest of Europe at short notice, yet Brexiteers want to introduce work permits or visas. A report by PWC, a consultancy, for the Corporation of London floats the idea of regional visas for London alone. Yet it is hard to see a carve-out for the City from broader controls, just as it is hard to imagine a deal that gives it alone full access to the EU's single market (and bankers snort at any notion that they might pay for the privilege).

Grim noises from the City may be partly designed just to shock pro-Brexit ministers. But bankers are deadly serious over needing clarity about post-2019 transitional arrangements if they are not to start shifting jobs abroad soon. Their big hope is that Philip Hammond, the chancellor, makes continuation of the banking passport in some form his priority for Brexit negotiations. But they are not sanguine. ■

Child refugees

Gnashing of teeth

A very British tabloid fuss highlights a very European problem

THE "Jungle" camp in Calais—squalid, ramshackle and lawless—was no place for children. In May the British government agreed, rather reluctantly, to take an unspecified number of minors from the camp to live in Britain. This week, as the Jungle was demolished (see Europe section), a few hundred started to arrive under the scheme. But some British tabloids, not known for their excessive sympathy towards asylum-seekers, queried whether the new arrivals were under 18. The debate, conducted on the front pages of an excitable press, seems quintessentially British. Yet it hints at a broader European dilemma.

Over the past two years tens of thousands of unaccompanied minors have turned up in European cities. Last year 35,000 lone children sought refuge in Sweden. As of September there were 51,000 in Germany. Britain receives many fewer, but the numbers are growing: in the year to September 2015, 2,564 unaccompanied children applied for asylum there, 50% more than the year before.

No standardised procedure exists to work out the age of these youngsters. And their age can make a big difference to their fate. On arrival in Greece, some minors claim to be over 18 to avoid being put in detention centres. In Sweden, by contrast, being under 18 means that an asylum-seeker gets a place in a special home and, in some cases, better access to lawyers.

In Britain some MPs suggested that the Jungle children should be subjected to dental checks to determine their age ("Tell us the tooth," roared the front page of the *Sun*). There was outrage at the uncharitable tone of the demand. Yet Britain is relatively unusual among European Union countries in not using dental X-rays as part of its age assessments (such tests are generally used as a last resort in those countries that do practise them). Instead, in Britain child refugees are interviewed by social workers, while the Home Office checks European records to see whether the children have been processed earlier in their journey across Europe and, if so, what age they gave at the time.

Dental checks are in fact of limited use. By the time people are in their late teens there is a "huge range" of development, says Judith Husband of the British Dental Association. Such tests therefore have a margin of error of about four years. The result should also be compared with a reference group of the same ethnicity or nationality, which European governments may lack. And it will differ if the subject is malnourished or has had chronic diseases.

Though it takes a miserly number of refugees compared with many European countries, Britain's age-verification system is more rigorous than most, thinks Taimour Lay, an asylum lawyer. Of the 574 asylum-seekers who underwent age checks in Britain in the year to September 2015, 65% were found to be over 18, despite having claimed to be children. With fewer asylum applications than many neighbouring countries, Britain should at least have the resources to identify those who fib about their age. ■

Minor on the move

The post-Brexit economy

Measuring the fallout

GDP grows by more than expected. But problems lurk beneath the headlines

HAPPILY, it is now certain that the British economy will not fall into recession in 2016. On October 27th the Office for National Statistics estimated that in the third quarter of the year GDP grew by 0.5%. This is a big improvement on the 0.1% growth that the Bank of England had forecast in August, and far better than some economists had predicted immediately following the Brexit referendum in June. British growth is good by international standards, and is in line with the average since 2010.

Yet markets shrugged. The pound registered little change against the dollar, against which it has lost nearly a fifth of its value since the referendum. The muted reaction was due to the fact that, beneath the impressive headline figure, there were signs that the British economy has not simply brushed off the Brexit vote. Of particular concern is the manufacturing sector, which economists had hoped would benefit from the weak pound. In the event it shrank by 1% compared with the previous quarter, its worst performance since 2012. Construction saw a bigger fall, of 1.4%, suggesting that firms and individuals are holding back on investment spending. Most of the economy's growth was in services, which grew by 0.8%.

This was a preliminary estimate, based on sparse data; readings of GDP are sometimes significantly revised years later. Other data give a fuller picture of Britain's post-Brexit economy, and it is not encouraging. Rising inflation will soon cause real wages to fall, pushing down living standards. The latest batch of public-finance figures (for September) made for painful reading. Tax receipts grew far more slowly than was forecast at the budget in March. By the end of this financial year the budget deficit is unlikely to be much lower than last year's, at around 4% of GDP.

With decent growth in 2016, the Bank of England and the chancellor, Philip Hammond, will probably adjust their immediate plans. At its next interest-rate meeting in November, the bank is unlikely to cut the base rate from its level of 0.25%, as had been widely predicted a few weeks ago. And Mr Hammond may feel that he can get away with a smaller fiscal stimulus in his autumn statement, a mini-budget due on November 23rd (a relief, given the poor public-finance figures). But expect further monetary and fiscal loosening in the future—after all, Brexit itself is still to come. ■

Bagehot | How to be a good bastard

What Tory Europhiles can learn from their Eurosceptic colleagues

WINSTON CHURCHILL'S dictum—"We shape our buildings; thereafter they shape us"—may account for the distinctively cabalistic quality of British politics. The Palace of Westminster is a maze of sticky-carpeted little bars, poky wood-lined offices and forgotten meeting rooms up twisting staircases. It urges those who work in it to agglutinate and machinate. Thus tribes, gangs and factions drive politics in Britain to a greater extent than elsewhere. Recently three have produced national transformations: the Thatcherite cabal of the late 1970s, the New Labourites around Tony Blair in the 1990s and the anti-Europeans who have marked Conservative politics for the past three decades.

The third of these groups stands out, for it achieved its revolution without taking power. Inspired by Thatcher's late, Eurosceptic turn and appalled by the disloyalty of the Europhile "grey men" who booted her out, they soared to prominence under John Major as he tried to secure support for the Maastricht treaty. "Bastards!" raged the then-prime minister of the rebels (later reflecting: "What I said was unforgivable. My only excuse is that it was true"). Back then they were relatively isolated. But over the long years of Labour government, the Conservative membership turned Eurosceptic; two "bastards", Iain Duncan Smith and Michael Howard, served as leader; their successor, David Cameron, pandered to the gang. Having won Mr Cameron's EU referendum, the bastards are supreme. Some are in the cabinet, others are breathing down their necks and a hard Brexit seems likely.

But if the old "awkward squad" is now the mainstream, what will take its place? Step forward, the Europhiles. The country's nationalist direction since June 23rd has unified a new, younger band of continentally minded Tories. One is Anna Soubry, a former business minister who does not mince her words. "He looks like somebody has put their finger up his bottom and he really rather likes it," she memorably told a television interviewer when asked about Nigel Farage of the Eurosceptic UK Independence Party. Nicky Morgan, a former education secretary, and Nick Herbert, an ex-policing minister, are her allies. George Osborne, a former chancellor and keener European than Mr Cameron ever was, is their shop steward. Ken Clarke, the rumpled, jazz-loving Europhile par excellence, serves as the resident greybeard.

There are differences within the gang. Mr Osborne favours a smaller state than the others. Only Mr Clarke doubts that the Brexit referendum should be treated as binding. But there are many more affinities. All are socially liberal. All question Theresa May's tough line on immigration and her plans to create more academically selective state schools. All campaigned heart-and-soul for Britain to stay in the EU, question the prime minister's rush to Brexit and want a "softer" break from the union, preserving the country's membership of the single market. Sometimes they even sit together in the Commons: Mr Osborne has joined Ms Soubry on the bench farthest back from the prime minister, now dubbed the "naughty corner".

Expect this group to gain influence once Mrs May triggers Article 50 in 2017, beginning the two-year countdown to Brexit. Already the prime minister is doing battle with Parliament. She wants to conduct the negotiations unscrutinised, but many MPs demur. A showdown will be the debate on the Great Repeal Bill, the legislation revoking the automatic transmission of European laws onto British statute books. This will create all sorts of opportunities for MPs to fiddle with the many volumes of European legislation reverting to Westminster's control. Mrs May has a working majority of 15, which gives the soft Brexiteers (who number at least 20) the ability to intervene where they do not like the government's line, just as their Eurosceptic predecessors so routinely and implacably did in the past. "They've certainly no reason not to fight just as dirty as the 'bastards' once did," says Tim Bale, a historian of the Conservative Party.

Listen to the naughty corner

If they get it right, the soft Brexiteers could tilt Britain towards a more open, rational sort of Brexit. Yet they face all sorts of perils: irrelevance, disunity, submission. To avoid these, they could do worse than learn from the bastards. First, that means sticking together. For decades the hardline Eurosceptics have worked in unison, co-ordinating their campaigns and voting as a bloc to encourage party leaders to seek their favour. Second, the soft Brexiteers must build up an institutional network. The Tory right has had the Bruges Group, Better Off Out and Business for Britain; not to mention the editorial pages of the *Daily Mail*, *Telegraph* and *Express*. The Tory left has Open Britain, a pressure group patched together from the ashes of the Remain campaign, but little else.

Third, the soft Brexiteers need a limited list of incrementalist goals. The bastards rarely talked publicly about leaving the EU, but little by little edged the country towards that outcome. Applying that lesson, the Tory moderates might seek to keep Britain in the single market, curb the aggressive tone of Britain's negotiators and rehabilitate Mr Osborne ahead of any future leadership race. Fourth and finally: they should reach out. The right always nurtured both sympathetic frontbenchers and the party's base. Ambitious Tories, from Mr Cameron to prospective parliamentary candidates, have long had to convince the party of their Eurosceptic bona fides. So the Conservative left needs to create its own litmus test: aligning itself with friendly ministers (like Damian Green, the welfare secretary) and making its endorsement a valuable asset for those who want to make their way in the party.

Pro-market and socially liberal, the soft Brexiteers represent Britain's truest instincts, as a mongrel nation created, whether it likes it or not, by grafters, merchants and immigrants. The Conservative Party has not always been a natural vessel for such people. But today it has a unique chance to represent them. It should do so with confidence. ■

Early childhood development

Give me a child

BULAKABYA, JOHANNESBURG AND NAIROBI

Boosting the health of toddlers' bodies and brains brings multiple benefits. But too often the wrong methods are used

THERE are no nurseries in Bulakabya, a hamlet hacked out of sugar-cane fields in eastern Uganda. That is not for a lack of children: most women will have at least eight and, since polygamy is widespread, some fathers have more. Until recently these children had few chances to learn. Parents often left them to their own devices until they could hold a hoe.

This is changing. On a tarpaulin mat in a church built from wood and mud, toddlers take turns at playing games that help them count, spell and get on with peers. Lively Minds, a charity, teaches the mothers how to foster children's cognitive and social skills. It also advises them on nutrition and hygiene. It says its intervention doubles the number of children scoring highly enough on cognitive tests to be thought of as "school-ready". Cases of diarrhoea and malaria have also fallen.

This is just one example of the multiple benefits that come from putting more emphasis on early childhood development (ECD), a term that includes everything that can be done to boost the physical and intellectual health of youngsters before they reach the age of eight.

According to the *Lancet*, a medical journal, in 2000 just seven developing countries had a comprehensive approach to ECD. Now almost half do. The UN's Sustainable Development Goals, a well-meaning set of targets launched in January, call for universal access to good-quality ECD by 2030.

As well as concern for children, the new zeal among development economists and poor-world governments for ECD reflects a desire to make it easier for their mothers to work. Globally just 55.3% of women of working age are employed or looking for a job—less than in 1990. But the usefulness to society of early development goes far beyond giving parents a place to park a kid.

The youngsters themselves are the main, though not the sole, beneficiaries. Another recent study in the *Lancet* reckons that 43% of under-fives in poor countries, in other words about 250m kids, will fail to meet their "developmental potential" because of avoidable deficiencies in ECD.

Their young brains are sensitive. In the first three or so years after birth, when up to 1,000 synapses are formed per second, they are vulnerable to trauma which triggers stress hormones. Though some stress is fine, too much is thought to hinder development. Neglect is also corrosive. Young children benefit from lots of back-and-forth dealings with adults. Research by the Rural Education Action Programme, based at Stanford University, suggests that rural children in China have "systematically low cognition", partly as a result of being reared by grandparents who pay them little attention while parents work in cities.

The evidence from neuroscience is sometimes exaggerated. Researchers still have a patchy understanding of the timeline for brain development. Some early adversity can be overcome. But the longer trauma or neglect goes on, the harder it is to counteract. And lots of studies now suggest that intelligent policy can help. One landmark programme began in the 1980s, when health workers started visiting Jamaican mothers to tell them about nutrition and learning through play. Compared with peers whose mothers had no such advice, these children had higher IQs, were less violent and earned 25% more at age 22.

Supporters of ECD add that its benefits go well beyond the children. Better-raised toddlers mean less need to cope with dysfunctional adults at public expense. The World Bank says every dollar spent on pre-school education earns between $6 and $17 of public benefits, in the form of a healthier and more productive workforce with fewer wrongdoers. Many developing countries seem to have accepted this case. China has vowed to provide pre-school facilities for all youngsters; India has the same goal. African countries are also investing in toddlers. Ethiopia says it will increase pre-school enrolment to 80% by 2020, from 4% in 2009; Ghana has added two years of pre-school education to its system. Uganda wants every state primary school to have a nursery.

This burst of enthusiasm is welcome and overdue. In the OECD club of mainly rich countries, spending on ECD amounts to around 2.4% of GNP; in poorer countries, where there is so much scope for improvement, the share is less than 1%, says the World Bank. Poor countries spend far more on regular schools. In Latin America, for every dollar spent on children under five, $3 is spent on those between six and 11.

The case for boosting the share benefiting from ECD is strong, but expenditure has to be well-aimed. Subsidies for all children to attend nursery are popular among parents and politicians; but unless kids get the right kind of attention, they are little better off than those who stay at home.

A report in May by Harvard University's Centre for the Developing Child found that the average impact of ECD experiments studied over the past 50 years has fallen. "There is huge potential in ECD intervention," says Orazio Attanasio of University College London. "The danger is to assume that any intervention no matter how ill-conceived and ill-designed will work." Although getting the right answers can improve tens of millions of young lives, there is a real risk that the current wave of enthusiasm for ECD will crash if bad methods are adopted and results disappoint. The latest research suggests at least four things which governments should keep in mind.

First, ECD must focus as much on physical well-being as on training the mind. That element is now missing: most ECD policies put the stress simply on educating kids aged four or five. In fact, health and nutrition are at least as important. A paper in 2008 by Cesar Victora of Federal University of Pelotas in Brazil tracked cohorts of children in five countries (Brazil, Guatemala, India, the Philippines and South Africa) and found a strong correlation between height at the age of two, school results and wages in later life. So correcting the bad nutrition (of expectant mothers as well as infants) that leads to stunting should be a priority. Supplements like iodine and iron for pregnant mothers and vulnerable babies can boost educational performance.

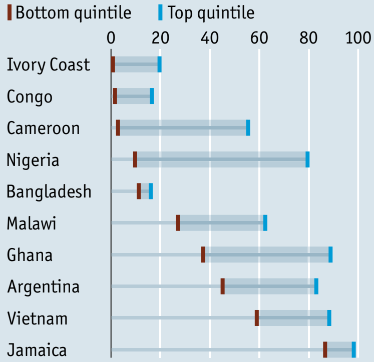
A second problem is that efforts to boost development in the first years of life can be shoddily run because they fall in the bureaucratic gaps between health and education policies. There are exceptions, such as a good Chilean initiative: known as *Chile Crece Contigo* (Chile Grows with You), the project has operated across the country since 2007, reaching 80% of the poorest mothers before they give birth and continuing until the child is four.

It offers a personalised service, from home visits to screening (for inherited diseases, for example) and there are cash incentives for taking part. Another lesson from Chile: what matters is how, not where, adults and children interact. In other countries, ECD policy amounts to building new subsidised child-care centres with little regard to what happens there. "Too often ECD is just child care," says Sonja Giese, director of Innovation Edge, part of a South

Unequal from the start

Children aged 3-4 years in early education

By wealth quintile, %



Source: UNICEF MICS

African early-development foundation. Few parents see the need for all-round development of mind and body, she laments.

Colombia offers examples of good and bad spending. In 2011, the government launched *De Cero a Siempre* (From Zero to Forever). Children were moved from small local facilities to larger ones costing twice as much per child. The shift to an impersonal setting harmed children's language and motor development, according to a study led by Raquel Bernal of the University of Los Andes, in Bogotá. A cheaper home-visit programme for even younger children had better results.

One reason for its success was that its curriculum suited the age of the children. Few toddlers are like John Stuart Mill, the thinker who began ancient Greek at three; and in some east African countries, the teaching of toddlers is utterly ill-adapted to their age. In those places, expanding ECD simply means putting kids in traditional schools a year or two earlier. In Kenya's state sector, for example, pre-school classes resemble a mini-secondary school, with tiny desks and chairs. Teaching is dull and based on rote learning; results are bad. About 40% of Kenyan seven-year-olds cannot read a word. Across the region, figures are even worse.

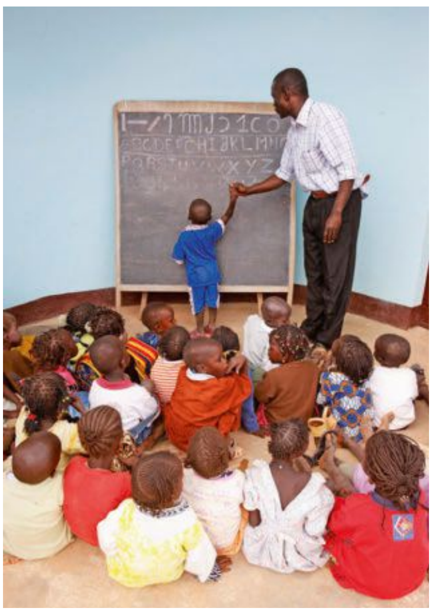
As researchers from Cambridge University found, a good ECD curriculum is the opposite of Kenya's. It needs play-based learning and lots of speaking, or just babbling, back and forth. But Betsy Chumo, who runs a play-based centre in a Nairobi slum, finds parents sceptical. "They want strict teachers and children behind desks."

