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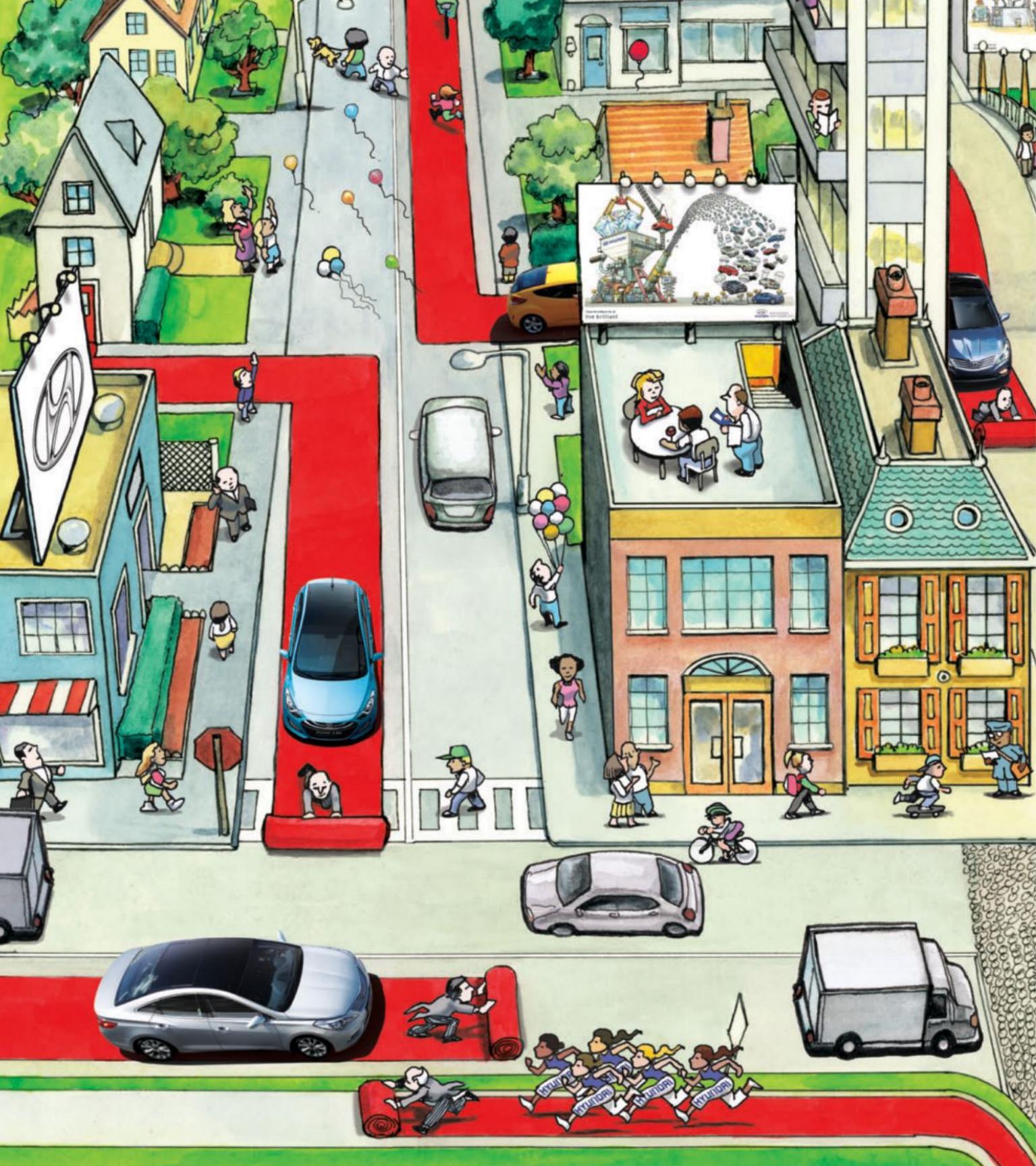
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- Greece's bond bombshell
- In praise of three-parent babies
- Nigeria's blood-soaked election
- Will India pollute more than China?
- How to quit the corner office

Capitalism's unlikely heroes

**Why activist investors
are good for the
public company**

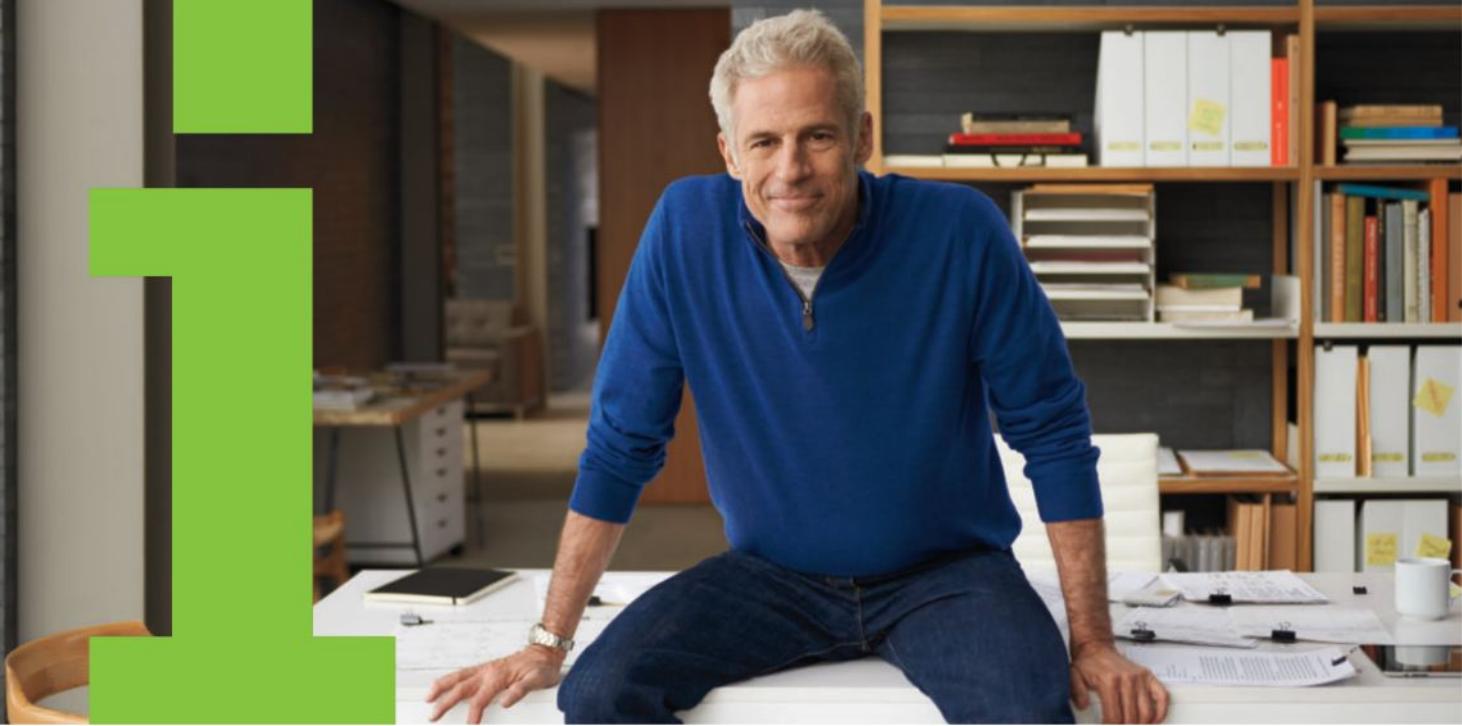




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Politics



The new prime minister of **Greece**, Alexis Tsipras, and his finance minister, Yanis Varoufakis (above left), toured Europe in search of debt relief and support against austerity. Mr Varoufakis floated a plan to replace Greek debt with bonds linked to GDP growth. For the most part, they met a dusty response; the European Central Bank stopped taking Greek government bonds as collateral. Markets were volatile but seemed hopeful that a deal would eventually be done.

America and Europe prepared a new peace initiative to present to the Russians to end the war in **eastern Ukraine**, amid heavy fighting and more military and civilian deaths. Earlier, the pro-Russian rebel leader said he would expand his force to 100,000 men. More Russian equipment and, according to NATO, troops poured across the border.

The International Court of Justice in The Hague rejected claims by both **Croatia** and **Serbia** that the other was guilty of genocide during their wars of 1991-95, when some 20,000 people were killed.

Italy's parliament picked a new president, Sergio Mattarella, a former judge. He was the candidate of Matteo Renzi, the prime minister. By securing his choice quickly, Mr Renzi improved his chances of pushing through his reforms.

Tightening the net

China stepped up controls over the internet. It is now requiring users of blogs and chat rooms to register their real names with internet providers

and they must promise to avoid attacking the political system. Censors have also been trying to restrict access to "virtual private networks", which are often used to circumvent the blocking of politically sensitive websites.

Myanmar accused a senior UN official of interfering in its affairs after she had raised concerns about discrimination against members of the Muslim Rohingya minority. The Rohingya are stateless and have been the target of attacks by members of Myanmar's Buddhist majority.

The coalition government in **Australia** suffered a resounding defeat in state elections in Queensland. The foreign minister, Julie Bishop, denied that she is planning to oust the prime minister, Tony Abbott, whose popularity has slumped, by mounting a challenge for the leadership of the Liberal Party.

Barbaric State

Islamic State militants broadcast their beheading of a Japanese journalist and murder of a Jordanian fighter pilot, whom they burnt alive in a cage. Jordanians, hitherto ambivalent about the bombing of Sunni jihadists, turned against the movement strongly, welcoming King Abdullah's continued participation in the American-led coalition as well as his execution of two jailed militants in revenge.

Egypt's president deported an Australian journalist who had reported for Al Jazeera, ending his incarceration of 400 days for broadcasting "false" news. Meanwhile, Egypt's courts jailed 230 people for anti-government activity, including a liberal activist, Ahmed Douma, who was sentenced to life in prison.

Houthi rebels who have overrun the capital of **Yemen**, Sana'a, refused to release the country's president, Abd Rabbo Mansour Hadi, and his cabinet from house arrest until a deal is reached on integrating the rebels into the regular

army. They said that without a deal, "a revolutionary leadership" under their command would take full control.



Forces from **Chad** and **Cameroon** backed by French planes fought their most serious battle since entering north-eastern **Nigeria** to suppress Boko Haram, a jihadist group. They claimed to have killed 250 militants and "wiped out" their bases near the border with Cameroon. But the fighting spilled into Cameroon, with Boko Haram reportedly killing at least 70 people in the town of Fotokol.

Petro dollars

Maria das Graças Foster, the chief executive of Petrobras, **Brazil's** state-controlled oil company, resigned amid a corruption scandal centred on claims that Petrobras solicited billions of dollars in payments from construction companies, some of which were funnelled to political parties. These include the Workers' Party, which is led by Dilma Rousseff, Brazil's president. The lower house of Brazil's Congress has elected as its Speaker Eduardo Cunha, who has often clashed with Ms Rousseff.

In **Argentina** it emerged that Alberto Nisman, a prosecutor who was found dead in January, had drafted a warrant for the arrest of the president, Cristina Fernández de Kirchner. Mr Nisman had accused the president of obstructing the investigation of the bombing of a Jewish community centre in Buenos Aires in 1994. The arrest warrant was found in a rubbish bin in his home.

Mexico's president, Enrique Peña Nieto, ordered an investigation into conflict-of-

interest allegations against him, his wife and the finance minister, Luis Videgaray. Mr Peña also backed a constitutional reform to create a set of interlocking institutions to fight corruption.

Pope Francis declared that Óscar Romero, an archbishop from **El Salvador** who was shot dead while celebrating mass in 1980, was a martyr. This opens the way to his beatification. Earlier popes had regarded the archbishop, who was an exponent of "liberation theology", as a Marxist.

Budget gambit

Barack Obama presented a \$4 trillion **budget** that he said is intended "to replace mindless austerity with smart investments". It includes plans to increase capital-gains tax for top earners from 23.8% to 28%, various levies on business and expanded tax credits for the less well-off. The Republicans who control Congress will not pass it.

Just a few weeks after confounding the pundits by declaring that he was seriously interested in running for president again, **Mitt Romney** announced that, upon reflection and a great deal of data-crunching, he was not going to enter the race after all.



Harper Lee said she was "humbled and amazed" that her second novel would be published, 55 years after "To Kill a Mockingbird". The new book, "Go Set a Watchman", acts as a sequel, featuring Scout Finch as an adult woman. Ms Lee had written it prior to penning her seminal work, but the manuscript was lost for decades. She says the work is "a pretty decent effort".

Business



Staples agreed to buy **Office Depot** in a \$6.3 billion transaction that will combine America's two biggest retailers of stationery and office equipment. A previous attempt to merge in 1997 was thwarted by antitrust regulators, but that was before Amazon, Walmart and others increased competition in the industry. Office Depot acquired OfficeMax, a smaller rival, in 2013. An **activist** hedge fund with stakes in both Staples and Office Depot had pressed the companies to make a deal.

The bank that likes to say yes
Russia's central bank took markets by surprise when it cut its main interest rate to 15%, having raised it by six and a half percentage points to 17% in December. Elvira Nabiullina, the governor of the central bank, had said only recently that the rate would not come down because of surging inflation. But aides to Vladimir Putin, the president, held the opposite view, calling for a cut to boost an economy struggling with plunging oil prices and Western sanctions.

In a move to increase lending to small businesses, the **People's Bank of China** reduced the amount of cash that banks must keep in reserve to 19.5% of deposits, from 20%. It is the first industry-wide cut in the ratio since 2012 and comes as more data point towards a cooling economy. One official measure showed that manufacturing shrank in January for the first time since mid-2012.

The stockmarket in **Australia** rose to a near seven-year high after the central bank shaved a

quarter of a percentage point off interest rates to 2.25%, an historic low.

A first official estimate indicated that **America's GDP** expanded by 2.4% in 2014. The economy slowed in the last three months of the year after racing ahead in the second and third quarters, mostly because of a drop in business investment and government spending. Consumers loosened their purse strings, however, increasing their spending in the fourth quarter at the fastest pace since early 2006.

Olé!

The **Spanish** government, which faces an election in the autumn, was buoyed by news that the economy grew by 1.4% last year, the most since 2007. Some forecasters think Spain will be the best-performing economy among the larger euro-zone countries this year. Spending and investment have increased after cuts to both income and corporate taxes.

After weeks of negotiations **BT**, Britain's biggest provider of broadband services, reached a deal to buy **EE**, the biggest wireless carrier, for £12.5 billion (\$19 billion) from Deutsche Telekom and Orange. The agreement leaves Deutsche

Telekom with a 12% stake in BT, making the German company its largest shareholder.