As a third big pointer, experience suggests that private efforts are often the most innovative; governments should avoid getting in their way. Chile's programme, for example, is a healthy mix of private and public. In many countries, private initiatives become franchises that spread fast with only a touch of state encouragement. One case is Kidogo, co-founded by Sabrina Habib after she nearly stumbled over supine infants on the floor of a badly-run day-care centre in Nairobi. Kidogo trains "mamapreneurs" such as Ms Chumo to run centres that offer healthy meals and an age-appropriate curriculum while also making a profit. Another voluntary effort is SmartStart, in South Africa, which wants to bring ECD to the 1m kids between three and five who have none. The charity hires unemployed people to set up franchises, trains them in care methods based on good research and monitors their quality.

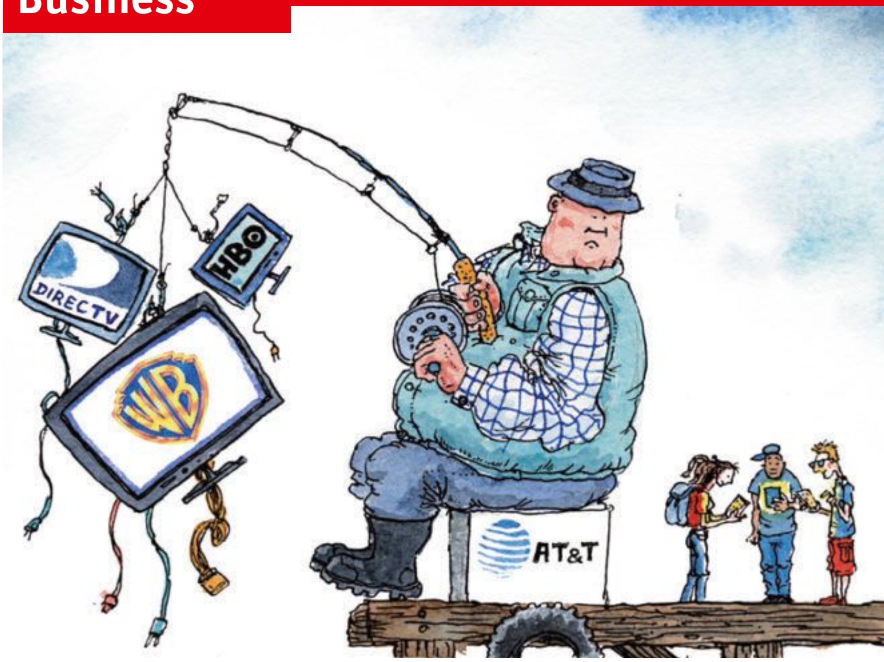
Where such franchises work, governments offer incentives, such as vouchers for poor parents. For all the differences, expertise gained from private-public partnerships in rich-world educational outfits (like American charter schools or England's semi-independent academies) can have a bearing on ECD. Ark, a group of English academies, will soon help test a new ECD model at nearly 100 places around Nairobi.

Fourth, technology can help in places where finding and paying decent staff is hard. Most child-care workers get little training and are paid a pittance. But new inventions boost teachers' skills cheaply and fast. Take a project in Kenya called Tayari; this involves issuing 1,700 pre-school teachers with tablets on which they get a curriculum, updated daily. In South Africa, Innovation Edge funds dozens of similar projects, from an app containing an ECD curriculum to a virtual-reality (VR) game showing good teachers at work.

Some claims for the benefits of all this excellent work may be overblown; ECD is not the only thing required to turn most children into successful adults. But it is one of the necessary conditions. Whether it is done through VR headsets or by playing on mats in a mud church, improving ECD can give millions of youngsters a better shot at overcoming life's other problems. ■



Bored by the board



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AT&T and Time Warner

Angling for the future of TV

NEW YORK

A huge takeover bid reflects the change in the way people watch television

IMAGINE a television which, as in the old days, has only a handful of channels to choose from instead of hundreds, as a typical cable set-up might offer today. In a decade or so TVS will once again have only a few channels, but each will run miles deep, with content that can be viewed on demand. Netflix might be one such offering; Amazon another. Both firms are spending billions of dollars making and buying TV shows and films to sell directly to viewers to watch when they like, and on devices other than the box in the corner of the room. And other rich tech firms may join them.

It is this vision that is now driving the direction of television and media. Broadcasters are willing to pay more to show live sporting events, and to invest more in producing TV shows, to make their networks the must-see choice for viewers. This trend has spurred the largest-ever merger of a telecommunications company with a media firm. AT&T, America's wireless and pay-TV giant, announced on October 22nd an offer for Time Warner, the owner of HBO, CNN and Warner Brothers studio, worth $109bn. In doing so AT&T is betting that a few vertically integrated platforms will dominate the future of viewing. This huge deal follows the $30bn purchase in 2011 by Comcast, a cable-TV company, of NBC Universal.

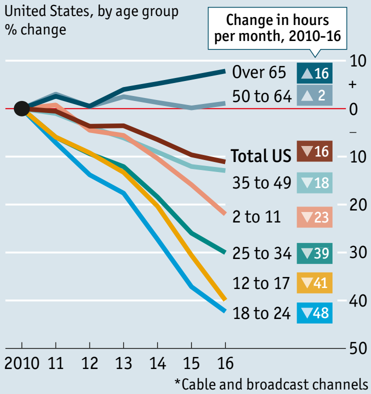
If approved, it would not be the last such merger. And the next buyers could be content companies buying distribution platforms. At 21st Century Fox, Rupert Murdoch might go after the rest of Sky, a British pay-TV firm, that he does not already own (Sky is a cheaper target with the fall of the pound). At Disney, Bob Iger mused recently about the need to reach consumers directly in an increasingly uncertain media landscape, leading many to speculate that he wants to buy Netflix, which has a market value of $54bn (almost one-third of Disney's). At present such a mammoth deal appears to be unlikely, but were it to happen it could trigger a bidding war with Apple and Google weighing in as well.

Off the box

Time spent watching traditional TV*

United States, by age group

% change



*Cable and broadcast channels (including time-shifted)

Sources: Nielsen; REDEF

Some analysts describe AT&T's strategy as diversification or empire-building, not integration. AT&T is the second-largest wireless carrier in America, behind Verizon Communications. Last year AT&T completed the $48.5bn purchase of DirecTV, a satellite provider, making the company the largest pay-TV distributor in America with 25m subscribers. The new deal adds the biggest available prize in film and television (as Disney is not for sale), with a vast library of films and TV shows including hits such as the "Dark Knight" movies and "Game of Thrones", besides multiple cable channels.

The backdrop to this is that Americans are watching 11% less television than six years ago, and those aged 12 to 24 see more than 40% less (see chart). In recent weeks a vital bulwark of pay-TV, live sports, has shown unusual weakness; ratings for American football have declined compared with a year ago. Last year traditional pay-TV lost more than 1m subscribers, about 1% of the total in America, as more viewers "cut the cord" to expensive cable and switched to streaming video services.

In the near term AT&T's business logic for buying Time Warner is not obvious. Cord-cutting will continue to put pressure on profit margins at the combined company, which will also become highly indebted. Nor will AT&T be able to offer Time Warner content exclusively to its customers. It will license it to as many distributors as possible to boost revenue—just as Time Warner does now. And AT&T will not be able to get that content at a lower price for DirecTV because clauses in pay-TV contracts prevent that and regulators would not permit it. Randall Stephenson, AT&T's chief executive, and Jeff Bewkes, Time ▸▸

Warner's boss (who would leave under the deal), argue that benefits will come from being able to target advertising better to viewers of Time Warner content, thanks to AT&T's knowledge of what people are watching. It is unclear how much that will help the bottom line.

Despite all that, regulators will be wary about AT&T wielding a competitive advantage from owning a combination of content, delivery and wireless spectrum (as well as broadband). In a display of the company's muscle, on October 25th Mr Stephenson announced that a new internet-streaming service in America, DirecTV NOW, will offer more than 100 TV channels (including Time Warner networks) for $35 a month, far cheaper than existing packages. Speaking at a conference in California, Mr Stephenson said he would not have been able to strike such a deal if he did not have DirecTV: "we cannot get the media companies to participate in this until we have scale." AT&T wireless customers will come off best as they will be able to stream the service without data charges. The Federal Communications Commission, a regulator, is already looking at AT&T and Verizon's practice of not charging mobile customers more to stream certain video content—called zero-rating. Mr Stephenson has said that the ability to drive down prices shows AT&T's big acquisitions are good for consumers. Trustbusters might see things differently.

Power from the pipes

Regulators will be extra cautious because of their experience with Comcast, the target of multiple complaints that it failed to abide by restrictions agreed as part of its purchase of NBC Universal. In 2015 antitrust authorities blocked Comcast's $45bn takeover of Time Warner Cable (which had previously been spun off from Time Warner). Craig Moffett of MoffettNathanson, a research firm, notes that a central concern in that case—how Comcast's control of broadband capacity could help the firm's vertically integrated structure discriminate against competitors like Netflix—would seem to apply to AT&T's combined market power in wireless, satellite and broadband. In addition politicians, sensitive to public perceptions that such mergers are bad for consumers, have raised concerns about the Time Warner transaction.

Mr Stephenson says his aim is to foster more competition—namely, to be a national competitor to the cable providers, each of whom have regional near-monopolies in broadband. The roll-out of 5G wireless technology in the coming years will, he reckons, also give consumers a mobile broadband option. In that sense AT&T is waging a bigger battle for the "primary customer relationship" in distributing video, as one senior media executive puts it. In order to command customers' loyalty and attention, premium content could in future be a valuable weapon in that fight.

Owning content might become more imperative as the multi-channel pay-TV system falls apart. Smaller TV networks and studios could be rolled into bigger ones. A recombination of CBS and Viacom would become more likely. Another Silicon Valley firm, like Apple, might jump into the production business as Netflix did, pouring billions more into programming.

In that world AT&T's purchase of Time Warner might then make more commercial sense. HBO NOW, the network's new streaming service, could be one of the standalone channels on that TV set of the future. Or perhaps there will be just a Time Warner service, combining everything that the group has to offer. But would that be worth the price AT&T has agreed to pay for it today? There is a reason Mr Bewkes and the Time Warner board took the offer at $107.50 a share, two years after rejecting a bid from Fox worth $85 a share. The future of TV may be blurry, but that is AT&T's problem now, not theirs. ■

Big tobacco

All fired up

A new deal points to broad changes for cigarette-makers

BIG Tobacco is about to get even bigger. On October 21st British American Tobacco (BAT) announced that it had bid $47bn for the 58% of Reynolds American that it does not already own. Though Brexit has weighed on some British companies, BAT is unencumbered, with most of its revenue earned overseas. Many investors expect the deal to go ahead, although BAT might need to puff up its offer. BAT would then become the world's largest tobacco company by sales and profits.

As in other volume businesses, like beer, some of the merger logic is simply to cut costs. With consolidation, BAT reckons its deal would generate $400m of annual savings. However, it also underscores two big, long-term changes for cigarette-makers.

Innovator at work

The first is that America has become an attractive market for tobacco firms and buying Reynolds, whose brands include Camel and Newport, is the easiest way for BAT to grow there. This is a reversal from the recent past. Not long ago America seemed stale and overrun by lawsuits, particularly compared with fast-growing economies. Cigarette firms quarantined their American businesses. In 2004 BAT sold Brown & Williamson, its American subsidiary, to R. J. Reynolds. That gave BAT its stake in the newly dubbed Reynolds American, but shielded the firm from belligerent lawyers. In 2008 Altria, another tobacco giant, split into two: Altria, which sells cigarettes in America, and Philip Morris International, which peddles tobacco elsewhere.

Cigarette-makers remain subject to a vast settlement reached with American states in 1998, but fears of huge class actions have proved overblown. "The damages they've had to pay in the cases they've lost—in the tobacco company context—have been very small," points out James Bushnell of Exane BNP Paribas, a stockbroker. Meanwhile other countries have become less hospitable. In Europe, for example, governments are demanding plain packaging devoid of even company logos.

The second change is potentially bigger. Tobacco firms are in fierce competition to come up with safer products, and buying Reynolds gives BAT more R&D clout and a larger portfolio of what the industry likes to call "reduced-risk" items, including e-cigarettes. These are a tiny but growing part of the market.

The race is on to come up with safer, more satisfying offerings. Philip Morris International, which spends nearly twice as much on research as BAT, reckons its new offering, IQOS, might add more than $1bn in profit by 2020. IQOS is a new type of e-cigarette, heating a tube of tobacco rather than a liquid. All this means more deals may be simmering: Bonnie Herzog of Wells Fargo, a bank, predicts that BAT's move will prompt Philip Morris to bid for its former parent, Altria.

Tata Group

Mistry exit

MUMBAI

India's biggest conglomerate unceremoniously sacks its boss

THERE have been only six chairmen of the Tata Group since it was founded in 1868. There will soon be a seventh after Cyrus Mistry, the first boss of the conglomerate not connected to the founding family, was ousted after less than four years in charge. Even though he undertook few of the reforms needed to bring vast swathes of the Tata empire to profitability, he will prove a difficult act to follow—not least because he has embarked on an extraordinary rampage against his old employer.

Mr Mistry might reasonably have expected to serve for a couple of decades at the helm of India's biggest group, with interests from IT to cars, hotels, salt, steel and much else besides. For a company with a culture of consensus, the abruptness of his sacking on October 24th—the board did not even give him the option of stepping down—is about as brutal as it comes. Many of the executives he hired have also been purged. Ratan Tata, his predecessor, will take over while a new boss is found.

The catalyst for the defenestration was the lack of performance at some of the group's big companies. Some felt Mr Mistry was doing too little to boost profits. Beyond Tata Consultancy Services, an IT firm, and Jaguar Land Rover, a maker of posh British cars Tata acquired in 2008, the conglomerate's 100 or so operating companies make lousy returns. Others felt, on the contrary, that the "tough love" Mr Mistry said was needed to whip the group into shape (though seldom applied) was unbefitting of a company with Tata's commitment to putting ethics before profits.

Overall Tata's financials—profits of around \$5bn on sales of \$108bn in 2015-16, and debt roughly the size of its equity—look just about right. But that is to misunderstand what is a complex investment company that often owns minority stakes in its operating companies rather than controlling them outright. Bits of the group, notably its steel and telecoms arms, are labouring under hefty debts even as other Tata companies are flush with cash.

Awkwardly, though Mr Mistry has been sacked from Tata's parent company, he remains the non-executive chairman of the largest operating entities. And he is not going down without a fight. Lawyers have been mobilised on all sides to contest or confirm his dismissal. At the very least, the board's manoeuvrings have dented Tata's reputation as a beacon of sound corporate governance in a country where other conglomerates pay the notion little more than lip service.

Shown the door

In a letter to the board of directors of Tata's main holding company, Mr Mistry is scathing about the firm's culture and ethics. Its hotels arm bought property at inflated prices and parked it in off-balance-sheet vehicles, he alleges, and faced hefty losses as Mr Mistry unwound the "flawed" strategy. The finance arm made loans, some of which seem to have soured, under the "strong advice" of higher-ups. Tata Motors deferred losses using "aggressive accounting". An airline joint venture created "ethical concerns" over transactions worth millions of dollars. Spokespeople for Tata did not respond to calls for comment. The letter includes a claim that write-downs of 1.18trn rupees (\$18bn) may be warranted. Among the biggest losers of the ruckus will be Mr Mistry's own family, who own nearly a fifth of the parent company.

His rearguard action will prove a distraction for Mr Tata, whom the ousted man described as a "lame duck". Mr Tata, the revered elder statesman of Indian business, is a steady interim hand on the tiller. But his return will confirm suspicions Mr Mistry was never fully in charge.

Finding a replacement for Mr Mistry will be tricky. There are no obvious Tatas angling to take over. Few outsiders will agree to serve if they feel their decisions will be second-guessed by the man whose name is on the door. The group's decentralised structure in any case means the bosses of its operating companies have no experience outside their particular silos. Tata's relentless expansion into everything from watches to undersea cables, property, tea and finance, among many other businesses, makes the group very unwieldy, if not entirely unmanageable. The need for reform has not gone away with the man who failed to make it happen. ■

Companies' dark pasts

Ghosts in the machine

A Dutch case suggests firms should face up to horrible stains on their history

"WE THOUGHT we knew our story, and we knew it wasn't great," says Maurice Brenninkmeijer, chairman of COFRA Holding, which owns C&A, a 175-year-old Dutch clothing retailer with over 2,000 stores globally. Yet the full account of how the German branch of his family behaved in the second world war "tore through your heart when you heard it", he adds. Mr Brenninkmeijer's ancestors—considered to be genial, virtuous, Catholic and reserved—turned out to have been avid Nazi collaborators. Old letters revealed cosy, corrupt, ties to Hermann Goering. From 1942 onwards C&A and Siemens, a German engineering firm, together exploited forced Eastern European labourers in Germany, keeping them in such a wretched state that malnutrition killed several women and children. C&A profited from "Aryanisation", grabbing business and property from terrified Jewish owners. Perhaps worst, it used Jewish tailors and leatherworkers, corralled in Lodz, a dreadful ghetto in Poland. Of some 200,000 people trapped in inhumane conditions there, only 1,000 survived to liberation.

Such grim details are now public thanks to Mark Spoerer, a historian in Regensburg who specialises in archival research to assess companies' dark pasts, putting "immoral business behaviour" into historical context. Remarkably, his new book "C&A: A family business in Germany, the Netherlands and the United Kingdom 1911-1961", was commissioned by the notoriously reclusive family. Mr Spoerer, over five years and with generous funds, was given unrestricted access to private files, conducted interviews freely and had the right to publish all he found.

Being low-profile went from being something worthy, to something strange, and now suspect, says Mr Brenninkmeijer, in a rare interview. Though some relatives were said to be reluctant to confront old horrors, he says all now agree on the need for a sort of corporate therapy, "so we have an understanding of our history, not as a burden but as a platform". This, he says, helps the family get a deeper sense of itself. A core of 30 family members are active owners and managers of the firm; around 1,300 Brenninkmeijers form an outer circle.

It is rare for a company to confront an ugly past so openly, especially as C&A faced no looming pressure from victims' relatives, journalists or other outsiders. Firms are most likely to do so if they have a ▸▸

strong international presence and deal directly with consumers, says Mr Spoerer. Another corporate historian, Lutz Budrass, assessed 100 companies that thrived in Germany in 1938 and still exist in some form today. He suggests that only 30 have yet organised a serious scholarly assessment of their wartime activities, while 40 have done nothing at all, including five companies which, he says, "were very heavily involved" in Nazi crimes.

He points to Deutsche Post, a successor of Reichspost, and much of the German steel industry as particularly hostile to the idea of exploring their pasts. Siemens has made only partial efforts to assess its wartime role. In the car industry, Volkswagen, BMW and Daimler have owned up to their intimately close associations with Nazis, but other firms have not. Mr Budrass is especially dismissive of German aircraft companies. He was commissioned in 2002 by Lufthansa to write part of its 75th anniversary, especially in explaining its use of 8,000 forced labourers in 1944. But the firm refused to publish it, acceding only this year once Mr Budrass brought out a separate book on the airline's past. He also argues that Airbus, the European aircraft-manufacturing group which incorporated old entities including Messerschmitt (one of the largest users of concentration-camp labour), is "trapped by fear of its past" in failing to commission a proper history.

How cleansing is the sunshine?

Perhaps it is not irrational for firms to shy away from difficult memories. And German firms are more transparent than most. Some 6,000 companies and the German state contributed to a €5.1bn ($4.5bn) fund created in 2000 to compensate victims of forced labour. By contrast, it took until 2014 for foreign relatives of holocaust victims transported by SNCF, the French railway, to be allowed to seek compensation from the state. Many Japanese firms can trace their histories back to wartime exploits, including the use of slave labour, but are far less likely to assess what went on than German ones. Similarly it is rare for American financial firms to admit to profiting from businesses related to slavery in the mid-19th century, as Aetna and JPMorgan Chase have. Nor is there any serious discussion to suggest firms which made money in apartheid South Africa should today offer compensation.

Mr Brenninkmeijer and the historians say that understanding the past brings deeper strengths—virtues that can help the business today. Finding out the whole story can be liberating and "helps you understand who you are", he says. The boss of C&A is preparing for members of the sixth generation of his family to run the private firm and wants them to learn how to hold serious discussions of ethical dilemmas, citing as an example his own worry over the firm's high consumer-credit charges in Brazil in the early 1990s.

He argues, too, that managers must give more thought to their supply chain, as in Bangladesh where 30% of the firm's goods are made, and consider how best to assess whether child labour or dangerous conditions exist; in 2012 a fire in a Dhaka factory supplying Western firms, including C&A, killed 117 people. If Mr Brenninkmeijer is right, then instead of worrying about skeletons in the cupboard, a firm that squarely faces up to its yesterdays should learn how to behave better today. ■

Brazilian business

Out of the gloom

Confidence grows with a stand-in leader at the helm

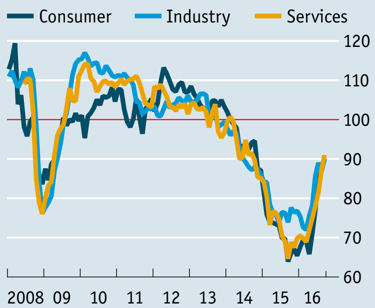
"BRAZIL is back in business," proclaimed Abílio Diniz, chairman of BRF, a Brazilian pork and poultry giant, at a recent investor shindig. Really? The economy, mired in recession since mid-2014, is not expected to stir before the end of the year—and then only sluggishly. After rebounding in the first half of 2016, industrial production plummeted again in August. Retail sales fell by more than forecast. Firms expect to hire just 100,000 temporary workers in the run-up to Christmas, 3% fewer than last year's already low tally. BRF's own domestic operations are hardly a picture of health. Sales dropped by 5% in the second quarter, year on year (though this was offset by rising global revenues).

For all that, Mr Diniz is not alone in his optimism. Surveys point to rising confidence among bosses and consumers alike (see chart). Investors' spirits are up—and with them the São Paulo stockmarket, which has returned to levels last seen in 2012. The real has strengthened by a third against the dollar since January.

Looking brighter

Brazil, future expectations indices

2011-15 average=100



Source: IBRE

The collective mood swing has less to do with the real economy, and more with realpolitik. In August the left-wing president, Dilma Rousseff, was impeached, ending months of uncertainty. Her pragmatic deputy, Michel Temer, will serve out the remaining 26 months of her term.

Brazil Inc wasn't always anti-Rousseff. When she came to office in 2011 and lavished cheap credit and tax breaks on firms, bosses did not complain. They rebelled when her constant meddling first distorted, then crippled, the economy.

The Temer government looks both more fiscally responsible than its predecessor, and more responsive to businesses' concerns. Bosses gush about easy access to ministers, even the president himself. They applaud the administration's commitment to narrow the confidence-sapping budget deficit, which exploded to 10% of GDP on Ms Rousseff's watch. Mr Diniz's remarks came after Mr Temer's proposed constitutional amendment to freeze government expenditures in real terms for 20 years handily cleared the first of four congressional votes. It passed the second on October 25th. A complementary reform to over-generous public pensions is in the works.

A promise of fiscal rectitude has helped dampen inflation expectations, allowing the central bank to cut interest rates for the first time in four years on October 19th, from 14.25% to 14%. Further cuts to Brazil's high rates—the number-one bugbear of many a Brazilian boss—are expected. So too are other market-friendly measures, such as easing onerous local-content requirements for some industries and enlisting the private sector to build and run roads, ports and airports.

Still, notes Carlos de Freitas of the National Confederation of Commerce, a lobby group, "The real economy does not live on expectations alone". For business to thrive, bosses never tire of repeating, Brazil must also tackle assorted structural deficiencies. Besides costly credit, perennial grumbles include shoddy infrastructure, unskilled workers, convoluted taxes, rigid labour laws and Byzantine bureaucracy.

Some take matters into their own hands. Daimler, a German carmaker, teaches English to technicians so that they can read technical manuals. Fed up with waiting for Rio de Janeiro's municipal government to build a promised access road to its research centre, General Electric paid for it to be paved. Singaporean shareholders of Aegea, a water utility, could not understand why a firm with revenues of 795m reais needed a private jet—until Hamilton Amadeo, its boss, showed them it was cheaper than relying on commercial flights and cars once the cost of executives' lost time was added in.

Most companies cannot afford language classes, let alone jets. All abhor red tape. In the office of Guilherme Afif, chairman of SEBRAE, a group for small businesses, a printout of all the rules even tiny firms must obey takes up fully five metres of shelf space. The average Brazilian corporation spends 2,600 man-hours annually complying with the tax code, ten times the global figure (see page 81).

For decades, fixing these gripes has eluded even popular presidents. Mr Temer isn't one, at least outside business circles. Some bosses urge him to undertake tough, early action. Others reckon that an all-out assault on workers' rights or states' tax-raising powers do not behove a president who lacks the legitimacy of an elected leader. Better to stick with emergency fiscal measures and leave deeper reforms to his successor. Many would be content with stopgaps: a law to make outsourcing easier, say, rather than an overhaul of the sacrosanct labour code dating back to 1943.

In the meantime, euphoria over Ms Rousseff's exit is tempered with caution. A tractor-maker in the southern state of Santa Catarina could use an extra 50 staff, its boss admits. But he is loth to hire, lest Mr Temer stumbles and confidence evaporates. "We are hoping for the best," echoes the boss of a big education provider who has also ordered a hiring freeze. "But we are planning for the worst." ■

The sharing economy

Deflating Airbnb

New rules are a hitch for Airbnb in New York and beyond

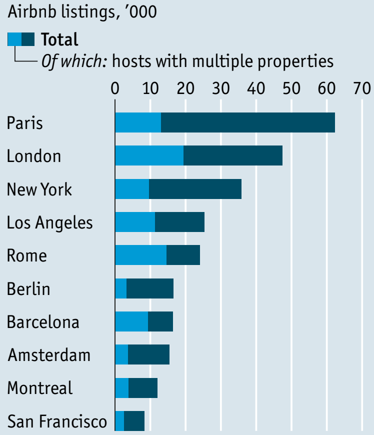
IN 2007, Brian Chesky and Joe Gebbia came up with a wheeze to rent out two air beds in their San Francisco apartment, because a conference had left the local hotels full-to-overflowing. Thus, Airbed & Breakfast was born. Since then, the firm's only contraction has been its name. Today, Airbnb's website lists over 2m properties for short-term let in 191 countries. Piper Jaffray, an investment bank, estimates that bookings through the firm will reach $14.4bn in 2016, compared with $52m in 2010. Analysts think the upstart might fetch $30bn were it to be taken public. That would make Airbnb worth more than Marriott, the world's largest hotel chain.

But legislation signed in New York state on October 21st has taken some of the puff out of Airbnb's mattress. New York City is the firm's largest market in America, with around 35,000 properties available for rent. But many of the hosts offer their apartments illegally. In 2010, the state passed a law banning rentals of whole units in residential blocks for less than 30 days. (It is legal to do so if the tenant is living there at the same time.) To encourage people to comply, Andrew Cuomo, the state governor, approved fines for those who flout the rules of $1,000 for a first offence, rising to $7,500 for recidivists.

The bill will severely limit Airbnb's ability to operate in the city. At issue is the way that its business model has evolved. The firm was conceived as a marketplace to rent a spare room to tourists. Entrepreneurs, however, quickly spied a more lucrative opportunity: acquiring a portfolio of empty properties and offering them as a direct, often cheaper, competitor to hotels. According to data gathered by Tom Slee, author of "What's Yours Is Mine", a book on the sharing economy, 27% of Airbnb listings in New York are offered by people who own multiple properties (see chart).

One room or three?

Airbnb listings, '000



Sources: Company reports; Tom Slee

Locals complain that Airbnb guests, filled with the holiday spirit, can be noisy and inconsiderate neighbours. Worse, they say that as apartments are scooped up by investors to be rented out on a short-term basis, residents are forced out of town. Arun Sundararajan, a professor at New York University and author of "The Sharing Economy", thinks this idea is overplayed. Pressure on housing stock in New York, he says, is affected more by population increase and rent controls than sharing-economy rentals. But not everyone agrees. According to Mr Slee, while Airbnb may indeed have a limited impact on a city in aggregate, for those who live in neighbourhoods that become Airbnb hotspots such effects are all too real.

Still, some worry that Mr Cuomo has bowed to pressure from powerful vested interests, including hotel lobbyists and unions. The occupancy rate in New York's hotels is close to 90%, among the highest in the country. Limited supply means premium prices and such advantages are jealously guarded. A study commissioned by the Hotel Association of New York found that people switching to Airbnb will directly cost its members around $780m in the city in 2016. It projects that by 2018 that will rise to over $1bn a year. Professional Airbnb hosts, say industry groups, should be classed as hoteliers, pay taxes as such and comply with the relevant health and safety regulations.

Airbnb is challenging the state law on the grounds that, as an online marketplace, it is not responsible for the content that others place on its site. (The state counters it is going after the hosts, not the site.) The firm has a good case, reckons Mr Sundararajan. Firms such as YouTube and Facebook have already invoked such a defence successfully. But perhaps the greater danger is that other cities will feel emboldened to craft their own restrictions. Last year Airbnb agreed to require people in San Francisco who rent out their entire homes to register with the city, and to cap the number who can do so. But when few hosts signed up, the city decided to apply more pressure, with fines of $1,000 a day for each unregistered San Francisco host on the site.

Europe has acquired a similar taste for regulation. Earlier this year, Berlin banned most short-term apartment lettings in response to a dearth of residential housing and the unsociable behaviour of lessees. Hosts flouting the rules face a €100,000 ($109,000) fine. (As with New York, those renting out a portion of their own apartments are unaffected.) According to Mr Slee's data, the proportion of serial hosts in Berlin listing on Airbnb has fallen from 36% in 2014 to 20% today.

In Barcelona, meanwhile, authorities have threatened to fine the firm €600,000 for such illegal listings and required hosts to obtain a licence. Ada Colau, the city's mayor, was elected after promising to rein in holiday rentals. Not all cities see Airbnb as a curse. London, which has some 47,000 Airbnb-listed properties, has talked up the advantages of encouraging sharing-economy accommodation, particularly for its unfashionable outer boroughs where few hotel tourists ever venture. ■

No rules broken here

Schumpeter | Jail bait

The lock-'em-up mentality for white-collar crime is misguided

ONE thing right-wing populists and left-wing progressives can agree on is that society is too soft on white-collar crime. Conservatives abandon their admiration for business when it comes to "crooked bankers". Left-wingers forget their qualms if locking up "corporate evil-doers". Hillary Clinton's line that "there should be no bank too big to fail but no individual too big to jail" would go down equally well at a Donald Trump rally.

But is society really soft on corporate wrongdoing? And would locking up bankers and businessmen and throwing away the key really solve any problems? Two new books try to inject reason and evidence into a discussion more commonly driven by emotion and hearsay: "Why They Do It: Inside the Mind of the White Collar Criminal" by Eugene Soltes, of Harvard Business School, and "Capital Offenses: Business Crime and Punishment in America's Corporate Age" by Samuel Buell, the lead prosecutor in the Enron case, who now teaches at Duke University.

Messrs Soltes and Buell both demonstrate that America is getting tougher on business crime. Between 2002 and 2007 federal prosecutors convicted more than 200 chief executives, 50 chief financial officers and 120 vice-presidents. Those at the heart of two big corporate scandals in 2001 and 2002 received harsh treatment: Bernard Ebbers, WorldCom's chief executive was sentenced to more than 20 years without the possibility of parole—the equivalent of a sentence for murder in many states—and Kenneth Lay, Enron's former boss, died awaiting sentence. Between 1996 and 2011 the mean fraud sentence in federal courts nearly doubled, from just over a year to almost two years, as the average sentence for all federal crimes dropped from 50 months to 43.

America is constantly giving way to the temptation to punish white-collar criminals more severely: the Sarbanes-Oxley act (2002) and the Dodd-Frank bill (2010) both include measures designed to punish corporate types more severely. Other countries are moving in the same direction. In South Korea, Cho Hyun-ah, the daughter of the chairman of Korean Air, was imprisoned for a year for delaying the departure of a plane because she didn't like the way a plate of nuts was served. In Oman, Adel al-Raisi, the boss of a state-owned oil company, was sentenced to 23 years in prison for accepting bribes. In 2012 Carmelo Aured, a Spanish developer, was fully prepared to pay a fine for evading about €1m ($1.1m) in taxes but was sentenced to three-and-a-half years in prison. The global war on white-collar crime is giving rise to a new global industry: advisers such as Wall Street Prison Consultants and Executive Prison Consultants specialise in helping white-collar criminals adjust to life behind bars.

Prosecutorial zeal does not always result in convictions, but that is because prosecutors face some difficult trade-offs—including respecting the rights of some of the world's most unpopular people. Mr Buell points out that America's Department of Justice could have bowed to popular pressure by prosecuting senior bankers for selling mortgage-backed securities and the like. But this would have been foolish: the products were perfectly legal (if unwise) and the people doing the buying were just as well-informed as the people doing the selling. The DOJ could bring far more individual prosecutions. But most corporate crime is the result of collective action rather than individual wrongdoing—long chains of command that send (often half-understood) instructions, or corporate cultures that encourage individuals to take risky actions. The authorities have rightly adjusted to this reality by increasingly prosecuting companies rather than going after individual miscreants.

Prosecuting firms may not have the smack of justice that populists crave: you can't imprison a company, let alone force it to do a humiliating "perp walk"—being paraded in handcuffs in public. And the people who end up paying the fines are shareholders rather than the executives or employees who actually engaged in the misconduct. But it saves the taxpayer a great deal of money: the DOJ routinely asks firms to investigate themselves on pain of more serious punishment if they fail to do so. It also advances the cause of reform, if not retribution: companies are routinely required to fix their cultures and adjust their incentive systems.

'Allo, 'allo

Populists like to think that there is a bright line between right and wrong: overstep it and you should go directly to jail. But a great deal of wealth-creation takes place in the grey area between what is legal and questionable. Some of the world's greatest business people have overstepped the mark. Bill Gates was hauled up before the authorities at Harvard University when he was a student for using computers without permission. Steve Jobs participated in backdating stock option-based compensation at Apple, including his own, in order to inflate the options' value. Some of the world's most admired firms specialise in applying new technologies to markets that are governed by outdated regulations: Uber in transportation and Airbnb in accommodation are engaged in frequent legal battles with regulators. But both companies are clearly advancing the common good by offering services that people want and forcing judges to modify outdated rules.

The strongest populist argument is about double standards: it is wrong to let the rich get away with a slap on the wrist while poor youths are put in prison for possessing an ounce of cocaine. Messrs Soltes and Buell have clearly demonstrated that the rich aren't getting away with a slap. But even if they were, this would argue for reforming criminal law for the poor rather than extending the lock-'em-up mentality to the rich. Society should by all means punish white-collar criminals if they have obviously committed crimes and imposed harm. But it should resist the temptation to criminalise new businesses testing the rules. And it should certainly resist the temptation to single people out for harsh punishment simply because they are rich and successful. ■

Also in this section

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Investment banking

Rebooting

PALO ALTO, CALIFORNIA

Both revered and reviled, Goldman Sachs struggles to stay relevant

JUST outside Stanford University's campus sits the headquarters of Symphony, one of the myriad tech companies that sprout like weeds in Silicon Valley. After a lunch break exercising in a nearby park, a dozen fit-looking employees, still in workout clothes, help themselves from buckets of fruit, energy bars and the food of the day (Indian), before plopping themselves in front of monitors in an airy room bathed in natural light. For the sought-after engineers making up most of the company's 200-strong workforce, this sort of environment is the norm. Work is supposed to be healthy and relaxed—a far cry from the terrors of a New York bank with its incessant pressure to sell and complex internal politics, not to mention often unappetising, pricey food.