General Motors' net income fell by a quarter to \$2.8 billion last year as it absorbed the costs of a big safety recall. Still, after making substantial productivity gains its unionised workers can expect bonuses of up to \$9,000, the biggest seen under the current profit-sharing scheme.

America's Food and Drug Administration issued its first approval for a drug to treat **binge-eating disorders**. Vyvanse is made by Shire, which is based in Britain. It says that severe binge eating, which has been designated a mental disorder by the American Psychiatric Association, affects 2.8m adults in America, a more common ailment than anorexia and bulimia combined.

Prince Alwaleed bin Talal reduced his stake in **News Corporation** from 6.6% to 1%. The Saudi businessman (who two years ago got into a spat with Forbes, claiming it had underestimated his wealth) had been News Corp's biggest shareholder after the Murdoch family and was a steadfast supporter of Rupert Murdoch during the phone-hacking

scandal at its British newspapers. News Corp learnt this week that it will not face charges over the scandal in America, where it was investigated for possible breaches of the Foreign Corrupt Practices Act.

A health-insurance company in America disclosed that its systems had been hacked, in what could be the biggest theft of **personal data** yet. Anthem said hackers had broken into a database containing information on 80m people and the records of "tens of millions" had been accessed. It is still investigating.

Car, where's my dude?

Uber announced that it was investing in research into **driverless cars**, in collaboration with Carnegie Mellon University in Pittsburgh. Google has a head start in testing fully autonomous cars, which could be on the road within a decade. But Travis Kalanick, Uber's boss, told a conference last year that the benefit to taxi passengers of having no driver meant that "When there's no other dude in the car" the cost of using Uber becomes so cheap that there is no need to own a vehicle.

Other economic data and news can be found on pages 84-85





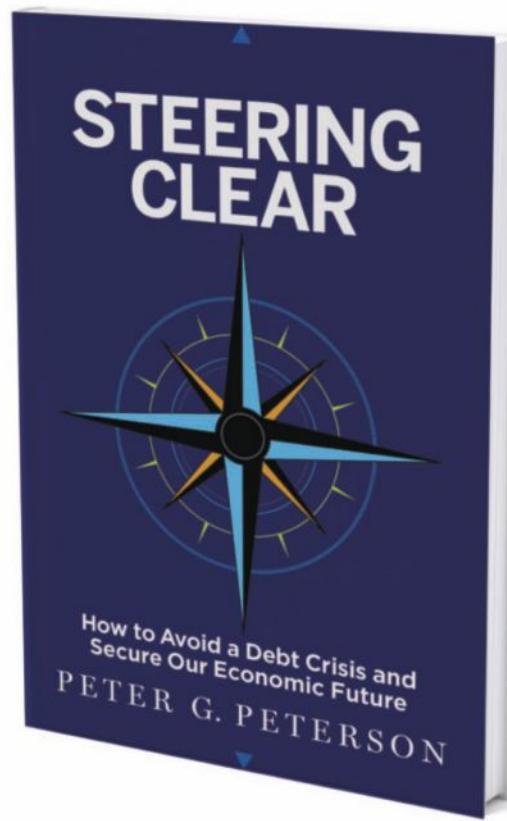
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Capitalism's unlikely heroes

Why activist investors are good for the public company



invest in capitalism's wealth-creating machines.

But the past 15 years have cast a shadow over the public company. There was not much sign of scrutiny or wealth creation in fiascos like Enron and Lehman Brothers. Governance has been weakened by the rise of passive index funds, which means that many firms' largest shareholders are software programs. Institutional investors prefer to sell at the first sign of trouble rather than manage problems—so chief executives obsess about quarterly earnings and grab pay and power while they can. At the same time, tycoons in Silicon Valley have often turned outside investors into second-class citizens, by creating special voting rights for their own shares.

Private-equity barons say their model of concentrated ownership makes more sense. Some governments argue that companies need the steady hand of the state. But there is a better way. Activist hedge funds take small stakes in firms and act like political campaigners, trying to win other shareholders' support for their demands: representation on companies' boards, cost-cutting, spin-offs and returning cash to shareholders. Mad, bad and dangerous to know, activists are often loathed by public-company bosses for their belligerence and opportunism. But the bosses are wrong. Activists are in fact the public company's unlikely saviours.

Hyenas laughing...

Activists have been around since the 1980s, but the scale of their insurrection in America is unprecedented. Activists run funds with at least \$100 billion of capital, and in 2014 attracted a fifth of all flows into hedge funds. Last year they launched 344 campaigns against public companies, large and small. In the past five years one company in two in the S&P 500 index of America's most valuable listed firms has had a big activist fund on its share register, and one in seven has been on the receiving end of an activist attack.

Americans encounter firms that activists have targeted when they brush their teeth (Procter & Gamble), answer their phone (Apple), log in to their computer (Microsoft, Yahoo and eBay), dine out (Burger King and PepsiCo) and watch television (Netflix). In December an activist fund called Trian broke new ground by winning a board seat at Bank of New York Mellon, custodian for many of the world's biggest banks.

A disgrace, say some; the cult of short-term shareholder value gone mad. Activists have a reputation for stripping cash and assets and loading firms with debt. Their rowdiness seems calculated to distract managers, good or bad. One prominent activist, Carl Icahn, likes to call chief executives "morons" and tease them on Twitter. Another, Bill Ackman of Pershing Square, has compared Herbalife, a firm he says is a fraud, to the

Nazis. When Dan Loeb went for Sotheby's, its then chairman branded him a "scumbag". Some have used dubious tactics, including building positions by stealth with derivatives.

So much money is flowing the activists' way that a few will no doubt go too far, harming a decently run firm or even breaking the law in the pursuit of an edge. Yet, despite their flaws and excesses, activists are a force for good.

...all the way to the bank

One reason is that plenty of companies suffer from rotten management. About a tenth of big American firms, and even more smaller ones, still employ tactics like "poison pills" and staggered boards that shelter incompetent managers.

Another is that today's activists belie the scavenging stereotype of the 1980s. They often seek to improve firms' boards rather than strip companies of assets. They work with other shareholders, frequently winning the support of big money-managers such as Capital Group and Fidelity. They are raising longer-term capital and so stretching their investment horizons. ValueAct, based in San Francisco, locks in its investors for three to four years and has served on the boards of 37 firms, including Microsoft. Mr Ackman has raised a pile of "permanent capital". *The Economist* has analysed the 50 largest activist positions in America since 2009 (see pages 21-24). More often than not, profits, capital investment and R&D have risen.

Private-equity funds are another way of fixing misfiring firms. But activists have advantages over Wall Street's buy-out barbarians. Instead of loading up on debt to finance the takeover of entire firms, they get the work done with a stake of, typically, just 5% or so. That means activists are good value because they use less debt, pay no takeover premium and extract far lower absolute fees.

Most of all, activists fill a governance void that afflicts today's public companies. A rising chunk of the stockmarket sits in the hands of lazy investors. Index funds and exchange-traded funds mimic the market's movements, and typically take little interest in how firms are run; conventional mutual funds and pension funds that oversee diversified portfolios dislike becoming deeply involved in firms' management. In the face of Wall Street's provocateurs, America's lazy money is waking up. Whether their ideas are barmy or brilliant, the activists make it harder for investors to stay on the sidelines. Mutual funds and pension funds are being forced to take a view, and hence become more active and forward-looking.

European and Asian shareholders say they do not need activists because they have more power than American investors over managers' pay and appointments. They typically dismiss Mr Icahn and his friends as an American solution to an American problem. And, for cultural reasons, the few European activists tend to be more diplomatic and consultative than their brash cousins.

Yet wherever there are stockmarkets you will find underperforming companies, clubbable bosses and lazy capital. The public company was never meant to be a bureaucracy run by distant managers accountable to funds run by computers. The activist revolt will help give it a new lease of life. ■

Reproductive technology

Oh, baby

Britain's approval of babies with three genetic parents offers lessons for other countries



PLAYING God" is what medicine is for. Every Caesarean section and cancer treatment is an attempt to interfere with the natural course of events for the benefit of the patient. Not every procedure should be allowed, but a general sense of what is "unnatural" is a poor guide to what to ban. Transplants and transfusions were once considered unnatural, but now save many lives. That insight is why MPs were right to agree, on February 3rd, that Britain should become the first country to allow the creation of children with genetic material from three people instead of the usual two (see page 55).

By doing so, they hope to relieve terrible suffering. Faults with mitochondria—the tiny power sources inside cells—afflict about one child in 6,500, or 100 a year in Britain. The many conditions that result, a lot of them agonising and fatal, have no cure. So scientists hope to prevent them at conception, by transferring the healthy nucleus of an egg cell with damaged mitochondria into the body of an egg with functioning ones.

The procedure is not yet allowed anywhere else in the world, partly because it is new and untested in people but also because of the opposition that reproductive medicine often inspires. Mitochondria contain DNA, therefore any child born as a result of such intervention will inherit genes from three people—hence the headlines in Britain this week about "three-parent babies". If the baby is a girl the genetic tweak in her mitochondria will be inherited by her children, and in turn by her granddaughters' children. It is a "germ-line modification", and thus irrevocable.

This ethical objection to mitochondrial donation is decisively outweighed by the good that ought to come from it. Mitochondrial disease is a misery to those who have it and a ter-

ror to those who fear they might pass it on to their children; curtailing it would be wonderful. The complaint that this is the first step on the road to "designer babies" is as weak as any other slippery-slope argument: approving one procedure does not mean automatically approving others.

A second objection is that this procedure, like any new technique, might not be safe. Those who must bear that risk are not yet born, and so cannot consent to the treatment. But parents already make medical decisions on behalf of their children, even unborn ones. And Britain's bureaucrats, led by the Human Fertilisation and Embryology Authority (HFEA), which regulates fertility treatments, have been scrupulous in assessing risks. The HFEA first granted a research licence for the technique in 2005. Since then, a scientific panel has conducted three reviews of trials in test tubes and in animals. These have given no cause for concern.

From the land of the test-tube baby

That scrupulousness is one reason why the vote passed as easily as it did. Doctors and patients' groups sometimes criticise the HFEA for being too conservative. But its somewhat ponderous, consensus-seeking approach (the HFEA has conducted consultations, ethics reviews and several opinion polls) has helped Britain steer clear both of American-style culture wars and of the lax oversight found in some Asian countries.

Mitochondrial donation will not be the last piece of controversial medicine that the HFEA will need to wrestle with. It is already possible, for example, to sequence the genes of embryos and discard those that carry incurable genetic diseases. Choosing beneficial characteristics is, for now, illegal. But as the human genome becomes better understood, patients may agitate for exemptions. The HFEA, or something like it, offers the best method for evaluating the benefits and risks of such procedures. Sometimes bureaucrats are just what you need. ■

Nigeria's election

The least awful

A former dictator is a better choice than a failed president



SOMETIMES there are no good options. Nigeria goes to the polls on February 14th to elect the next president, who will face problems so large—from rampant corruption to a jihadist insurgency—that they could break the country apart, with dire consequences for Nigerians and the world.

And yet, as Africa's biggest economy stages its most important election since the restoration of civilian rule in 1999, and perhaps since the civil war four decades ago, Nigerians must pick between the incumbent, Goodluck Jonathan, who has

proved an utter failure, and the opposition leader, Muhammadu Buhari, a former military dictator with blood on his hands (see page 43). The candidates stand as symbols of a broken political system that makes all Nigeria's problems even more intractable.

Start with Mr Jonathan, whose People's Democratic Party (PDP) has run the country since 1999 and who stumbled into the presidency on the death of his predecessor in 2010. The PDP's reign has been a sorry one. Mr Jonathan has shown little willingness to tackle endemic corruption. When the governor of the central bank reported that \$20 billion had been stolen, his reward was to be sacked.

Worse, on Mr Jonathan's watch much of the north of the ▶▶

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► country has been in flames. About 18,000 people have died in political violence in recent years, thousands of them in January in several brutal attacks by Boko Haram, a jihadist group that claims to have established its “caliphate” in territory as large as Belgium. Another 1.5m people have fled their homes. The insurgency is far from Mr Jonathan’s southern political heartland and afflicts people more likely to vote for the opposition. He has shown little enthusiasm for tackling it, and even less competence. Quick to offer condolences to France after the attack on *Charlie Hebdo*, Mr Jonathan waited almost two weeks before speaking up about a Boko Haram attack that killed hundreds, perhaps thousands, of his compatriots.

The single bright spot of his rule has been Nigeria’s economy, one of the world’s fastest-growing. Yet that is largely despite the government rather than because of it, and falling oil prices will temper the boom. The prosperity has not been broadly shared: under Mr Jonathan poverty has increased. Nigerians typically die eight years younger than their poorer neighbours in nearby Ghana.

Goodbye Jonathan

Voters have ample cause to send Mr Jonathan packing. In a country where power has often changed through the barrel of a gun, the opposition All Progressives Congress has a real chance of winning through the ballot box. Yet its candidate, Mr Buhari, is an ex-general who, three decades ago, came to power in a coup. His rule was nasty, brutish and mercifully short.

Declaring a “war against indiscipline”, he ordered whip-wielding soldiers to ensure that Nigerians formed orderly queues. His economics, known as Buharism, was destructive. Instead of letting the currency depreciate in the face of a trade deficit, he tried to fix prices and ban “unnecessary” imports. He expelled 700,000 migrants in the delusion that this would create jobs for Nigerians. He banned political meetings and free speech. He detained thousands, used secret tribunals and executed people for crimes that were not capital offences.

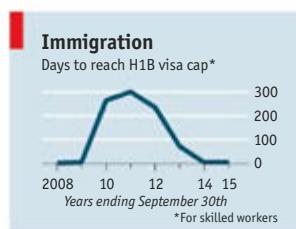
Should a former dictator with such a record be offered another chance? Surprisingly, many Nigerians think he should. One reason is that, in a country where ministers routinely wear wristwatches worth many times their annual salary, Mr Buhari is a sandal-wearing ascetic with a record of fighting corruption. Few nowadays question his commitment to democracy or expect him to turn autocratic: he has repeatedly stood for election and accepted the outcome when he lost. He would probably do a better job of running the country, and in particular of tackling Boko Haram. As a northerner and Muslim, he will have greater legitimacy among villagers whose help he will need to isolate the insurgents. As a military man, he is more likely to win the respect of a demoralised army.