Across the continent, in a newly opened tower within the World Trade Centre, Kensho, a three-year-old company, has a similar feel. Like Symphony but a bit smaller, it is stuffed with talented engineers. In a New York approximation of the West Coast, it boasts "vertical gardens"—rectangular patches of vegetation like framed paintings—and a pool table.

Symphony is a messaging platform, owned by a consortium of investment firms. It offers a critical function at present almost monopolised by Bloomberg: the seamless incorporation of data and communication that makes the terminal the most important conduit in finance since Wall Street went from thoroughfare to metaphor. Kensho screens vast amounts of information—speeches, earnings, earthquakes and on and on—to help investors find correlations among all these data that might move prices.

If the two companies succeed—a big if—their products could become pervasive. They are tiny entities with vast potential. And they are examples of technology firms backed and used by Goldman Sachs, a big investment bank, in its efforts to transform itself, and indeed its industry, at a time when its core business is being pummelled by technology and regulation.

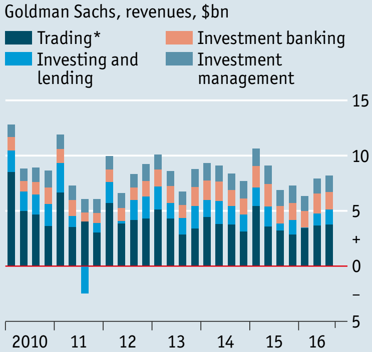
In 2014 Goldman spun out a messaging technology developed internally as a new company, Symphony. Kensho was formed with backing from Goldman in 2013. Early on, the investment bank had a contractual right to be the sole user of its products among brokers. Goldman continues to be the only outside investor with voting rights on the company's board, but many other banks have taken stakes in it and are customers.

It is possible that these two companies will provide little benefit to Goldman. Cynics are entitled to wonder whether these and similar efforts are merely a way of putting a modern veneer on an old structure. Tech companies are fashionable and widely perceived as helpful; banks are unfashionable and seen as parasitic. The non-cynical take is that Goldman understands that answers to the challenges it faces will have to come, at least in part, from outside its mirrored-glass headquarters in downtown Manhattan. It may have many flaws; a failure to grasp corporate vulnerability is not among them.

Goldman, with its enormous influence, lavish compensation and alumni network in pivotal political roles looks anything but embattled. But the firm—derisively dubbed a "great vampire squid" by *Rolling Stone* magazine—is in the process of seeing its tentacles severed.

Ficcle and falling

Goldman Sachs, revenues, $bn



Source: Rafferty Capital Markets

*Includes equities and fixed-income instruments, currencies, and commodities (FICC)

Lost prop

Since 2009 revenues have dropped by a quarter; they remain below where they stood a decade ago (see chart). Even in a good quarter, such as the one just completed, its return on equity barely exceeds single digits. "Principal transactions", ie, proprietary trading and investments, produced $25bn in revenues in 2009 and $18bn in 2010 but only $5bn in 2015. The decline is a result of new rules that limit these activities—and regulators threaten more. ▸▸

Fixed income, commodities and currency (FICC), the once immensely lucrative niche that nurtured the careers of Goldman's chief executive, Lloyd Blankfein, and its president, Gary Cohn, has also been hit hard. Revenues reached $22bn in 2009. In the first three quarters of this year they totalled $5.6bn.

Richard Bove, an analyst at Rafferty Capital Markets, concludes Goldman has just one superb business left among its distinct parts: its traditional niche of providing advice on important transactions, notably mergers. Goldman remains the global leader, despite having missed out on a role in the year's biggest proposed deal—AT&T's attempt to take over Time Warner. Even its M&A business is in some difficulty—as exemplified by its big cutbacks in Asia, where governments in China and elsewhere still favour local institutions. Goldman also has a good business in wealth-management, which thrives on sophisticated schmoozing and does not require much capital.

Its other businesses, which collectively still account for about 60% of revenues, face unrelenting pressure from regulatory and technological change. None of this is unique to Goldman. A recent survey of 35 global investment banks by the Boston Consulting Group implied a long-term, industry-wide contraction: over the past five years, revenues have declined by 20%, return on equity has slipped from an inadequate 9% to 6%, and almost every business area has shrunk, with the exception of the advisory work that represents only about one-tenth of the overall pie.

Regulators want investment banks to reduce risk, and to do so by cutting out businesses that directly support their own returns as opposed to those of clients. That means they cannot hold large inventories of securities, must reduce proprietary trad-

Buttonwood | No Trumps!

For once, Wall Street does not favour the Republican candidate

TRADITION suggests that Wall Street should favour the Republican Party. America's conservatives usually back low taxes, free trade and a reduction in regulation. But the 2016 election seems to be an exception. A Bank of America Merrill Lynch poll of fund managers in October found that a Republican victory was seen as one of the biggest risks facing financial markets, along with the disintegration of the EU.

A study* by Justin Wolfers of the University of Michigan and Eric Zitzewitz of Dartmouth College found that in the wake of the first debate, there was a six-percentage-point rise in the probability of a Hillary Clinton victory on betting markets. In reaction, stockmarkets rose, and gold and Treasury bonds (two assets that benefit when investors become risk-averse) fell. "Financial markets expect a generally healthier domestic and international economy under a President Clinton than under a President Trump," the authors concluded.

What makes this election different for investors is the nature of the Republican candidate—Donald Trump is a long way from the party's mainstream. A Trump victory would throw up all kinds of uncertainty about the likely tone of economic and foreign policy. It is not just that the candidate's pronouncements have been vague and inconsistent; he has not surrounded himself with the kind of mainstream policy advisers that backed past candidates such as Mitt Romney or John McCain. "This will be totally uncharted territory," says Mitchell Harris, chief executive of the investment-management arm of BNY Mellon.

A range of issues causes investors concern. On trade, Mr Trump's threats to tear up the North American Free Trade Agreement and to take a more aggressive line

with China risk economic disruption, as does his policy on the deportation of illegal immigrants. Then there is his desire to walk away from (or at least renegotiate) some of America's defence alliances—an approach that would heighten geopolitical risk. Another worry is his attitude towards Janet Yellen, the chairwoman of the Federal Reserve. Mr Trump has said that Ms Yellen should be "ashamed" of her low-rate policy, implying he would appoint a more hawkish candidate when her term expires in January 2018, or perhaps even earlier. Investors would welcome neither aggressive Fed tightening nor any sense that central-bank independence was under threat. All of these factors would affect global, not just American, financial markets.

The risks are not all on the Trump side. A Democratic sweep in which the party controlled the White House, Senate and the House of Representatives would also be seen as a negative for the markets. It would strengthen the hands of those on the left of the party, such as Bernie Sanders and Elizabeth Warren, who would promote higher taxes and greater regulation.

The least worst result, from a market point of view, would be a win by Mrs Clinton, with the Republicans still controlling the House. Kate Moore of BlackRock, a fund-management group, says that a split government is seen as good for business. Such an outcome might even result in a modest fiscal stimulus, something that the markets would welcome.

As Michael Zezas, an analyst at Morgan Stanley, points out, the candidates have some common ground on corporate taxation—favouring proposals designed to make companies repatriate overseas earnings and to limit the tax deductibility of interest payments, for example. That suggests it might be possible for President Clinton to do a deal with House Republicans, trading lower tax rates for the elimination of deductions. When she was a senator, Mrs Clinton was seen as someone who was willing to co-operate with the opposing party.

A final oddity of this election is that Mr Trump is seen as a populist champion for the common man, even though he plans to cut taxes for the rich and raise prices for the poor (assuming he pushes through tariffs on goods from China, as he has threatened). In contrast, Mrs Clinton has been painted as the Wall Street candidate even though she plans to raise the top rate of income tax and tighten the tax treatment of capital gains. In many ways, indeed, her agenda resembles that of a traditional Democrat. That makes it all the more telling that the financial markets have so little enthusiasm for a Trump victory. This is a an electoral choice investors would rather not have to make.

*What do financial markets think of the 2016 election? https://www.brookings.edu/research/what-do--financial-markets-think-of-the-2016-election/

Economist.com/blogs/buttonwood

ing and must take on ever more capital (diluting returns). They should, in short, be intermediaries.

But that intermediary role is also under attack. Big fixed-income investors say they can underwrite many debt offerings directly. Fewer companies want to issue public shares. New competition has emerged in the shape of more than 300 "fintech" companies, a broad term for entities using technology to do what existing banks do with more people and at higher cost.

Monetary stimulus

So far-reaching are these changes that it is surprising bank revenues have not fallen further. The most common explanation is that repressed interest rates have stimulated many borrowers to refinance their debt more cheaply. If so the positive news will be transitory; the pressures will endure.

In deference to these trends, Goldman describes its strengths in terms of characteristics—superior contacts and execution—rather than specific franchises (which may be imperilled). That provides a framework for four intertwined strategies.

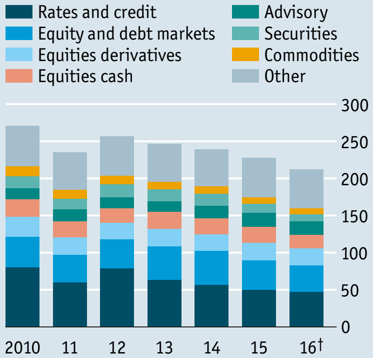
The first involves collaborative efforts or strategic investments that gave rise to Symphony, Kensho and a number of similar ventures. "Orbit", for example, is a suite of smartphone apps Goldman developed that enable e-mailing, browsing and file-saving within an environment controlled by an employer (and thus accessible by a regulator). It was spun off last October to another publicly traded company, Synchronoss, in exchange for a minority stake. Such ventures are more valuable if used more broadly than just by Goldman. If it had retained control, potential customers might be unwilling to allow a competitor access to sensitive information.

The second prong is automation. Not all that long ago, 600 people worked on a vast floor trading shares. Traders yelled and phones were slammed (though perhaps with more decorum at blue-blooded Goldman than elsewhere). Obscured by the din were 66 distinct actions, many of them amenable to mechanisation. Now, Goldman has two people who trade equities and another 200 software engineers who work on systems that, in effect, do the job on their own. Traditional investment-banking is ripe for change as well. Goldman has mapped each of the 146 steps of an initial public offering in 51 charts that appear in proper sequence on a five-foot long roll-out. Costly, redundant steps are being cut or, once again, automated.

The next big change is in the bank's sources of funds and its lending. Goldman pays just under 5% interest on its long-term debt, the most stable component of its funding. Its competitors, JPMorgan Chase and Bank of America, pay a fraction of one per cent on trillions of dollars of government-insured deposits. It is not feasible for

Almost all bad

Investment-banking revenues from capital markets*, worldwide, $bn



Source: Boston Consulting Group *35 banks †Forecast

Goldman to open branches. Nor, these days, is it necessary. In April, it acquired GE's internet bank with $16bn in savings accounts, on which it pays an average of 1% in annual interest.

On October 13th, as expected, it launched an online lending arm to match, named Marcus after the firm's founding Goldman. Clients will pay from 6% to 23% a year for loans of up to $30,000, to be used to repay more expensive credit-card debt. The clients are those huddled masses previously not affluent enough to afford a human Goldman account-manager, but now, apparently, an attractive market for a Goldman machine.

And that leads to the fourth change—in how Goldman interacts with clients. Not long ago, it was almost entirely through phone-calls, e-mails, electronic orders and presentations delivered in person. Now, a client portal named "Marquee" gives access to tools such as Goldman's risk analytics for trading shares or arranging hedges (named "Studio") or for corporate clients to create strategies for executing large share buy-backs ("Athena").

Behind the paywall

Among the largest challenges for this effort at reinvention is how to charge. The old methods—large fees on deals, commissions on trades, extraction of spreads (often in opaque ways) between the price paid by buyers and that received by sellers, the use of information gained in transactions for proprietary trades—are somewhat compromised. Clients know too much and can do too much on their own. New methods are being considered, such as a fee based on the number of employees at a firm, or number of users, or some form of subscription-based remuneration.

The change in environment is accompanied by a change in the Goldman kind of person. One-quarter of its employees now have a background in some facet of technology, be it a degree in mathematics, engineering, computer science or the like. That is up from 5% not long ago (a number it believes is still common for other banks). And the number of internal engineers underestimates the change since it does not include outside investments, such as Symphony and Kensho.

Perhaps the oddest aspect of this transformation is how little evidence exists of a payoff. Athena, the firm says, has been used in many share buy-backs. Another tool named "Simon" is widely used by customers who want to create customised "structured notes", or debt instruments. Kensho is profitable. Symphony has many adopters. But it is early days and in many ways these are just experiments.

Further transformation is still to come and if, as seems probable, it enhances efficiency, then the Goldman of the future may do as much as it does now with far fewer people and smaller costs. In the past, Goldman's rise to the pinnacle of the investment-banking stack was a consequence of besting its rivals. The challenge now is less from them than from a difficult external economic, technological and regulatory environment. As for every other bank, change is not a matter of choice. ■

Digital money

Known unknown

Another crypto-currency is born

COMPETITION between currencies is the stuff libertarian dreams are made on—and central bankers' nightmares too. Already digital monies, in particular Bitcoin and Ethereum, are rivals. On October 28th a new crypto-currency will join the fray: zcash. Many such "altcoins" are dubious affairs and don't add much. But this one brings important innovations.

zcash is based on Bitcoin's code, but its creators, a bunch of cryptography researchers, have tweaked it. The new digital cash is minted more quickly and the system can handle more transactions. This makes for more liquidity and shorter transaction times, says Zooko Wilcox, who leads the project.

The newcomer also differs in the way it is governed. The incumbent started—and is still run—as an open-source project: a small group of volunteer developers decides which changes are made. zcash's code is also open-source, but its inventors have formed a company and accepted money from investors. In addition, 10% of the 21m coins to be issued are earmarked for founders, investors, employees and a putative zcash foundation. All this, says Mr Wilcox, is to align incentives for all involved, allow the firm to hire a great team and enable quicker decisions—all problems for Bitcoin.

Yet the biggest step forward is confidentiality. Bitcoin obscures the identity of currency owners, but the "blockchain", the ledger that keeps track of all the coins, is open and can be analysed to see the flows of funds. This is a serious barrier for banks: blockchains could reveal their trading strategies and information about their customers. zcash, by contrast, shields transactions from prying eyes with a scheme based on "zero-knowledge proofs" (hence the "z" in its name). These are cryptographic protocols proving that a statement (who owns coins, for instance) is true without revealing any other information (how many and where the money came from). And it is by selling this technology—called "zk-SNARK" (don't ask)—to banks that zcash, the company, wants to earn its keep.

This sounds promising, but zcash, the currency, may not be able to give incumbents much of a run for their money. After a governance crisis, the Bitcoin community thinks it has found a way to increase the system's capacity (which has reached its limit: many transactions are being delayed). And Ethereum, whose claim to fame is to enable "smart contracts", has recovered after one of these self-executing business agreements, a venture fund called the DAO, went terribly wrong (although other crises have erupted since).

But crypto-currencies are not only competitors. They represent different trade-offs between security, complexity, performance, cost and other factors, so each is likely to find its niche. They are also a case of co-operation: since their software is open-source, developers can easily learn and copy from each other. If zcash's zero-knowledge scheme works, it may one day become part of Bitcoin. And some coders are working on ways to connect different blockchains. One day, perhaps, the collaboration will give rise to an ÜberCoin that floats across all blockchains—which would cheer up some central bankers. ■

Asian deflation

Steel trap

SHANGHAI

Producer prices perk up in Asia

BESIDES being dirty and dangerous, making steel in China has been a good way to burn through money over the past few years. But in recent months, the fires from the country's blast-furnaces have started to emit the warm glow of profits. Steel prices have risen by nearly 50% this year. Production, which fell in 2015 for the first time in decades, is also up. Smelters are set for a strong recovery after losing $10bn last year. And it is not just the steelmakers who will be pleased. Asia's central bankers can also take some comfort in the rising prices: they suggest that the threat of deflation might be receding.

Once seen in Asia as a peculiarly Japanese phenomenon, deflation spread throughout the region's factories in the past half-decade. The prices that consumers see in shops have on the whole continued to increase, albeit more gently than before. But the prices that companies charge for goods as they leave their factories' gates have dipped lower and lower. Virtually all big Asian economies, including South Korea, India, the Philippines, Taiwan and Thailand, have experienced prolonged bouts of falling producer prices.

China, the biggest economy and the centre of the deflationary spiral, recorded ▸▸

China's growth

The greatest moderation

Has any country ever grown as repetitively as China?

ON OCTOBER 19th China reported that its economy grew by 6.7% in the third quarter. It would have been an unsurprising, reassuring headline, except that China had reported exactly the same figure for the previous quarter—and for the quarter before that. This freakish consistency invited the scorn of China's many "data doubters", who have long argued that it fudges its figures. China has expanded at the same pace from one quarter to the next on numerous occasions. But it has never before claimed to grow at exactly the same rate for three quarters in a row.

Has anywhere? This growth "three-peat" is not entirely without precedent. Seven other countries have reported the same growth rate for three quarters in a row, according to a database spanning 83 countries since 1993, compiled by the Economist Intelligence Unit, our sister company. The list includes emerging economies like Brazil, Croatia, Indonesia, Malaysia and Vietnam, but also two mature economies: Austria and Spain. Indeed, Spain has performed this miracle of consistency twice. It grew by 3.1% (year-on-year) in the first three quarters of 2003 and by 4.2% in the first three quarters of 2006. Those were the days.