We are relieved not to have a vote in this election. But were we offered one we would—with a heavy heart—choose Mr Buhari. Mr Jonathan risks presiding over Nigeria’s bloody fragmentation. If Mr Buhari can save Nigeria, history might even be kind to him. ■

Immigration

Let the states decide

Congress shows no sign of fixing America’s broken immigration system. It is time to give the states a go



And although they are perhaps America’s largest single ethnic group—46m claim German ancestry—their neighbours barely notice them, so thoroughly have they assimilated (see page 25). Agreeable Teutonic customs, such as drinking beer with pretzels and watching sports on Sunday, have spread throughout the land. Tedious ones, such as reading Nietzsche, have not. The success of people who arrived poor and now prosper mightily, is evidence that the melting pot works. It is a rebuke to those who demand ever-higher fences to keep foreigners out.

Fixing America’s broken immigration system is as urgent as ever. America is generous in issuing visas for relatives of those already there, but economic migrants face huge barriers. Firms that want to bring in skilled workers find it costly, time-consuming and often impossible, thanks to cumbersome rules and a rigid cap on the number of visas. Foreign students are kicked out shortly after they graduate. Entrepreneurs are told to take their big ideas elsewhere. And roughly 11m people live in America illegally. Most will never be deported, not least because Barack Obama’s amnesty has explicitly shielded 5m or

so from removal. But they have little hope of legal recognition.

Congress refuses to sort out this mess. Wise heads in both parties understand that immigrants bring talent, youth and global connections. All told, they create jobs, not least because they are more likely than the native-born to start new businesses. Highly skilled immigrants help companies grow and raise the wages of the native-born. Unskilled ones tend to do jobs that natives shun. America is built on immigration. Yet a bipartisan immigration reform approved by the Senate in 2013 has no chance of passing the House, and Republicans on Capitol Hill are putting all their energy into a futile effort to end Mr Obama’s amnesty.

Fifty ways to get a visa

If the federal government refuses to act, what about the states? Some make life nasty for illegal immigrants in the hope that they will go away: police in Arizona, for example, constantly check the papers of anyone who looks vaguely Mexican. But others—the most recent being California—issue them with driving licences. Massachusetts sponsors a scheme whereby enterprising foreigners can shelter their businesses under the aegis of universities (which are exempt from national visa caps on skilled migrants). And several struggling cities, such as Baltimore and Cleveland, welcome immigrants with open arms, hoping that they will repopulate blighted neighbourhoods and replenish empty public coffers (see page 26). Rick Snyder, the Republican governor of Michigan, has called for 50,000 ►

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David L. Pickett, President of Gotham Organization

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► new visas for people willing to live in Detroit.

America's borders are a federal responsibility, but there is a case for delegating some powers. In Canada and Australia provinces and states can nominate immigrants for visas directly. If sparsely populated South Australia wants young workers or oil-rich Alberta wants geologists, they can sponsor immigrants to move there. The central government sets quotas; the regions decide how to apportion them. In Canada such immigrants are free to move around once they have earned permanent residency, but since the provinces tend to pick migrants whose skills match local demand, most stay put.

America, too, should create such a scheme, on a larger scale and in addition to existing visa quotas. California would then be able to make it easier for its tech firms to hire Indian and Chinese whizz-kids; Kansas would find more farm hands; Michigan might even find people willing to invest in Motown. Immig-

gration is not a cure for dying cities—some are doomed to fade away no matter what. But an influx of foreign workers looking for cheap homes can sometimes turn rough neighbourhoods around, as in New York in recent decades.

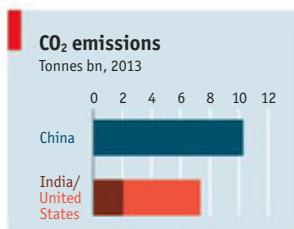
State-sponsored immigrants should be free to move around the country immediately. Even if they are obliged to stay put for a couple of years it would be less restrictive than the status quo, in which not-yet-permanent migrants are often tied for years to a specific employer, and cannot switch jobs.

State governments are often more pragmatic than the federal one, and more sensitive to the needs of local labour markets. So involving the states more in immigration policy could create powerful new advocates for rolling out the welcome mat. Giving states a say in who can come to America may sound implausibly radical, but if anyone has a better idea for breaking the immigration logjam, let's hear it. ■

Pollution in India and China

Indian winter

Narendra Modi should learn from China's mistakes before it's too late



Beijing, then suffering an “airpocalypse”—alarming levels of airborne pollution which focused public attention on China’s dismal environmental record and forced the government to do more about it. Today they are more likely to feature in India’s capital, Delhi, the most polluted city on Earth.

India’s mission in the next 30 years is to grow as fast as China has in the past 30—but without all the pollution (see page 38). The global climate could not bear India following China’s path; and the health of Indians could not stand it. Instead India’s prime minister, Narendra Modi, needs to improve India’s environmental laws by drawing lessons from China.

Modi vivendi

If India were to start belching out as much carbon as China does now, it would be adding an extra America’s-worth of emissions to the atmosphere every year. That is why curbing pollution would benefit everyone. But it would benefit Indians the most. One study calculated that air pollution (from soot, mostly, not carbon dioxide) has reduced the life expectancy of citizens of northern China by about 5.5 years (see page 41). The authors of that study have now looked at India, and concluded that air pollution already cuts life expectancy there by about three years for nearly 700m people.

The good news is that India has some advantages over China. When it began its market reforms, China was saddled with monstrously polluting, Soviet-inspired heavy industry. India has fewer smokestacks and a bigger services sector. Its bureaucrats do not have to meet targets for economic growth, which in China encourage local officials to favour output over cleaner water or purer air. And although Indians are sometimes said

NATIONAL monuments skulk in the smog. Pedestrians and traffic policemen mask their mouths in a vain attempt to keep out the fetid vapours. Children choke in their schoolrooms. Two years ago such scenes would have been set in

not to care about the environment, they can look back to an ancient tradition of green law. Ashoka, who united much of the Indian subcontinent in the third century BC, was the first ruler to issue edicts protecting his natural surroundings (“Forests must not be burned in order to kill living things or without any good reason,” said one rule).

All that bodes well. But India still has much to do. Smoke from cooking fires claims about 1m lives a year. Fewer than one in ten coal-fired power stations scrubs its flue gases of sulphur compounds. Too many laws are weak or poorly enforced. The Pollution Control Board controls nothing. Environmental groups have filed a mass of lawsuits against the government’s inaction, with the result that the Supreme Court plays a larger role in environmental protection than its equivalent does in any other big country—an odd way to set policy.

Mr Modi should start with better information. Some Indian cities have begun to monitor particulates in the air. Others should quickly follow—and make the data public, so that independent groups can hold politicians and polluters to account. Cleaner transport is a priority. The fuel in most of India’s cars and lorries is filthy and sulphurous. In March the Supreme Court will decide whether to raise fuel-efficiency and vehicle-emissions standards. It should do both.

Happily, India has plans to clean up. It ended subsidies on diesel last year, so firms have less reason to run inefficient, polluting generators and vehicles. Next to go should be subsidies on paraffin. The dirtiest power plants must close. States should follow the lead of Gujarat, Maharashtra and Tamil Nadu, which are due to launch the world’s first cap-and-trade schemes for particulates.