Contrary to popular belief, China's GDP statistics have not always been unusually smooth. Since 1993, the average gap between one quarter's growth and the next has been (plus or minus) 0.77 percentage points (see table). Fourteen countries, including America, have reported a smaller average gap. But in recent years, the zigzags in China's growth have been less pronounced. Since 2012 only France and Jordan have enjoyed more stable growth (as measured by statistical variance, a common measure of volatility) and only Indonesia has recorded a smaller average gap between one quarter's growth and the next.

Either China's policymakers are newly successful at stabilising growth or its statisticians are newly determined to smooth the data. But if the number-crunchers are to blame, one wonders why they do not try harder to hide it.

One of many

Quarterly GDP growth rates (year-on-year)
1993-2016, selected countries

Country	Same rate in consecutive quarters*: Twice	Thrice	Average difference between quarters†
Spain	13	2	0.441
France	8		0.476
Britain	5		0.584
United States	5		0.598
Australia	5		0.635
Belgium	3		0.644
Switzerland	4		0.646
Canada	4		0.654
Netherlands	6		0.657
South Africa	6		0.684
Austria	9	1	0.713
Italy	7		0.714
Czech Republic	2		0.757
Portugal	4		0.760
China	**7**	**1**	**0.766**

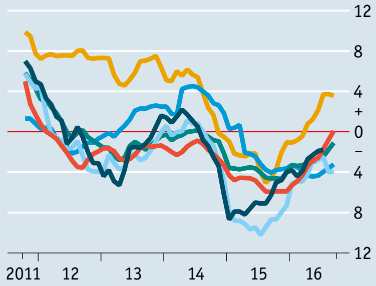
Sources: Economist Intelligence Unit; Haver Analytics; *The Economist*

*Rounded to one decimal place
†Absolute value, percentage points

Correflation

Producer prices, % change on a year earlier

China — India — Japan — South Korea — Taiwan — ASEAN-5 (excl. Indonesia)



Sources: Wind Info; Thomson Reuters; *The Economist*

54 consecutive months of declines. It broke that gloomy run at last in September, when prices increased by 0.1% from a year earlier, thanks to rebounds in the steel and coal industries. Elsewhere in Asia, producer prices are now also rising, or at least falling more gradually than before (see chart).

This turnaround should be cause for relief. Deflation is often a symptom of economic torpor. For companies, falling prices cut into revenues and make it harder to repay debts, which are fixed in nominal terms. As companies sour on future prospects, they also pare back their investment—a potentially vicious circle. In its outlook for 2016, the Asian Development Bank (ADB) called producer-price deflation the "new spoiler" for the region. This is one forecast it would be glad to get wrong.

Still, no one is about to declare victory yet. A couple of years ago, producer prices also appeared to be edging up, when they were battered by a renewed slowdown in China's industrial sector. The ebbing of deflation now is partly thanks to a much lower base of comparison. Oil at $50 a barrel is still relatively cheap by the standards of the past decade, but it is two-thirds higher than the lows of January.

More promisingly, the rise in producer prices does point to vigour in the Chinese economy. A big jump in property sales ignited demand for steel, with iron ore and coal rallying alongside it. Some of the excitement is clearly speculative, with investors punting on commodities as they have in the past. Official orders to curb excess capacity in the coal industry also proved rather too effective (see box), and led to supply shortages. The government has now shifted gears, instructing miners to increase coal production ahead of the winter, when demand for heating spikes.

Whatever the future course of prices, Asia's half-decade of deflation has already yielded valuable lessons. It is clear that prices around the region are closely linked. Prices for commodities are, of course, global, explaining some of the similarity in inflation trends but not all of it. Researchers at the Hong Kong Institute for Monetary Research calculated that the correlation between Chinese producer prices and those of most Asian economies is very high, at about 0.7-0.9 (with 1 being a perfect correlation). A research paper for the Federal Reserve Bank of Dallas argued that the integration of the supply chain in Asia might explain the tight relationship: inflation rates are more similar in countries that trade more with each other.

Asia's long battle with falling factory prices should also affect the way that policymakers think about inflation. It is common to dwell on consumer prices, not least because of their impact on just about everyone's pocketbook. But for consumers, deflation is not necessarily bad. If, for instance, technological innovation leads to lower prices, this can create more, not less, prosperity. An ADB study examined nearly 150 years of deflationary episodes and came to a sobering conclusion. Although in many cases, consumer-price deflation has not caused a growth slowdown, producer-price deflation does indeed tend to be a big drag on investment. The message for central bankers is simple: keep a close eye on those Chinese steel mills, and hope their good fortune lasts. ■

Clean energy v coal

Fighting the carbs

Wind and solar advance in the power war against carbon

THE battle between clean energy and dirty coal has entered a new phase. The International Energy Agency (IEA), an industry forecaster, this week reported that in 2015 for the first time renewable energy passed coal as the world's biggest source of power-generating capacity.

The IEA, whose projections for wind and solar energy have in the past been criticised as too low, accepted that renewables are transforming electricity markets. Last year 500,000 solar panels were installed every day around the world. In China alone, home to a whopping 40% of the 153 gigawatts (GW) of global growth in renewable-energy installations, two wind turbines were erected every hour. Based on existing policies, it forecasts that from 2015-21, 825GW of new renewable capacity will be added globally, 13% more than it projected just last year.

All those new wind and solar plants will not generate electricity all the time. Unlike coal, which burns around the clock, renewables are intermittent. But the IEA expects the share of renewables in total power generation to rise to almost 28% from 21%. Government policies to curb global warming and reduce air pollution are the driving force behind the clean-energy revolution, as well as falling prices of solar panels and wind turbines. The IEA expects America to eclipse the EU to become the second-biggest market for renewables (after China) in the next few years, thanks to an extension of federal tax credits to wind and solar producers. Because electricity demand in rich countries is falling, renewables are driving out other sources of electricity. But in developing countries, they are still not being built fast enough to keep up with demand (see chart).

Lauri Myllyvirta, a Chinese-energy expert at Greenpeace, an environmental NGO, says the IEA may still be underestimating the "exponential growth dynamics" of renewables. For instance, more grid-connected solar energy was installed in China in the first half of 2016 than in the whole of last year, he says.

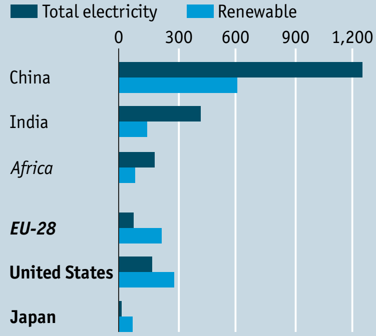
Yet coal is also showing surprising resilience. Earlier this year the betting was that thermal-coal prices would sink because of falling investment in new coal-fired power plants and a decline in long-term demand. Since mid-year, however, they have doubled to $100 a tonne. The reason, again, is China. Its authorities imposed restrictions on its debt-strapped coal miners, limiting them to 276 working days of production a year, in order to push up prices. Partly because of rampant speculation in the Chinese futures market, the measures worked better than expected. Faced with an unwanted surge of imports, the government has since set out to loosen them. Yet if the rally continues, it would give a further fillip to the green brigade: higher coal prices will squeeze the margins of their dirty rivals.

Imbalances of power

Electricity-generation growth forecasts

2015-20, TWh

Total electricity — Renewable



Source: IEA

Free exchange | Passing the buck

Too often, efforts to make financial systems safer shift risk rather than eliminating it

IN 2007 financial dangers, piled up like so much tinder, ignited at last and caused a swathe of destruction across the global economy. The blaze also engulfed governments, which faced intense public pressure to prevent such calamities from recurring. Much has happened on the regulatory front since then. Few believe, however, that the problem of financial instability has been solved. To regulators' frustration, in a world of global financial flows, efforts to safeguard one country often endanger others.

This bothersome tendency has become harder to ignore as cross-border capital flows have swollen. Annual gross financial flows in rich countries soared from roughly 5% of GDP in 1980 to around 25% of GDP on the eve of the financial crisis. This worldwide torrent of money has its benefits. Investors can more easily diversify their portfolios. Investors in slow-growing rich countries gain access to higher-yielding investments in poorer, capital-starved economies, and those poorer economies gain access to desperately needed capital relatively cheaply.

Yet there are costs as well. Emerging economies with less sophisticated financial markets and weaker regulatory institutions can mismanage the great tides of global capital; even mature economies sacrifice a degree of macroeconomic control when they open themselves to global capital markets. Most aggravatingly, protective measures in some countries divert or increase global financial risks rather than reduce them.

Take foreign-exchange reserves. Emerging economies burnt by fickle foreign investors learned that a defensive hoard of reserves, made up of safe assets like American Treasury bonds, could protect them in times of trouble. But as they built their war chests, the demand for such bonds pushed down interest rates around the world. That encouraged greater risk-taking. As yields on Treasuries fell, for example, investors, including these same emerging-market governments, turned instead to mortgage-backed securities, which seemed nearly as safe but offered higher returns. The dynamic created a "conundrum" for Alan Greenspan who, as chairman of the Federal Reserve in the early 2000s, found that raising short-term interest rates had little effect on long-term interest rates—including the rate on mortgages.

Worryingly, the main strategies available to central bankers for curtailing systemic risk share these negative side-effects. Despite Mr Greenspan's experience, some economists reckon interest rates ought to be used more aggressively to rein in credit-market exuberance; while a governor at the Federal Reserve Board, Jeremy Stein, now back at Harvard University, argued that the Fed should consider financial stability while setting monetary policy. If the yields on risky bonds relative to safe ones reveal an imprudent disregard for risk among investors, the Fed could then set rates higher than inflation alone might demand. Recent Fed minutes show some members thinking along similar lines. Yet even if financial excess can be calmed at an acceptable price to the economy, such preventive rate increases impose a cost on others. American rate rises often draw money away from emerging economies, placing stress on their financial systems. Elsewhere, higher rates reduce investment and increase saving, adding to the global glut of capital and depressing global interest rates.

Economists have higher hopes for "macroprudential" policies: regulations designed to reduce systemic risk. The Basel III guidelines agreed on in 2010 include measures like countercyclical capital buffers: bank-capital requirements which can be tweaked as lenders look more or less reckless. In 2015 economists at the IMF wrote that advanced economies could use such policies to lean against capital inflows, in lieu of the blunter instrument of capital controls. Alas, life is not so simple. Effective macroprudential policy should work much like an interest-rate rise: by reducing borrowing. In a global financial system, less borrowing in one country means more money sloshing around in others.

Is there nothing, then, to be done? Co-operation between governments could help; co-ordinated macroprudential measures would reduce the risk that some countries face an unmanageable fire-hose of money. Yet the international goodwill this would require is scarce. And co-ordination can do only so much in a world awash with capital, facing chronically low interest rates. If governments somehow manage to rein in private borrowing, the global glut will grow worse. Interest rates around the world would stay lower for longer, raising the odds that dangers build up in dark corners of the markets beyond regulators' reach.

Asset hounds

Sensible regulation would work better if combined with the clever provision of more of the safe assets markets crave. In a recent paper Mr Stein and several co-authors note that when governments provide too few safe, short-term assets, private firms such as banks step in to issue more, in the form of short-term debt. Such short-term private bonds are prone to runs. So more government issuance would reduce risk.

Trusted governments could help in other ways as well. America might run larger budget deficits than would normally seem appropriate to help sate market demand for the world's favourite safe asset, its Treasury bonds (just as financial-stability worries might lead the Fed to choose a higher interest rate than would typically seem prudent). Europe could chip in. In September François Villeroy de Galhau, the governor of the French central bank, called for the creation of European safe bonds, backed by the bonds of member states. Such measures are admittedly unorthodox and politically fraught. But if the world cannot find better ways to prevent financial risks spilling across borders, governments will eventually decide global capital markets are more trouble than they are worth. ■

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Bathymetry

In an octopus's garden

Researchers have a plan to chart in detail the depths of the ocean floor

THREE billion dollars sounds a lot to spend on a map. But if it is a map of two-thirds of Earth's surface, then the cost per square kilometre, about $8.30, is not, perhaps, too bad. And making such a map at such a cost is just what an organisation called the General Bathymetric Chart of the Oceans (GEBCO) is proposing to do. GEBCO, based in Monaco, has been around since 1903. Its remit, as its name suggests, is to chart the seabed completely. Until now, it has managed less than a fifth of that task in detail. But means of mapping the depths have improved by leaps and bounds over recent decades. So, with the aid of the Nippon Foundation, a large, Japanese philanthropic outfit, GEBCO now proposes to do the job properly. It plans to complete its mission by 2030.

The area of Earth's ocean is two and a half times the area of Mars—and it is often claimed that Mars's surface is the better recorded of the two. It took mere hours to find the crash site of *Schiaparelli*, an ill-fated Mars-bound space craft (see page 73). By contrast, the resting place of MH370, an airliner that disappeared over the Indian Ocean in 2014, remains unknown.

In large part, this is because peering through Mars's thin atmosphere from an orbiting satellite is easier than peering through hundreds or thousands of metres of water from an equivalent satellite in orbit around Earth. Despite water's apparent transparency, the sea absorbs light so well that anywhere below 200 metres is in pitch darkness. Radio waves (and thus radar) are similarly absorbed. Sound waves do not suffer from this problem, which is why sonar works for things like hunting submarines. But you cannot make sonic maps from a satellite. For that, you have to use the old-fashioned method of pinging sonar from a ship. Which is just what GEBCO plans to do.

Ping me when you're ready

Sailors have taken soundings since time immemorial, to avoid running aground. Their equipment was a plumb line—a piece of cord with a lead weight at the bottom. The term "sounding" has nothing to do with noise, echoes or anything like that (it comes from the old English *sund*, meaning a sea or strait), but the coincidence is a neat one, for the modern version of swinging the lead is "echo sounding", using sonar reflected from the seabed. Marie Tharp and Bruce Heezen of Columbia University, in New York, pioneered the technique in the 1950s and 1960s by using technology developed during the second world war. With it, they mapped part of the Mid Atlantic Ridge, an underwater mountain chain.

Tharp and Heezen employed single-beam sonar, which yielded a fairly fuzzy image. These days, sounding sonars broadcast a fan-shaped series of beams. This means a wider strip of the seabed can be mapped during a single pass. It also increases accuracy, because signals from neighbouring beams, which overlap to a certain extent, can be compared with one another. That, plus the invention of special housings fitted onto platforms under sounding-ships' bows, which stop bubbles generated as the vessel rides the waves interfering with the signal, means mapping can be done to a far higher standard than it was in the past.

Such mapping has not, however, been well co-ordinated. Cable-laying companies, oil firms, academic oceanography laboratories, national hydrographic surveys and the world's navies all have oodles of sounding data. One of GEBCO's jobs is to gather this existing information together and sew it into a new database, to create a coherent portrayal of the known ocean floor.

The organisation is also keen to include data collected by helpful volunteers. A new digital platform overseen by America's National Oceanic and Atmospheric Administration encourages the crowd-sourcing of bathymetric data, letting mariners upload their findings easily. Recent political initiatives, such as a deal made in Galway in 2013 between America, Canada and the European Union to support transatlantic floor-mapping, will also boost efforts. National icebreakers are gathering information in parts of the ocean too frozen for other vessels to reach. And GEBCO is trying to persuade governments and companies with proprietary data on the sea floor to share them. One such firm, a cable-laying outfit called Quintillion, has already agreed to do so.

The other, larger job that GEBCO faces is filling in the blanks. Larry Meyer of the University of New Hampshire, who is helping co-ordinate this task for the organisation, estimates it would take a single research vessel 200 years to do so. A simple ▸▸

calculation therefore suggests hitting the target of 2030 requires a few more than a dozen such vessels working simultaneously, which does not sound unreasonable. GEBCO hopes to co-opt shipping companies and other waterborne industrial concerns, together with various academic groups, into contributing to an ad hoc fleet to do this. These manned vessels will be joined by an array of robots that will include sea gliders (underwater drones requiring minimal propulsion) which have been kitted out with multi-beam sonar, and also unmanned barges steered by satellite. Such robots could prove particularly helpful in places with little shipping, like the South Pacific. And there is hope for improvement. New deep-sea technologies for mapping are part of this year's Shell Ocean Discovery XPRIZE. The winner of this will scoop $4m and the runners up will share another $3m.

Mere curiosity aside, an accurate map of the seabed may help open this unknown two-thirds of Earth's surface to economic activity. How quickly Davy Jones's locker yields anything valuable will depend on the technological difficulty, and therefore the expense, of bringing useful discoveries back to dry land. But the sort of data that will contribute to GEBCO's map should help spot petroleum and natural gas seeps, and may point to ore-bearing geological formations. The world's navies (or, at least, those among them with submarine capability) will also take an interest—for an accurate seabed map will both show good places for their boats to hide and suggest where their rivals' vessels might be secreted. Whether they will welcome GEBCO making this information public is a different question. ■

The world's weirdest place?

Topsy turvy

THE DANAKIL DEPRESSION, ETHIOPIA

A piece of sea floor, stranded on dry land, may hold clues to life's origin

STUDYING the seabed does not always mean penetrating the sea itself, even if that penetration is done using sound waves rather than submarines (see previous article). There are a few places where what a geologist would call the ocean floor is actually dry land. One such is the Danakil depression, which lies near the northern vertex of the Afar Triangle, a rift valley stretching from the Dallol volcano in Ethiopia past the salt plains of Lake Assal, in Djibouti, to the north-west tip of Somalia, and then inland to Awash. Millions of years ago, the Danakil was indeed covered by the sea—in its case, the Red Sea. But volcanic eruptions formed barriers of lava that isolated it from the ocean. What water remained evaporated in the intense heat, leaving brine lakes and saline flats. These are mined, and the resulting slabs of salt exported by camel, by nomadic Afars who are the nearest thing the depression has to permanent inhabitants.