India’s leaders need to recognise that the pollution created in the rush to improve people’s lives sets progress back and that emissions can be curbed in ways that do not wreck economic growth. If, for instance, India were to build a reliable electricity grid it would reduce the use of dirty private generators, cut indoor air pollution from cooking fires and boost productivity all at the same time. China waited too long to clean up its act; India should not make the same mistake. ■

Oxford v Cambridge

The picture you used of a victorious Cambridge crew in the annual boat race did not reflect all aspects of its historical rivalry with Oxford ("Trailing in its wake", January 17th). The economic picture also has more facets. Oxford has created more new firms than any other British university over the past 25 years. Many are still based in the city. One of those, NaturalMotion, was sold for \$527m, making it one of the ten biggest acquisitions in British technology last year. Two regional partnership deals struck in 2014 will unleash more than £1.3 billion (\$2 billion) of investment in infrastructure and innovation. They will be new businesses built on Oxford University's strengths in nano-medicine, robotics, supercomputing, superconductors and other fields of research.

Furthermore, an independent report by Sherry Coutu, an angel investor, about scaling-up companies, a significant measure of economic growth, found that the Oxfordshire Local Enterprise Partnership area had nearly twice as many scaled-up companies as the Cambridge and Peterborough area in 2014. (She predicts that Cambridge will almost catch up by 2024, so there is some encouragement for them.)

December's research assessment of British universities put Oxford in clear first place. That assessment, which evaluated all the benefits of university research, demonstrates the outstanding economic impact of Oxford's research portfolio.

PROFESSOR IAN WALMSLEY
Pro vice-chancellor, research
Oxford University

Mexico is fighting corruption

Bello (January 24th) misrepresented one of the important steps already taken in Mexico's drive against corruption. The comprehensive reforms approved in 2013 grant the attorney-general's office autonomy and independence from the executive and establish a special prosecutor within the office to work against corrup-

tion. The aim of this new body is to prosecute corruption-related crimes that fall under federal law and investigate offences committed by federal public servants.

The Anti-Corruption Agency is a branch of the independent prosecutor's office and will not and cannot come under government control. Once the Senate approves the reform's secondary legislation in the coming weeks, the new office will begin to operate, a prosecutor will be appointed, and the agency and the Prosecutor's Office for Electoral Crimes will be developed.

This political reform is only one of many structural improvements aimed at taking on well-established vested interests by opening important parts of Mexico's economy and political system to greater competition and transparency.

DIEGO GÓMEZ PICKERING
Ambassador of Mexico
London

Party philosophy

"An army without generals" (January 10th) is how you described the Democratic Party's leaderless direction. That reminded me of the down-home Oklahoman insight of Will Rogers, cowboy and social commentator, who once said, "I am not a member of any organised political party. I am a Democrat."

MARSHAL ALAN PHILLIPS
Wichita, Kansas

Global warning

Bravo for calling for an end to government-backed fossil-fuel subsidies, which amounted to \$550 billion last year ("Seize the day", January 17th). I would also direct your attention to the \$500 billion in financing that international banks have coughed up for coal-industry projects and investment activities between 2005 and April 2014. Our research reveals that the trend for coal finance is rising. As well as calling for the eradication of handouts to the fossil-fuels industry in this year of the make-or-break Paris climate summit, I urge you also to pay attention to the coal

hole that is widening across the portfolios of the big banks. This is impeding their ability to help realise the "more efficient and greener energy future" that you favour.

JOHAN FRIJNS
Executive director
BankTrack
Nijmegen, the Netherlands

It is quite wrong to think that the current surplus of crude oil has "dealt a final blow to the notion of peak oil" (Special report on energy, January 17th). It is all about timing the peak. No one doubts that the Earth still contains huge amounts of crude oil. The problem is that the cost of recovering those resources is going to be much higher than today. If we are prepared to pay \$200 a barrel in the future for our oil then the timing of peak production will be much later than if we pay \$150 a barrel. At less than \$75 a barrel there are few new resources that can be developed profitably so, with production from existing fields falling naturally by 6% a year, the peak is almost upon us.

JEREMY GILBERT
Former chief petroleum engineer
at BP
Goleen, Ireland

Measuring inequality

Your claim that Oxfam's use of net wealth to measure inequality is "The wrong yardstick" (January 24th) missed some salient points. As anyone who has fallen sick or lost their job can tell you, net wealth is often vital. Having no resources to fall back on in times of crisis is a barrier to escaping poverty. Measuring inequalities of net wealth does not tell us the same things as looking at income but, as Branko Milanovic, whom you cited in your article, recently blogged, it is important nonetheless.

As you pointed out, our data include a small number of high-income individuals who have fallen into debt. But they do not significantly affect our analysis. If you exclude all those in debt, the top 1% still owns 48% of the wealth. As we said in our brief, if the trend since the financial crisis contin-

ues, the chances are that the wealthiest 1% will control half the world's net assets. We are not alone in believing that that is a problem worth tackling.

RICARDO FUENTES-NIEVA
Head of research
Oxfam
Oxford

The Super Bowl is still super

Lexington's prediction of the demise of American football hinges on his characterisation of the game as entertainment (January 31st). Yet football is embedded in the American psyche to an extent that is hard for some to comprehend. On a Friday night in autumn, the view from a cross-country airliner reveals pools of light reflected up from the playing fields of thousands of high-school football games watched by millions. Hundreds of college games are played each weekend. Those foundations ensure that football will not wither away for a long, long time, despite its problems.

LYMAN LYONS
McFarland, Wisconsin

The main reason why boxing has declined has nothing to do with concern about brain injuries or the safety of the boxers. Rather, it is because it has lost out in popularity to mixed martial arts and ultimate fighting, where the combatants really do knock ten bells out of each other.

MARTIN MOLLOY
Tampa, Florida ■

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Exploiting the moon

The 1967 Outer Space Treaty says that the Moon "is not subject to national appropriation". But one company—Bigelow Aerospace—believes it has found a loophole that might allow it to exploit the Moon's resources



Lost in Google Translate

When Google announced that its Google Translate app would be getting an update, the technology press went into a bit of a swoon. Our testing shows it hasn't improved much, but the technology should continue to get better



The rise of the megacity

The British capital has now surpassed its previous population peak set in 1939. But London only earned megacity status in 2013, and if it occasionally feels cramped on the Tube, the task for other city planners around the world looks far more daunting

From our blogs



Culture: Van Gogh in Mons

An exhibition in Belgium charts the transformation of Van Gogh from failed preacher to nascent artist. Those expecting sunflowers may be confused



America: Living in Detroit

It is possible for someone on a fairly modest income to buy a street in Detroit. But living there turns out to be a lot more expensive



Business travel: Planes

On Sunday, a pilot was rescued after ditching his Cirrus SR22 in the Pacific Ocean. Why don't more planes have their own parachutes?

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Featured comment

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An investor calls

Sometimes ill mannered, speculative and wrong, activists are rampant. They will change American capitalism for the better

IMAGINE that you are an American CEO. You have just spent your week dealing with the damned regulators, the latest BS on social media, the lawyers and their ever more brain-aching rules about what you can say and to whom, a president in Washington who urges you take a patriotic rather than merely law-abiding stance to paying taxes and campaigners who think it is your corporation's obligation to reduce social inequality. You finally get a moment to do the job you are remarkably well paid for—running a global firm in the pursuit of long-term profit—when the phone rings. It's a banker on the line.

"Hello? We're hearing rumours that an activist hedge fund has bought 4.9% of your shares." Activists are not, in this instance, tree-huggers who dislike what your company is doing to the atmosphere. They are hedge funds that seek to shake up your company's management. It is like a ruler hearing rumours of a coup. It is the call that every CEO in America dreads getting—or has already received.