Afar horizon

Dallol, appropriately, means disintegration in Afar. For this is a place where Earth's crust is, indeed, disintegrating. The triangle sits at the convergence of three tectonic plates, which are slowly separating. A glance at the map shows that, were the whole triangle to flood (not possible at the moment, because not all of it is currently below sea level), the African and Arabian coasts would run parallel, as they do farther north along the Red Sea. That sea is an incipient ocean. The continents either side of it are being pushed apart by basaltic eruptions along a line that will, in millions of years' time, form a mid-ocean ridge.

The Danakil is geologically a part of the ocean floor because it is underlain by this erupted basalt, rather than by granitic continental rocks. It is also close enough to the infant ridge to be volcanically active. Rising magma heats the area's groundwater, which wells up—dissolving salt, potash and other minerals from the rocks it travels through—to emerge as hot springs. The water then evaporates, leaving crusty formations (see picture) coloured both by minerals like iron and copper, and by such algae and bacteria as can survive the salinity. The result, to human eyes, is surreal.

It is also scientifically interesting. Many who speculate about life's origin think hot springs were involved. The dissolved minerals and gases these springs eject provide chemical possibilities for fuelling living creatures that are independent of the photosynthesis which drives modern biology. As a consequence, underwater springs of this sort team with life adapted both to the chemistry and to the temperature.

If the speculators' line of thinking is correct, these "extremophile" organisms may once have dominated life on Earth, but those of them that now live deep in the ocean are hard to collect. In Danakil, collecting them is easy—at least, it is once you have made the journey there to do so.

And some have. Earlier this year Felipe Gómez Gómez of the Astrobiology Centre in Madrid led an expedition to the Dallol, and he plans to return in the winter. Just as, in the 19th century, biologists scoured the tropics for new species of animal and plant, so Dr Gómez Gómez is scouring them for microbes. Whether he will find within his discoveries clues to life's origins on Earth, and thus some indication of the likelihood it has emerged on other planets, too, remains to be seen. In the meantime, it can be said with reasonable confidence that places like Danakil are about as otherworldly to human eyes as it gets. ■

Cyber-security

Crash testing

Recent attacks on the internet could be a prelude to far worse ones

"SOMEONE is learning how to take down the internet." This was the headline of a blog post Bruce Schneier, a noted cyber-security expert, wrote in mid-September. It looked prescient when, on October 21st, Dynamic Network Services (Dyn), a firm that is part of the internet-address system, was disrupted by what is called a "distributed denial of service" (DDOS) attack. (Essentially, a DDOS floods servers with requests until they can no longer cope.) For hours, hundreds of sites were hard to reach, including those of Netflix, PayPal and Twitter.

The attack on Dyn was only the latest in a string of similar ones. On September 20th, for instance, the victim was Brian Krebs, an American journalist who often reports on internet criminals. The server where he hosts his blog became the target of one of the largest DDOS attacks on record (it was bombarded with data equivalent to almost half a percent of the internet's entire capacity). Most of the other recent digital assaults, however, were more discerning—as if the attacker "were looking for the exact point of failure," Mr Schneier wrote in his blog post.

It is not clear who the attackers are, although security analysts suspect they are either Chinese or Russian. At any rate, all the attacks used the same software, called Mirai, whose source code has been leaked online. It mainly scours the internet for devices such as webcams, digital video recorders and home routers in which easy-to-guess factory-set passwords ("12345" or even "password") have not been changed. The program then turns those it can gain access to into a huge army of digital slaves that can be directed to inundate targets with requests. Shortly after the attack on Dyn, XiongMai Technologies, one of the biggest makers of webcam components, announced it would recall some products and provide owners of others with software updates to improve security.

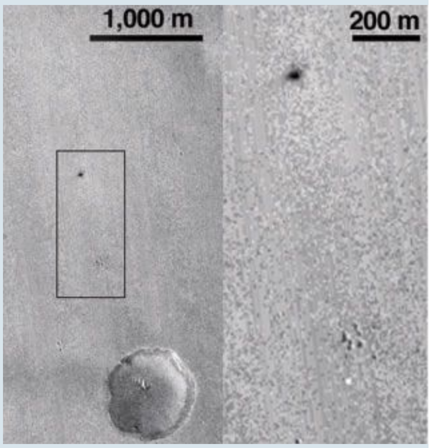
This may help, but not much can be done in the short run other than to appeal to owners of internet-connected devices to change their passwords. To fix the problem properly, Mr Krebs argued in a blog post, the makers of such devices, collectively called the "internet of things" (IOT), would all have to recall vulnerable systems and change their careless approach to security. Since this is unlikely to happen, regulators may have to step in. Indeed, the European Commission is already working on legislation to require better security in IOT devices. Lawsuits against negligent device-makers would also help.

As for the goal of the attacks, it could be something other than to take down the internet. Many fret that such virtual weapons could be turned to full blast just before or on November 8th, when America will elect a new president and House of Representatives, and also many senators and state governors. A DDOS could not paralyse voting machines, for hardly any of them are connected to the internet. But striking all kinds of websites, from those of online media to the government's, could spread chaos—and the feeling that the elections are somehow being "rigged". ■

Schiaparelli's end

Flash, bang, wallop, what a picture

A Mars probe's impact crater is discovered



THE dark splodge near the top of the enlarged part of this picture of the Martian surface, taken on October 20th by *Mars Reconnaissance Orbiter*, an American satellite circling the planet, is thought to be the crash site of *Schiaparelli*, a European and Russian probe that arrived there on October 19th, but with which contact was lost during its descent to the planet's surface. The white speck near the bottom is likewise believed to be the probe's jettisoned parachute.

What went wrong is not clear. Communication with the craft ended 50 seconds before its scheduled touch down. Data transmitted in advance of this loss of contact suggest *Schiaparelli* jettisoned both its parachute and its heat shield early, and fired its retro-rockets for only three to five seconds, rather than the 30 seconds that had been planned. It probably hit the ground at more than 300kph (200mph).

Since *Schiaparelli*'s main job was to test the landing gear for a future rover its failure is not, as it were, a complete write-off. It has at least shown that work needs to be done before a more expensive piece of equipment is hazarded in this way. Meanwhile, its companion on its journey to Mars, a satellite called the *Trace Gas Orbiter*, seems to be working well.

Dealing with autism

First, treat the parents

Turning mothers and fathers into therapists helps autistic children

AUTISM may bring a lifetime of disability and difficulty to the most severely afflicted. As children, they often struggle to communicate, are anxious in situations unproblematic for anyone else and may behave in repetitive ways that disturb others. As adults, they may be shunned—or even ostracised.

Medical science has little to offer. Drugs have limited effects, and although there have been claims for many years that therapies aimed at training a child directly to behave in desirable ways (known as behavioural intervention) can work, the evidence they actually do so is poor. All this, observes Tony Charman, a clinical psychologist at King's College, London, leaves parents of autistic children vulnerable to false promises. Only this month, for example, a four-year-old boy had to be taken to hospital in Britain after being subjected to a bizarre array of treatments described as "holistic medicine".

Incidences of such quackery should be reduced by a study published in this week's *Lancet* by Dr Charman and his colleagues. The "Pre-school Autism Communication Trial" (PACT) attempted to answer, once and for all, the question of whether behavioural intervention in autism works—and, in particular, whether it does so in the most severe cases. It is the largest such trial yet attempted, and the one with the longest period of follow up. Its answer was: yes, it does. The PACT team found not only that, if carried out correctly, behavioural intervention has an immediate effect, but also that this effect persists. Even six years after therapy, autistic children could communicate better and had a lower level of repetitive behaviour than ▸▸

did a control group of their peers.

The crux of PACT was the nature of the intervention employed. This was designed to train not the children but their parents. The idea was to alter parental behaviour in ways that would then go on to encourage desirable changes in offspring. Specifically, PACT's intervention trained parents how to communicate with an autistic child. This is rarely a problem with "neurotypical" children, who provide plenty of opportunities for engagement. But autistic children can be difficult to engage with, and their attempts at communication can be so subtle that parents need assistance in detecting them, and advice about how to respond appropriately.

The approach used by PACT involved parents being videoed while playing with their children. Those videos were then replayed to the parents under the tutelage of a speech therapist, who pointed out moments, which might not otherwise have been obvious, when children were attempting to communicate. Even just turning towards a parent may be such an attempt. Having seen when to respond, parents then learned how to do so in the way a therapist would, in order to draw the child out. Parents are thus taught to become therapists themselves.

Family values

This therapy, encouragingly, is neither invasive nor intensive nor costly. It involves sessions once a fortnight for six months, and then a further six sessions, once a month. The results, though not startling, are encouraging. In families who were coached, the percentage of children with severe symptoms (such as having difficulties speaking and learning things) fell from 55% to 46%. In those who formed the control group, and were not so coached, they actually rose—from 50% to 63%.

The study adds to evidence that therapy delivered by parents is helpful for a range of childhood mental-health conditions, including aggression and anxiety. Yet, in the case of autism, some crucial scientific questions remain to be answered. One is whether the age of intervention matters. A second is whether this approach might help less severely afflicted children than those chosen for the study. And a third is whether a similar approach, taught to teachers rather than parents, might permit the method to be extended to schools.

Perhaps the greatest unanswered question, though, is practical. It is how such a therapy might be adopted swiftly and widely. Those involved in the PACT study have already made a start on this. They are creating training materials to be posted on their website, so that therapists who work with autistic children can adapt their methods accordingly. With luck, those methods will spread, and the lives of such children will improve accordingly. ■

Shark behaviour

Waste not, want not

One fish's excretions are another's vital resource

AMMONIA is as repulsive to most marine animals as it is to land-lubbing ones—and for good reason. It is extremely toxic. But there is an exception. Far from being repelled by ammonia, sharks are actually attracted to it. The longtime assumption has been that this is because it is a waste product, voided into the water by fish and other creatures, that signals the presence of potential prey. But Chris Wood and Marina Giacomin of the University of British Columbia, in Vancouver, think there may be more to it than this. As they describe in the *Journal of Experimental Biology*, they suspect that for sharks, ammonia is itself a useful resource.

All animals make ammonia. It is a compound of nitrogen and hydrogen produced by the breakdown of amino acids, the building blocks of proteins. Marine creatures can flush it directly into the sea (fish do so through their gills), since it is soluble in water. Land animals often add carbon and oxygen to convert it into urea, which is far less toxic, and store the result in solution in a bladder, for periodic evacuation. Sea creatures can make urea too, though—and in sharks this molecule, which they synthesise in their gills, plays a crucial role in stabilising the salinity of their tissues.

Dr Wood and Ms Giacomin knew from the work of others that sharks forced to swim in water containing unnaturally high concentrations of ammonia absorb the chemical into their gills, convert it into urea and then expel that urea back into the water. The presumption was that this was an anti-poisoning mechanism. That, though, is a slightly odd idea. In the wild, unconfined by an experimenter's tank, it would surely be simpler and safer for a shark to swim away from the dangerous area and avoid the problem altogether. The two researchers therefore wondered if what had been seen in these previous experiments was really an accidental consequence of something else. Given urea's role in shark salinity-stabilisation (a role which it does not play in other groups of fish), they wondered if the animals' eagerness to find water with lots of ammonia in it was as much to do with replenishing their urea supplies as with locating prey. They therefore decided to run some experiments of their own.

To this end, they exposed ten Pacific spiny dogfish (a type of small shark easily maintained in the laboratory) to ammonia concentrations ranging from 100 micromoles per litre (µmol/l), a level commonly found in the wild, to 1,600 µmol/l, an unnaturally high level, while monitoring the water's chemistry closely.

Whatever the initial level of ammonia, they found, that substance's concentration began declining almost as soon as the sharks were put into the tank. The animals were, indeed, absorbing it. They were not, though, automatically excreting the resulting urea. Levels of this in the water rose only when the dogfish were exposed to ammonia concentrations of 800 µmol/l or more. And a closer look at the animals' gills and blood confirmed that they were retaining urea.

All this makes perfect sense. The importance of urea to shark physiology means they have to make it from something. Amino-acid breakdown, the alternative source of its central element, nitrogen, requires otherwise-valuable proteins. Calculations performed by Dr Wood and Ms Giacomin suggest dogfish swimming in ammonia-rich waters would be able to scavenge from those waters almost a third of the nitrogen they need to make urea. That adds up to a tidy saving in protein. So, sharks may well be driven by appetite to swim towards places where their prey have been releasing large amounts of waste ammonia. But, contrary to past theories, the appetite that takes them there may really be for the waste itself. ■

Is that ammonia I sniff?

Also in this section

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Eleanor Roosevelt

Ahead of her time

Two biographers reassess a woman who towered over the 20th century

Eleanor Roosevelt: The War Years and After, 1939-1962. By Blanche Wiesen Cook. *Viking; 670 pages; $40*

Eleanor and Hick: The Love Affair That Shaped a First Lady. By Susan Quinn. *Penguin; 404 pages; $30*

IT IS tempting to think that in a different era, Eleanor Roosevelt could have become president of the United States. Widely loved, the longest-serving first lady was on the right side of history on virtually every subject, including civil rights, acceptance of European refugees and the need to end empires. She was fierce in support of her causes. Impatient as well as impassioned, she tirelessly lobbied her husband, Franklin Delano Roosevelt (FDR), to embrace her projects too. Theirs was "one of history's most powerful and enduring partnerships", her biographer Blanche Wiesen Cook explains. "She understood his needs, forgave his transgressions, buried her jealousies, and embarked on her own independent career…FDR encouraged her independence and when he silenced her did so for reasons of state."

The third and final volume of Ms Cook's life of Eleanor Roosevelt is concerned mainly with the second world war years. Eleanor, like her husband, was early to see the clouds forming in Europe, and together they tried to coax the American public to prepare for involvement. It was a difficult task. Isolationism had taken hold, and when the war in Europe began, some Americans viewed it, as one union official said, as being "between two thieves".

Eleanor campaigned for economic and social equality. How, she questioned, could America promote democracy abroad while stifling minorities at home? As the Nazi horrors became clear, she worked in private on Franklin, and in public through her near-daily newspaper column, "My Day", urging that refugees from abroad be let in to America. "People are not throwing Americans out of work to employ refugees, though isolated cases of this might be found," she wrote in 1939, sounding a theme that resonates today.

As the war progressed, FDR sought Eleanor's counsel less frequently; he didn't want to be accused of running a "petticoat government". More significantly, his ill health, especially his worsening heart problems, reduced his tolerance for argument. So as Eleanor pushed her causes—ending discrimination against black troops, for example, or promoting low-cost housing for workers in defence industries—he tried to dodge. Courting Winston Churchill, the president sought to contain Eleanor's criticism of Churchill's relentless imperialism. To her daughter Anna, Eleanor described Churchill as "lovable and emotional and very human, but I don't want him to write the peace…"

Through decades of exhaustive research, Ms Cook, a history professor at John Jay College in New York, has emerged as the voice of authority on Eleanor Roosevelt. Yet in isolation, this final volume offers only occasional glimpses into the complex bond between the first couple. Both signed their letters with endearments like "much love" and depended on each other for counsel, yet romance seemed long gone. "There is no fundamental love to draw on, just respect and affection," Eleanor wrote in one letter to a friend. Forthright about her loneliness, she turned to other deep friendships for sustenance.

In "Eleanor and Hick" Susan Quinn focuses on the first lady's relationship with Lorena Hickok (known as Hick), a journalist with the Associated Press. Assigned to cover the first lady, Hick fell in love instead, and Eleanor seems to have reciprocated. They shared difficult childhoods. Eleanor's emotionally distant mother had called her "Granny" as a child because she was so serious; Hick had been beaten by her father and the family moved constantly to try to escape poverty. Both craved love. Eleanor had been forced to turn outside her marriage in 1918 after uncovering an affair between her husband and her secretary.

Hard-charging yet fragile, Hick drew out the emotionally reserved Roosevelt. Together they worked to help those needing jobs and food as the Great Depression tightened its grip. Their letters, covered extensively as well in the earlier volumes of Ms Cook's biography, are extraordinarily expressive: "Oh! How I wanted to put my arms around you in reality instead of in spirit," Eleanor wrote to Hick in 1933, not long after FDR took office. "I went and kissed your photograph instead and the ▶▶

tears were in my eyes." Hick's letters contained equal passion. Once, after a long time apart, she wrote, "I remember your eyes, with a kind of teasing smile in them, and the feeling of that soft spot just north-east of the corner of your mouth against my lips."

Ms Cook's book essentially ends with FDR's death in April 1945, with just 30 pages of "epilogue" devoted to the final 17 years of Eleanor's life—years in which she became unshackled, so to speak, from her role as a politician's wife. During that time, despite the low expectations of male delegates at the founding of the United Nations (UN), she was the driving force behind the Universal Declaration of Human Rights, a UN document that endures to this day. Across 30 articles, it lays out fundamental principles, including that every human being deserves freedom and must not be tortured or arbitrarily arrested.

Eleanor's increasingly busy life meant she had limited time. So Hick makes only brief appearances in Ms Cook's final volume, despite living in the White House during much of the war. It is difficult to understand the full scope of the relationship; Hick burned some of the letters from the most intense period of their involvement, and as Ms Cook likes to say, "I do not know what two people do when they are alone together." What is clear is that Eleanor Roosevelt, a woman who could never find the lifelong loving relationship to salve her inner loneliness, instead shared her love with those closest to her—and with the world at large—as she strove unceasingly to make it better. ■

Europe's single currency

France v Germany

The Euro and the Battle of Ideas. By Markus Brunnermeier, Harold James and Jean-Pierre Landau. *Princeton University Press; 440 pages; $35 and £24.95*

THE euro crisis that first blew up in late 2009 has revealed deep flaws in the single currency's design. Yet in part because it began with the bail-out of Greece, many politicians, especially German ones, think the main culprits were not these design flaws but fiscal profligacy and excessive public debt. That meant the only cure was fiscal austerity. In fact, that has often needlessly prolonged the pain. Later bail-outs of countries like Ireland and Spain showed that excessive private debt, property bubbles and over-exuberant banks can cause even bigger problems for financial stability.

That is one early conclusion of "The Euro and the Battle of Ideas", by three academics from Germany, Britain and France. They describe thoroughly the watershed moments of the crisis, how power shifted to national governments (especially in Berlin) and the roles played by the IMF and the European Central Bank (ECB). They blame euro-zone governments for failing to sort out troubled banks more quickly, for not realising that current-account deficits matter when public debts are in effect denominated in a foreign currency, for not making the ECB into a lender of last resort and for not pushing through structural reforms in good times.

Such complaints are often heard, not least from Britain and America. But more originally, the authors find the roots of these failings not in stupidity but in clashing economic ideas. Simplifying a bit, they focus on Germany and France. The Germans like rules and discipline, and fret about excessive debt and the moral hazard created by bail-outs. The French prefer flexibility and discretion, and worry about large current-account surpluses and the lack of a mutualised debt instrument. The Germans favour budget austerity even in hard times; the French favour fiscal stimulus on Keynesian lines. German policymakers are often lawyers, French ones more frequently economists.

Examples of such ideological clashes run throughout the book. They range from the design of the Maastricht treaty and the later stability and growth pact to the constitution of the ECB and the application of the fiscal compact. Throughout the crisis the French tended to see bank or national-debt woes as cases of illiquidity whereas the Germans usually viewed them as signs of insolvency. Similar divides have emerged in rows over Eurobonds (backed by France, opposed by Germany) and over accountability and democratic control at supranational level (backed by federal Germany but not by centralised France).

As the authors note, such differences in ideas are not party-political (they persist regardless of whether the two countries have centre-left or centre-right governments). Nor, interestingly, are they fixed forever in history: in the 19th century, and even more in the 1930s, it was France, not Germany, that favoured rigid rules, big surpluses and the discipline of the gold standard. Only after 1945 did that change.

The authors end on an optimistic note, with proposals for a Europe-wide insurance mechanism built on a form of Eurobonds designed to please both France and Germany. But their analysis might equally lead to pessimism. The euro crisis is far from over, with Greece needing more debt relief, Italy mired in banking problems and chronic slow growth and high unemployment almost everywhere. Britain's Brexit vote will not help the mood, even if it was greeted by some as one more reason to push towards deeper fiscal and political union in the euro zone.

The trouble is that, as the book shows, France and Germany still have huge differences over the direction of travel. The French want debt mutualisation and more fiscal flexibility first, and are only then ready to talk about more discipline and deeper integration. The Germans are the reverse, pushing for discipline and integration before being ready even to think about debt mutualisation. After next year's elections in both countries, such deep differences are likely to cause continuing problems for the single currency. ■

American fiction

Dope and the doppelganger

The Sellout. By Paul Beatty. *Farrar, Straus & Giroux; 304 pages; $26. Oneworld; £12.99*

THE narrator of Paul Beatty's fourth novel, "The Sellout", is Bonbon, a black man who grows artisanal watermelons and marijuana in southern California. One of the finer strains of weed that he develops is called Anglophobia. The joke, however, is now on the author. Earlier this year "The Sellout" was shortlisted for the Bollinger Everyman Wodehouse prize, a British award that rewards humour in fiction. On October 25th, Mr Beatty became the first American to win the Man Booker prize for fiction.

Born in 1962, Mr Beatty won his initial literary award in 1990 while making his name as a performance poet, both at festivals and on television. After publishing two volumes of poetry, his debut novel, "The White Boy Shuffle", was described by the *New York Times* as "a blast of satirical heat from the talented heart of black American life". "Slumberland", his third novel, was about a black American DJ in Berlin.

In 2006 Mr Beatty went on to bring out "Hokum", an anthology of African-American humour. In the introduction he wrote that he had read the canonical black American writers. While he welcomed their rhetoric, he said he came to miss "the black *bon mot*, the snap, the bag, the whimsy upon which 'fuck you' and freedom sail. It was as if the black writers I'd read didn't have any friends." The book included contributions from Toni Cade Bambara and Henry Dumas, but also pieces by writers not known for being funny or even writers at all, including Mike Tyson and the Reverend Al Sharpton. Mr Beatty ended the introduction thus: "I hope 'Hokum' beats you down like an outclassed club fighter …each blow plastering that beaten boxer smile on your face, that ear-to-ear grin you flash to the crowd to convince them that if you're laughing, then you ain't hurt."

The laughter and the hurt are both wholly there in "The Sellout". Bonbon, the hero, lives in Dickens, a fictional town on the southern outskirts of Los Angeles that is so run down it has been excised from the map to save California from embarrassment. In the novel's opening pages, Bonbon's hands are cuffed and crossed behind his back as he awaits the start of his trial in the Supreme Court. Bonbon has been indicted for trying, with the help of an old man called Hominy, to reinstate slavery and segregate the local high school as a way of bringing about civic order.

What follows is a filling-in of Bonbon's back story, starting with his upbringing by his single father, a fixated social scientist who carries out experiments on the boy and is eventually shot by the police. Bonbon pulls his father's body up onto the horse he keeps on his urban farm and plods home. The novel's first 100 pages are searing; no racial or cultural stereotype is safe from Mr Beatty's satirical eye. Tiger Woods, Bill Cosby, Oreo cookies, cotton-picking and penis size are all taken out and given a shaking. As for Stevie Wonder, Bonbon says his Latin motto should be, "*Cogito, ergo Boogieum.* I think, therefore I jam."

"The Sellout" took Mr Beatty more than five years to finish. "I hate writing," he admitted as he accepted a cheque for £50,000 ($61,000) from the Duchess of Cornwall at a dinner in London where the Man Booker winner was announced. "This is a hard book," he went on. "It was hard for me to write, I know it's hard to read." The five judges were not put off: "This is a book that nails the reader to the cross with cheerful abandon," Amanda Foreman, the chair of the panel, told the dinner guests. "But while you are being nailed you are being tickled." ■

Modernist art from Mexico

Evolutionary tales

PHILADELPHIA

What it meant to be Mexican in the mid-20th century

IN 1927 John Dos Passos, an American writer and artist, returned from a long stay in Mexico where he had been soaking up the vibrant cultural scene south of the border. Reporting on what he found in an article for the *New Masses*, he proclaimed: "Everywhere the symbol of the hammer and sickle. Some of it's pretty hasty, some of it's garlanded tropical bombast, but by God, it's painting."

"Paint the Revolution: Mexican Modernism 1910-1950", a fascinating exhibition that has just opened at the Philadelphia Museum of Art and will travel to the Museo del Palacio de Bellas Artes in Mexico City next year, takes its name from that essay and largely confirms the writer's judgment. The kind of painting that the novelist had in mind is epitomised by Diego Rivera's "Sugar Cane" (1931, pictured), a scene of plantation life filled with tropical scenery and, yes, plenty of bombast. Much of the work in the show preaches and hectors, stokes nationalist fervour and promotes Marxist ideology. But most of it has such gusto, such sense of purpose and a conviction that images well made and well intentioned can change the world for the better, that one can forgive the occasional heavy-handed messaging.

As is inevitable with any survey of Mexican art from the first half of the 20th century, "Paint the Revolution" is dominated by the muralists who rose to international fame in the years following the decade-long turmoil that ended in 1920. Put to work by a reformist government that was anxious to heal the wounds of the recent past, these artists participated through vast mural cycles combining indigenous imagery with socialist agitprop in the great patriotic project of rebuilding the nation.

The "big three"—Rivera, José Clemente Orozco and David Alfaro Siqueiros—are well-represented with paintings that reveal powerful narrative styles that were at once both passionate and didactic. Typical of the way in which the language of modernism was harnessed for polemical ends is Orozco's "Barricade" (1931), a painting in which the violence of revolutionary struggle is enhanced by bold simplification and spatial compression borrowed from Cubism and Expressionism. Of course the works that made these men famous are the mural cycles in buildings across Mexico and the United States. They cannot travel, so video installations in the museum galleries provide an experience that is the next best thing to being there.

"Paint the Revolution" enriches this familiar tale, showing how, for instance, the cause of nation-building spurred experimentation in photography and printmaking, and even transformed arts education. Crucially, the show provides a more nuanced understanding of the age, puncturing the myth that everyone was marching in lockstep towards a common goal, and exposing the contradictions and cross-currents that characterised this most innovative period.

One group, known as the *Estridentistas*, rejected the impulse to fall back on traditional imagery. Instead, they tried to hitch Mexican modernism to the wider avant-garde by imitating the promotional techniques of Dada and Futurism. Also running against the grain were the *Contemporáneos*, a group associated with a literary magazine of the same name. Whereas the muralists proclaimed, "[Our] aesthetic aim

Agrarian heroes

is to socialise artistic expression, to destroy bourgeois individualism," the *Contemporáneos* tried to carve out a private space where individual sensibility could endure. Roberto Montenegro's "Portrait of Xavier Villaurrutia" portrays an elegant, dandified figure who is the polar opposite of the macho, chest-thumping strivers who populate the work of the muralists.

What all these artists share, and what gives the period its peculiar urgency, is their common search for identity. Whether making works for public consideration or private consumption, each of them wrestled with what it meant to be Mexican in the wake of civil war and in the aspirational decades that followed.

Nowhere is the fraught question of identity more movingly explored than in the work of Frida Kahlo. All her life she toiled in the shadow of Rivera, her larger-than-life husband, and for decades after her death in 1954 she remained a forgotten figure. It was not only the prejudices of a patriarchal society that were responsible for her obscurity, but the fact that her idiosyncratic, even neurotic, paintings did not fit the heroic story the nation preferred to tell about itself. Kahlo's approach is intimate and introverted.

The gemlike "Self-Portrait on the Border Line Between Mexico and the United States" is as topical on the subject of national identity as any of Rivera's murals, but Kahlo's approach is meditative and confessional. Caught between two worlds, she appears frail, vulnerable and out of place in her Sunday best. Her patriotism is heartfelt but tinged with sadness, and even a bit of irony. The Mexican flag held tentatively in her left hand is mocked by the cigarette she holds in her right. This tiny work speaks as eloquently about an exciting but anxious age as the booming voices that surround it. ■

Johnson | Lexicography unbound

Dictionaries have found their ideal format

THERE is something comforting in a dictionary: right angles, a pleasing heft, reassuringly rigid covers. A new one is tight, a bright sheaf of discoveries yet to be made; an old one is a musty but trusted cosy friend. A good dictionary is the classic school-leaving gift from ambitious parents to their children. A great dictionary might even be passed on through several generations.

But maybe the most reassuring thing about a dictionary is its finite nature. A small dictionary contains all the words you need to know, and a really big one seems to contain all the words in existence. Having one nearby seems to say that the language has boundaries, and reasonable ones at that.

It might surprise dictionary-owners to know that most lexicographers do not think of their subject in this way at all. The decision to impose a page-count on a dictionary is in fact a painful one. Definitions can almost never cover the full complexity of a word, even in huge dictionaries. And even more painful is leaving words out simply for reasons of space.

Many readers think that something is a "real word" if it's "in the dictionary" (raising the question of which of the hundreds of English dictionaries they mean). But lexicographers don't like to regard themselves as letting the trusty words in and keeping the bad guys out. Erin McKean, who left traditional lexicography to found an online dictionary, Wordnik, explained why she chose a format that could allow virtually limitless entries: "I don't want to be a traffic cop!"

Lexicographers prefer to think they are a different kind of cop: the kind in the title of John Simpson's "The Word Detective", published in October, a memoir of his time as editor-in-chief of the Oxford English Dictionary (OED). Mr Simpson's

lexicography career began in the 1970s, scouring books for example usages and writing them down on notecards. (The original OED was published in alphabetically consecutive volumes between 1884 and 1928; Mr Simpson worked on the supplement of new words and meanings.) In 1982 a new boss shocked the then-editor with a plan to computerise the dictionary's ways: both the lexicographic work itself, with digital research files, and its outcome, an OED on compact disc. But that wasn't the final shape either: by the end of Mr Simpson's tenure in 2013, the OED's flagship product was a website with entries richly linked to one another and updated at regular intervals.

A dictionary is really a database; it has fields for headword, pronunciation, etymology, definition, and in the case of historical dictionaries like the OED, citations of past usages. Its natural home is one that allows the reader to consult it in any way that makes sense. Look up a single word. Or look up all the citations by a single author. Or those which share a root: only such a tool can tell you that the OED knows of 1,011 words ending in -ology, against 508 with -ography.

When a new word like "grok" appears or the meaning of a word like "marriage" expands, as it has recently, readers need not wait for years for a new print dictionary. Once the new word or meaning seems here to stay, it can be added in an instant. The OED is conservative: a rule of thumb is to wait until a word has hung on for at least ten years. But the principle is to catch all of the language in use, and not merely to admit the good words, whatever those are.

Ten years is still a long time. Lexicographers, aware that people still look to them for guidance on what is a "real" word and what isn't, whether or not they like this role, can still be conservative. Those who long for a conservative dictionary should seek one, but this is not the only way of doing things. "Green's Dictionary of Slang" first appeared as a chunky three-volume work of historical lexicography in 2010, with over 100,000 entries. But Jonathon Green did not hang up his hat when the books hit the shelves; he went on to add an online edition that was to be continually updated.

At the free-for-all end are the online and completely crowdsourced dictionaries from Wiktionary to Urban Dictionary. Whatever one may think of the latter—which includes terms of rank racist and misogynist abuse as well as a broad fare of drug- and sex-related terms—it is useful, allowing oldies to find out what their kids are talking about. That may be an inversion of the old dictionary, the graduation present—but discovery, in whatever format, is after all what dictionaries are for.