In the 1980s activists were called corporate raiders and were the jackals of capitalism, outcasts that attacked and dismembered weak companies to widespread opprobrium but consoling profit. They were immortalised in the film *Wall Street*, whose charismatic criminal, Gordon

Gekko, showed his mettle by treating greed as good and lunch as for wimps. They faded from prominence after a series of scandals and the collapse of the junk-bond market in the late 1980s.

Today activism is mainstream and arguably the biggest preoccupation of America's boardrooms. The current activist crop are not the red-in-tooth-and-braces raiders of the 1980s; but they are determined to shake up the companies in which they invest, shaking that very often leads to change in the corner office. Since 2011 activists have helped depose the CEOs of Procter & Gamble and Microsoft, and fought for the break up of Motorola, eBay and Yahoo—which on January 27th said it would spin off its stake in Alibaba, a Chinese internet firm, after pressure from Starboard Value, an activist. They have won board seats at PepsiCo, orchestrated a huge round of consolidation across the pharmaceutical industry, and taken on Dow Chemicals and DuPont.

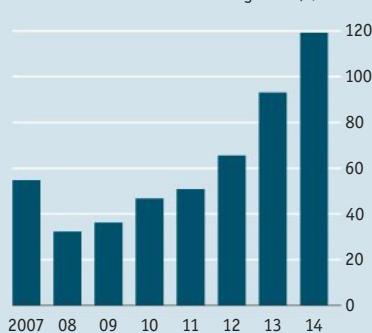
Neither age, status nor systemic importance offers any protection. Activists have removed the management of the oldest firm on the New York Stock Exchange, Sotheby's. They have won a board seat on Bank of New York Mellon, a too-big-to-fail bank at the heart of the global financial system. And they have attacked the world's

most valuable company, Apple. The chairman of one of Silicon Valley's biggest firms admits, "We think about an attack all the time." A CEO with a superb record of running a giant industrial firm says that a slip up would make him vulnerable. Inside activists' offices you can have breezy chats about dismantling pillars of the establishment like Ford and Citigroup.

Since the end of 2009, 15% of the members of the S&P 500 index of America's biggest firms have faced an activist campaign, according to FactSet, a research firm, and estimates by The Economist—a "campaign", here, being an effort to change a firm's strategy, acquire board seats or remove managers. As activists often buy stakes in firms without going on to launch such campaigns that underestimates the number of scary phone calls the CEOs must take. The Economist estimates that about 50% of S&P 500 firms have had an activist on their share register over the same period. The ►

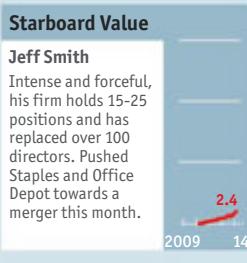
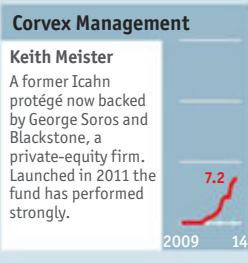
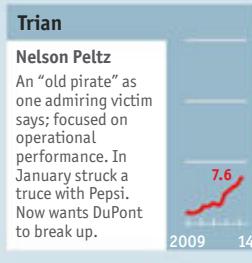
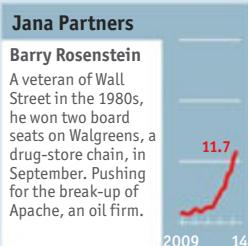
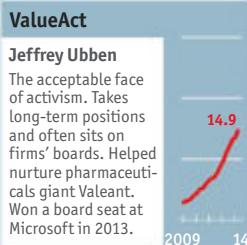
Growing concerns

Activist fund assets under management, \$bn



The new masters of the universe

Selected big activist investor funds, value of disclosed US equities, \$bn



Sources: Whalewisdom; Bloomberg; The Economist; company websites

► only proven defence that a firm can offer is to not be American in the first place; 80% of activist interventions are in America, where the culture and legal system are better suited to shareholder revolts than those in Europe or Asia.

For some all this is the doctrine of shareholder value taken to an absurd extreme—"they are having a serious impact on the economy and are an aggressive deterrent to investment, research and development and employee training," says Martin Lipton, a lawyer who advises many firms that come under attack. For others activism is a breath of fresh air in the stuffy, complacent world of the big American corporation.

Money never sleeps

Back in the office of the CEO under attack a well oiled defence machine is slipping into action. Many big firms practise "emergency drills" for this moment. The CEO will summon a war cabinet and the room will fill with lawyers, bankers, experts in investor relations and spin-doctors to deal with the media. The first casualty of an activist conflict is the CEO who underestimates his opponents.

Activists are a small sliver of the hedge-fund world. Hedge Fund Research (HFR), a research firm, says that of about 8,000 hedge funds activists number just 71—less than 1%. But they are larger than most; at \$120 billion under management the activ-

ists account for about 4% of the hedge-fund total (see chart 1 on previous page). Their clients now include many of the world's big endowments, family offices and sovereign-wealth funds. And their assets have risen by a factor of five over the past decade. In 2014 they raised \$14 billion of new money, a fifth of all flows into hedge funds.

A dossier prepared by an investment bank will help the CEO and his consiglieri understand who they are dealing with. The big funds (see table) are differentiated by their vintage, staying power and propensity to campaign, and by their belligerence once the game is afoot.

The old guard includes Carl Icahn, an outrageous and outrageously successful septuagenarian, who has been on the warpath since the 1980s. Nelson Peltz has similarly deep roots, but rather more gravitas. Over the years he has attacked Cadbury, Pepsi and Kraft.

The new establishment includes ValueAct, Third Point and Elliott Advisors, all of which earned their spurs in the 2000s. Its most prominent figure is William Ackman of Pershing Square, who says Warren Buffett is his inspiration. Mr Ackman has had some disasters, including J.C. Penny, a department store he tried to resuscitate, but also some triumphs, including Allergan, a pharmaceutical firm that was taken over last year. The industry's young guns include Sachem Head and Corvex, set up

by protégés of the old guard.

The established funds lock in their clients' money for one to two years, more than the typical hedge-fund lock-in of a few months. Last year Mr Ackman launched a \$3 billion vehicle listed in Amsterdam with an indefinite life.

In theory this allows activists to take a medium-term view. In practice most trade in and out of firms often—the typical position is held for less than a year, according to JP Morgan Chase. But big bets are made for longer. In firms where it has board seats ValueAct holds its positions for two to four years, according to Jeffrey Ubben, its boss.

Activists' propensity to campaign varies. Southeastern, based in Memphis, says it invests in about 20 firms at any given time but only intervenes in firm's management occasionally. Starboard Value runs a portfolio of 20 stocks, too, but thinks that it can help each firm it owns to improve.

The last differentiating factor is belligerence. Mr Icahn is famous for public insults, and in his young-punk days Dan Loeb of Third Point wrote strikingly acerbic letters, though he says he has mellowed. ValueAct is known for its quiet diplomacy—at Microsoft it argued for change behind the scenes, helping to ease Steve Ballmer out of the top job in favour of Satya Nadella in 2014. But it does occasionally bare its teeth—on January 5th it publicly criticised MSCI, a firm which runs financial indices. By January 30th MSCI had caved in to its demands.

Whether they favour a knockout punch, a hug or torture-by-PowerPoint, activists are persistent: if they commit themselves to a full-blown campaign they usually get at least some of what they want. The CEO's first tactic is thus to try to persuade them that he is already working behind the scenes to meet their concerns in the hope they will relent. Even if they agree with the activists, most CEOs would prefer to reform their companies on their own. At this stage the odds of an all-out campaign are probably about 50%.