Economic and financial indicators

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*	2016†	latest	latest	2016†	rate, %	latest 12 months, $bn	% of GDP 2016†	% of GDP 2016†	10-year gov't bonds, latest	Oct 26th	year ago
United States	+1.3 Q2	+1.4	+1.5	-1.0 Sep	+1.5 Sep	+1.3	5.0 Sep	-488.2 Q2	-2.6	-3.2	1.75	-	-
China	+6.7 Q3	+7.4	+6.6	+6.1 Sep	+1.9 Sep	+2.0	4.0 Q3§	+260.9 Q2	+2.6	-3.8	2.45§§	6.77	6.35
Japan	+0.8 Q2	+0.7	+0.6	+4.5 Aug	-0.5 Aug	-0.2	3.1 Aug	+173.6 Aug	+3.6	-5.1	-0.06	104	121
Britain	+2.1 Q2	+2.7	+1.8	+0.8 Aug	+1.0 Sep	+0.7	4.9 Jul††	-161.2 Q2	-5.6	-3.9	1.12	0.82	0.65
Canada	+0.9 Q2	-1.6	+1.3	-0.7 Jul	+1.3 Sep	+1.6	7.0 Sep	-51.1 Q2	-3.3	-2.6	1.16	1.33	1.31
Euro area	+1.6 Q2	+1.2	+1.5	+1.8 Aug	+0.4 Sep	+0.2	10.1 Aug	+383.9 Aug	+3.2	-1.7	0.09	0.92	0.91
Austria	+1.2 Q2	-0.9	+1.3	+2.3 Aug	+0.9 Sep	+1.0	6.2 Aug	+8.2 Q2	+2.4	-1.3	0.22	0.92	0.91
Belgium	+1.4 Q2	+2.2	+1.3	+1.0 Aug	+1.9 Sep	+1.8	8.2 Aug	+4.8 Jun	+1.2	-2.8	0.36	0.92	0.91
France	+1.3 Q2	-0.4	+1.3	+0.5 Aug	+0.4 Sep	+0.3	10.5 Aug	-27.3 Aug‡	-0.4	-3.3	0.31	0.92	0.91
Germany	+1.7 Q2	+1.7	+1.7	+2.0 Aug	+0.7 Sep	+0.4	6.1 Sep	+305.6 Aug	+8.4	+0.9	0.09	0.92	0.91
Greece	-0.4 Q2	+0.7	-0.6	-0.3 Aug	-1.0 Sep	-0.1	23.2 Jul	-0.3 Aug	-1.0	-5.8	8.28	0.92	0.91
Italy	+0.7 Q2	+0.1	+0.8	+4.1 Aug	+0.1 Sep	nil	11.4 Aug	+46.3 Aug	+2.5	-2.6	1.54	0.92	0.91
Netherlands	+2.3 Q2	+2.6	+1.6	+2.2 Aug	+0.1 Sep	+0.3	7.0 Sep	+59.7 Q2	+9.2	-1.2	0.12	0.92	0.91
Spain	+3.2 Q2	+3.4	+3.0	+6.8 Aug	+0.2 Sep	-0.4	19.5 Aug	+22.0 Jul	+1.4	-4.3	1.08	0.92	0.91
Czech Republic	+3.6 Q2	+3.7	+2.4	+13.1 Aug	+0.5 Sep	+0.6	5.2 Sep§	+3.7 Q2	+1.5	nil	0.48	24.8	24.5
Denmark	+0.8 Q2	+1.5	+1.0	+2.1 Aug	nil Sep	+0.4	4.3 Aug	+25.8 Aug	+6.4	-1.0	0.23	6.81	6.75
Norway	+2.5 Q2	+0.1	+1.0	-5.6 Aug	+3.6 Sep	+3.5	5.0 Jul‡‡	+23.6 Q2	+5.3	+3.0	1.31	8.26	8.34
Poland	+3.0 Q2	+3.6	+3.1	+3.2 Sep	-0.5 Sep	-0.8	8.3 Sep§	-2.7 Aug	-1.0	-2.9	3.07	3.97	3.86
Russia	-0.6 Q2	na	-0.7	-0.8 Sep	+6.4 Sep	+7.3	5.2 Sep§	+30.2 Q3	+3.1	-3.7	8.41	62.7	62.8
Sweden	+3.4 Q2	+2.0	+3.1	-4.8 Aug	+0.9 Sep	+1.0	6.1 Sep§	+25.4 Q2	+5.1	-0.3	0.16	8.90	8.50
Switzerland	+2.0 Q2	+2.5	+1.4	-1.2 Q2	-0.2 Sep	-0.5	3.3 Sep	+66.1 Q2	+9.3	+0.2	-0.42	0.99	0.98
Turkey	+3.1 Q2	na	+3.2	+2.8 Aug	+7.3 Sep	+7.8	10.7 Jul§	-31.0 Aug	-4.7	-1.8	9.94	3.08	2.89
Australia	+3.3 Q2	+2.1	+2.8	+3.7 Q2	+1.3 Q3	+1.2	5.6 Sep	-52.8 Q2	-4.2	-2.1	2.23	1.30	1.38
Hong Kong	+1.7 Q2	+6.5	+1.6	-0.4 Q2	+2.6 Sep	+2.7	3.4 Sep‡‡	+13.6 Q2	+3.0	+0.1	1.04	7.76	7.75
India	+7.1 Q2	+5.5	+7.6	-0.7 Aug	+4.3 Sep	+5.2	5.0 2015	-16.2 Q2	-1.0	-3.8	6.87	66.8	64.9
Indonesia	+5.2 Q2	na	+5.0	+4.8 Aug	+3.1 Sep	+3.6	5.5 Q1§	-18.7 Q2	-2.2	-2.6	7.03	13,008	13,645
Malaysia	+4.0 Q2	na	+4.3	+4.9 Aug	+1.5 Sep	+1.9	3.5 Aug§	+5.3 Q2	+1.0	-3.4	3.58	4.16	4.23
Pakistan	+5.7 2016**	na	+5.7	+1.5 Aug	+3.9 Sep	+3.9	5.9 2015	-4.1 Q3	-0.8	-4.6	8.03†††	105	104
Philippines	+7.0 Q2	+7.4	+6.4	+13.6 Aug	+2.3 Sep	+1.7	5.4 Q3§	+3.2 Jun	+1.1	-1.0	3.80	48.4	46.5
Singapore	+2.0 Q2	-4.1	+1.0	+6.7 Sep	-0.2 Sep	-0.7	2.1 Q3	+58.4 Q2	+19.4	+0.7	1.81	1.39	1.39
South Korea	+2.7 Q3	+2.8	+2.6	+2.3 Aug	+1.2 Sep	+0.9	3.6 Sep§	+101.3 Aug	+7.2	-1.4	1.63	1,134	1,134
Taiwan	+0.7 Q2	+0.2	+0.7	+5.0 Sep	+0.3 Sep	+1.1	3.9 Sep	+75.7 Q2	+13.3	-0.5	0.96	31.6	32.4
Thailand	+3.5 Q2	+3.2	+3.1	+3.1 Aug	+0.4 Sep	+0.2	0.9 Aug§	+42.4 Q2	+5.3	-2.5	2.19	35.0	35.5
Argentina	-3.4 Q2	-8.0	-1.5	-2.5 Oct	— ***	—	9.3 Q2§	-15.4 Q2	-2.4	-5.0	na	15.2	9.52
Brazil	-3.8 Q2	-2.3	-3.2	-5.2 Aug	+8.5 Sep	+8.3	11.8 Aug§	-23.3 Sep	-1.1	-6.4	11.24	3.12	3.88
Chile	+1.5 Q2	-1.4	+1.7	+2.8 Aug	+3.1 Sep	+3.9	6.9 Aug§‡‡	-5.1 Q2	-1.9	-2.5	4.18	654	685
Colombia	+2.0 Q2	+0.8	+2.0	+9.4 Aug	+7.3 Sep	+7.6	9.0 Aug§	-15.7 Q2	-5.1	-3.7	7.27	2,958	2,915
Mexico	+2.5 Q2	-0.7	+2.1	+0.3 Aug	+3.0 Sep	+2.9	3.9 Sep	-30.9 Q2	-2.9	-3.0	6.15	18.6	16.5
Venezuela	-8.8 Q4~	-6.2	-14.2	na	na	+485	7.3 Apr§	-17.8 Q3~	-3.0	-24.3	10.57	9.99	6.31
Egypt	+6.7 Q1	na	+4.4	-13.1 Aug	+14.1 Sep	+12.8	12.5 Q2§	-18.7 Q2	-6.8	-11.5	na	8.88	8.03
Israel	+2.8 Q2	+4.3	+3.0	+1.7 Jul	-0.4 Sep	-0.4	4.6 Aug	+12.1 Q2	+3.3	-2.4	1.81	3.84	3.88
Saudi Arabia	+3.5 2015	na	+1.1	na	+3.0 Sep	+4.2	5.6 2015	-61.5 Q2	-5.6	-11.6	na	3.75	3.75
South Africa	+0.6 Q2	+3.3	+0.4	+0.1 Aug	+6.1 Sep	+6.4	26.6 Q2§	-12.9 Q2	-4.1	-3.4	8.88	13.9	13.6

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. ***Official number not yet proved to be reliable; The State Street PriceStats Inflation Index, Sept 35.92%; year ago 26.47% †††Dollar-denominated bonds.

Markets

	Index Oct 26th	% change on: one week	% change on Dec 31st 2015: in local currency	% change on Dec 31st 2015: in $ terms
United States (DJIA)	18,199.3	nil	+4.4	+4.4
China (SSEA)	3,262.7	+1.0	-11.9	-15.5
Japan (Nikkei 225)	17,391.8	+2.3	-8.6	+5.3
Britain (FTSE 100)	6,958.1	-0.9	+11.5	-7.5
Canada (S&P TSX)	14,807.6	-0.2	+13.8	+18.6
Euro area (FTSE Euro 100)	1,048.6	+0.6	-4.2	-3.7
Euro area (EURO STOXX 50)	3,081.0	+0.8	-5.7	-5.2
Austria (ATX)	2,508.4	+2.5	+4.6	+5.2
Belgium (Bel 20)	3,570.6	-0.8	-3.5	-3.0
France (CAC 40)	4,534.6	+0.3	-2.2	-1.7
Germany (DAX)*	10,709.7	+0.6	-0.3	+0.2
Greece (Athex Comp)	589.5	-0.6	-6.6	-6.2
Italy (FTSE/MIB)	17,280.7	+1.4	-19.3	-18.9
Netherlands (AEX)	455.8	+0.3	+3.2	+3.7
Spain (Madrid SE)	925.7	+2.6	-4.1	-3.6
Czech Republic (PX)	919.2	-0.4	-3.9	-3.4
Denmark (OMXCB)	817.9	-1.0	-9.8	-9.0
Hungary (BUX)	29,854.7	+2.4	+24.8	+28.1
Norway (OSEAX)	697.8	-0.6	+7.5	+15.2
Poland (WIG)	48,381.3	+1.1	+4.1	+3.6
Russia (RTS, $ terms)	989.5	-0.6	+12.2	+30.7
Sweden (OMXS30)	1,454.2	-0.1	+0.5	-4.8
Switzerland (SMI)	7,892.8	-2.5	-10.5	-9.8
Turkey (BIST)	79,397.9	+0.2	+10.7	+4.7
Australia (All Ord.)	5,442.1	-1.4	+1.8	+7.0
Hong Kong (Hang Seng)	23,325.4	+0.1	+6.4	+6.4
India (BSE)	27,836.5	-0.5	+6.6	+5.5
Indonesia (JSX)	5,399.7	-0.2	+17.6	+24.6
Malaysia (KLSE)	1,673.9	+0.3	-1.1	+2.0
Pakistan (KSE)	40,526.8	-1.0	+23.5	+23.5
Singapore (STI)	2,828.6	-0.6	-1.9	+0.2
South Korea (KOSPI)	2,013.9	-1.3	+2.7	+6.2
Taiwan (TWI)	9,362.3	+0.8	+12.3	+16.9
Thailand (SET)	1,492.1	+0.4	+15.8	+19.1
Argentina (MERV)	18,187.6	+0.3	+55.8	+32.5
Brazil (BVSP)	63,825.7	+0.5	+47.2	+86.8
Chile (IGPA)	21,439.2	+0.9	+18.1	+28.1
Colombia (IGBC)	10,052.2	-0.5	+17.6	+26.2
Mexico (IPC)	47,805.4	-1.4	+11.2	+3.1
Venezuela (IBC)	14,057.4	+3.2	-3.6	na
Egypt (Case 30)	8,257.2	+1.2	+17.9	+3.9
Israel (TA-100)	1,254.5	+0.3	-4.6	-3.3
Saudi Arabia (Tadawul)	5,885.0	+6.6	-14.9	-14.8
South Africa (JSE AS)	51,552.3	+0.1	+1.7	+13.4

Doing business

A record number of economies have adopted reforms to make "doing business" easier, according to the latest World Bank report. New Zealand, which has the fewest number of procedures and shortest time required to start a business, ranks highest this year, overtaking Singapore. It also ranks first for dealing with construction permits, registering property and providing access to credit. But for paying taxes it ranks 11th out of 190 countries. Businesses there take on average 152 hours a year preparing and paying taxes—the global average is 250 hours. Brazil ranks 123rd overall, and red tape makes it a taxpayers' nightmare. Firms in the United Arab Emirates spend a mere 12 hours a year on their tax returns.

Time spent paying taxes*, 2016
Hours per year, '000

Source: World Bank *By a local manufacturing company

Other markets

	Index Oct 26th	% change on: one week	% change on Dec 31st 2015: in local currency	% change on Dec 31st 2015: in $ terms
United States (S&P 500)	2,139.4	-0.2	+4.7	+4.7
United States (NAScomp)	5,250.3	+0.1	+4.9	+4.9
China (SSEB, $ terms)	346.9	+1.3	-15.2	-18.6
Japan (Topix)	1,382.7	+1.9	-10.6	+3.0
Europe (FTSEurofirst 300)	1,349.8	-0.4	-6.1	-5.6
World, dev'd (MSCI)	1,699.9	-0.4	+2.2	+2.2
Emerging markets (MSCI)	910.6	-0.3	+14.7	+14.7
World, all (MSCI)	413.2	-0.4	+3.5	+3.5
World bonds (Citigroup)	936.9	-0.7	+7.7	+7.7
EMBI+ (JPMorgan)	806.7	+0.2	+14.5	+14.5
Hedge funds (HFRX)	1,189.2§	+0.1	+1.3	+1.3
Volatility, US (VIX)	14.2	+14.4	+18.2	(levels)
CDSs, Eur (iTRAXX)†	71.4	+0.7	-7.4	-6.9
CDSs, N Am (CDX)†	75.4	+2.3	-14.7	-14.7
Carbon trading (EU ETS) €	5.9	+6.5	-28.3	-28.0

Sources: Markit; Thomson Reuters. *Total return index.
†Credit-default-swap spreads, basis points. §Oct 25th.

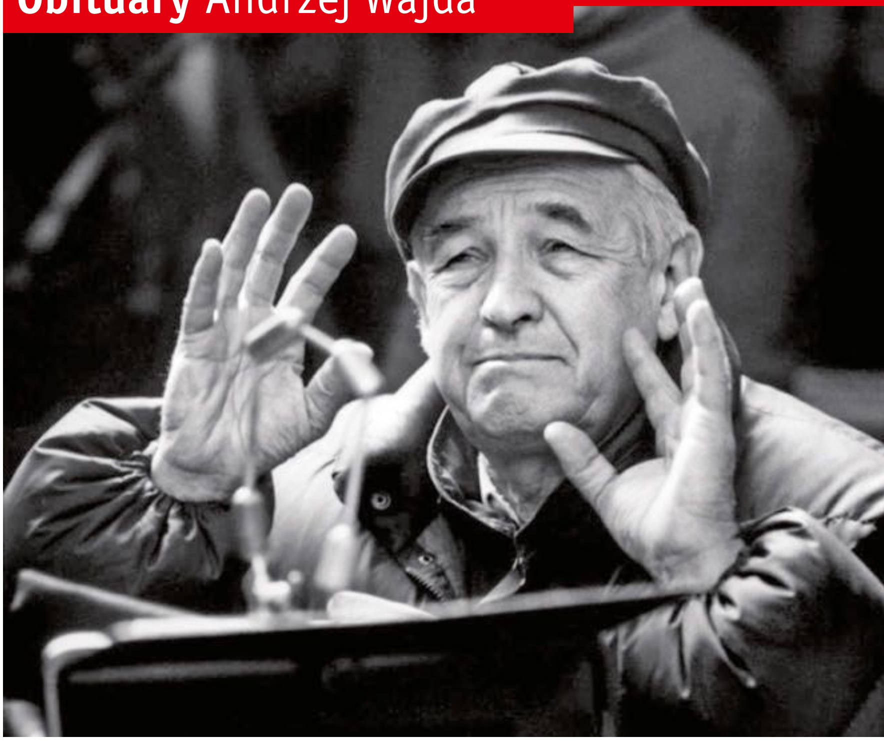
Indicators for more countries and additional series, go to: **Economist.com/indicators**

The Economist commodity-price index

2005=100

	Oct 18th	Oct 25th*	% change on: one month	% change on: one year
Dollar Index				
All Items	137.4	138.0	-0.4	+5.6
Food	156.1	157.2	-0.7	+3.5
Industrials				
All	117.9	117.9	+0.1	+8.5
Nfa†	128.9	126.9	+0.5	+16.5
Metals	113.2	114.1	-0.1	+5.1
Sterling Index				
All items	203.1	206.9	+6.6	+33.3
Euro Index				
All items	155.6	158.0	+2.7	+7.4
Gold				
$ per oz	1,261.7	1,272.6	-4.1	+9.0
West Texas Intermediate				
$ per barrel	50.3	49.6	+10.9	+14.7

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.



Conscience-keeper

Andrzej Wajda, Poland's greatest film-maker, died on October 9th, aged 90

THE life's work of Andrzej Wajda was to tell Poles forbidden truths about their country and explain simpler ones to foreigners. Neither should have been necessary. Nazis and communists smothered Poland in fear and lies. The country of Chopin, Conrad and Copernicus was cut off from the European cultural mainstream, to be patronised, misunderstood and forgotten.

He would have loved to make films about something else, to have dumped the tragic national themes and their well-worn symbols—sabres, white horses, red poppies—for something more exotic, such as "a handful of sexual symbols from a Freudian textbook". But that was a luxury for film-makers in happier countries.

Since pictures were harder to censor than words, he set himself to making films that would evade the official scissors, giving his compatriots a chance to see, think and breathe freely, at least in the darkness of the cinema. At first, his work avoided direct confrontation. Instead he stuck to the rules while quietly subverting them, with bleak, anti-heroic films that could be seen as stories about people, not dangerous ideas. A favourite image in the early work was a lit match burning away a glass of alcohol: nothing to the censors but, to him, idealism evaporating in the war.

The closing scene of his greatest early work, "Ashes and Diamonds" (1958), showed an anti-communist guerrilla dying on a rubbish dump after botching an assassination—an image as powerful as those of Goya or Delacroix. That grim end, he knew, would make the censors glad, but audiences would ask themselves: "What kind of system is this that forces such a sympathetic lad to die on a garbage heap?' In an earlier film, "Kanal" (1956), young soldiers in the Warsaw Uprising of 1944 perished hopelessly in the city's sewers. He did not say explicitly that the Soviet Red Army callously stood by while Nazis crushed the flower of the resistance—but no Pole needed reminding of that.

Double vision

As a young man he went to art school in Cracow, and film-making remained a second-choice career. Film, for him, had to be based on painting, especially the tortured victim-figures of his idol Andrzej Wroblewski, who had recorded the Nazi occupation. Mr Wajda's 40 films became his own great mural of Polish misfortunes. And since the good Lord had given him two eyes, one to look into the camera and the other to notice what was going on around him, he managed to make history, too. His work subtly undermined communism's grip on Polish life; audiences could see that the system was based on lies, and could be outwitted.

Only after martial law was declared in 1981 did the authorities crack down. Mr Wajda's "Man of Iron", about the Gdansk shipyard strike of 1980, had just won the Palme d'Or at Cannes, and he was increasingly caught up in the Solidarity movement; 22 years later he made a biopic of his close friend Lech Walesa, its founder. The prize saved him from prison, but the government shut down his production company. Or so it thought. In secret he then made "Interrogation", a nightmarish exposé of Stalinist brutality, regarded as the most anti-communist film ever made in Poland, and not shown publicly until 1989.

Pigeonholing him was hard. His films were realistic and romantic, classic and innovative; his baroque leanings became starker as he matured. Little of himself was allowed to show. Only "The Birch Wood" (1970) was an indulgence, and he felt guilty to be out in nature, watching leaves unfurl, while Poland was dying; but lyricism could leaven the relentlessly political.

Optimistic by nature, a man of winning smiles, he still firmly expected to die in the communist system, and was astonished when freedom came. Modest in manners, he was also utterly confident. It was not arrogance, but a statement of fact, when he said he was the only director who could make a film about the "unhealed wound" of Katyn, the secret Soviet massacre in 1940 of 20,000 Polish officers. His father Jakub, a cavalry officer, was one of those murdered; he never forgot his mother's desperate search for news of her missing husband. Under communism the topic had been taboo, for the butchery was followed by a lie: that it had been the work of the Nazis.

After 1989, when Poles began to gorge on Western culture, Mr Wajda would not hear a word against the American films he so admired. But he worried that Polish cinema, "born only to speak about the disasters of our nation", was now unfashionable and unnecessary. He fretted, too, that Western audiences found his subject matter "as antediluvian as the battle for workers' rights in England in the time of Karl Marx". Groundless fears: four of his films were nominated for Academy Awards.

Among them was "Katyn". The harrowing film was a great success, especially as it coincided with fresh worries about Russian mendacity and menace. History may sometimes seem optional in Poland; geography shapes its destiny. As he received an honorary Oscar in 2000, Mr Wajda admitted how distant and unknown Poland was; but his work could not stray from it, nor would he happily make films anywhere else. "I think I have things to say," he declared once. "But they are only important if I say them from Poland." ■