Impossible relationships

Within a month the activist and the CEO will meet. If the CEO is confident he may agree to a casual dinner. If he is weak he will come phalanxed by lawyers and some of the firm's directors. If it comes to war, both sides need to be able to claim they talked, so there will be a veneer of courtesy. But privately the CEO will be wondering how on earth the activist has so much clout. After all, such people typically own only 5% of the equity in firms in which they invest. In total, activists' assets amount to only 1% of the value of the S&P 500 index of top firms.

Activists wield disproportionate power because the ownership of big firms in America has polarised. On one side is the lazy money. About 20% of the typical firm is owned by index managers such as Black-

► Rock and Vanguard, which mimic the market and charge low fees. Followers of the market rather than its trendsetters, they have not in the past felt much need to worry about how the firms they invest in are run. Alongside them are the managers of mutual funds and pension funds, such as Capital Group and Fidelity. They actively pick stocks and talk to bosses but their business is running diversified portfolios and they would rather sell their shares in a struggling firm than face the hassle of fixing it.

At the other end of the spectrum is the bossy money. Berkshire Hathaway, the \$350 billion fund run by Warren Buffett, buys entire firms and runs them for ever. Private-equity funds also buy whole firms, replacing managers and setting strategy.

Activists provide a way for lazy money to outsource the messy task of fixing subpar firms. It is a task which, because they do not pay takeover premiums or rely heavily on debt, activists can do more efficiently than private equity.

Because their fees are charged over a smaller pool of capital, the absolute sum the activists skim off is small. And their performance is pretty good, at least before fees. The typical activist position has outperformed the S&P 500 (see chart 2). After fees the picture is murkier. The HFR index of activists has risen by 89% since the end of 2008, after fees. That is worse than the S&P (159%) but better than most hedge funds (50%) and demonstrably good enough to convince many investors seeking to diversify their holdings to give activists more cash.

The essence of the evolutionary spirit

A week after meeting the CEO the activist sends a letter and 300-page presentation to the board. Once the directors have waded through the numbers and snarky asides about the corporate jet, it boils down to three demands: a buy-back, the spin-off of a non-core subsidiary and the search for a merger partner. Just over half of the demands made by activists in 2014 fell into these categories, according to FactSet.

The typical CEO will feel defensive, and



his board of directors will dither. Perhaps the activists' suggestions were examined several years ago and rejected by clever folk at McKinsey & Co, a consultancy, and by the helpful banker who made that initial warning call. An old-timer on the board may suggest playing dirty, by putting in place a poison pill—a cap on the number of votes any individual shareholder can have—or “staggering” the board so that only a few directors can be ousted each year. But such defences are more likely to provoke than to deter, and these days boards avoid them. Instead the board will often string the activist along, hinting it agrees with him while doing nothing. Big mistake, as Julia Roberts, consort of another 1980s corporate raider in *Pretty Woman*, memorably remarked.

At this point the diddled-around activist may go public, raising its stake to over 5% (which triggers a regulatory disclosure), putting its documents online with a video and campaigning for shareholders' votes like a politician in a primary. The media go wild, especially about the corporate jet.

The typical CEO launches a roadshow of his own to elicit his big shareholders' solidarity. But he may well find that up to a fifth of the firm's shares have changed hands and now lie with “event-driven” traders who make very short-term speculative bets on events like takeovers and deals. They gamble that the activist will succeed and that the shares will jump.

When he enters the Los Angeles offices of his biggest shareholder—call it Capital—the typical CEO discovers the people there have already met the activist and have bought in to spinning off the subsidiary. The final straw comes when the CEO visits ISS and Glass, Lewis & Co, two proxy-advisory firms. They have a duopoly on guiding passive index funds how to vote in “proxy contests”—campaigns to win shareholders' vote at companies' annual meetings. Most CEOs have never met the proxy

firms before; the activist funds have spent years building up relationships and know how to present their ideas in a way that fits with these firms' thinking.

After a month's campaigning the CEO knows he faces a good chance of losing the vote. In 2014 73% of so-called proxy votes were won by dissidents, according to FactSet (see chart 3). Now it is the CEO's turn to pick up the phone and call the activist.

All these quick victories have helped activists bring about short-term outperformance. But what do they do for investors and companies in the long term? Naturally activists embellish their role. Mr Icahn claims credit for a big return to shareholders of some of Apple's \$177 billion cash pile and the break-up of eBay, but both events would have happened anyway. Big firms can have a short-term mentality without any help—IBM has spent twice as much on buy-backs as on research and de-

A proxy nation

Proxy fights against US companies



Success rate, %



Source: FactSet

Nicely chosen

Performance of publicly disclosed long positions
December 2007=100



development and is shrinking, perhaps as a result. Activists point out that if they were to propose changes that clearly damaged a firm's prospects the stock price would fall. "Unless you have one eye on the long term—how customers and products are affected—you will not succeed," says Mr Loeb.

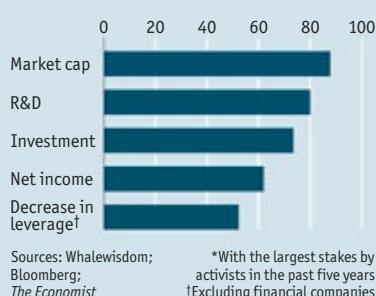
Every economy has rotten firms that need bitter medicine, which is why some bosses admit a grudging respect for the activists. "It keeps management on their toes," says a former chairman of one of Mr Peltz's conquests. And some activist funds lay good claim to long-term vision. ValueAct backed a turnaround plan at Adobe, a software maker, that sacrificed short-term earnings and took years to come good, says Mr Ubben.

A study of activism in 1994-2007 by Lucian Bebchuk of Harvard Law School, and his colleagues, found that activist interventions lead to a sustained, if modest, improvement in operating performance and better shareholder returns. Its period of interest precedes the recent growth in activism, but there is reason to believe that the pattern persists. *The Economist* has analysed the 50 largest activist positions taken since 2009. In most cases profits, capital investment and R&D have risen (see chart 4). There is little evidence of Gekko-style "asset stripping". Even when firms have cut back, it is worth considering that others in the same sector may have done just the same with no campaign.

The biggest threat to activism is not a poor record, but a paucity of prey. Given the size of activist funds and their pace of intervention, they collectively need to find 100 large target companies over the next three years. Only 76 firms in the S&P 500 are currently showing persistently poor returns on equity (an average of below 7% for five years) and only 29 trade at below their liquidation value, which suggests 100 targets may be hard to find. "I think it's saturated," says one of the biggest activists,

No harm done

Top 50 activist-held companies* showing improvement, Q4 2009-Q3 2014, % of total



adding that some of his competitors may not have cottoned on to this. "You have a lot of people who don't have experience or a track record."

One option might be to look abroad, but most big funds think the cultural barriers are too great. European activist funds such as Cevian and Knight Vinke tread very softly. Asia is a world unto itself. An attempt by TCI, an activist fund in London, to take on Coal India, a giant state-owned firm, was like a gnat biting at an elephant. In 2013 Mr Loeb's efforts to force Sony to restructure proved a damp squib.

Wanting the fairy tale

Instead overcrowding may lead activists to attack well-run firms in America. About a third of recent targets were outperforming the wider market when the activist campaign began, according to JP Morgan Chase. On January 8th Mr Peltz launched a proxy fight against DuPont, a chemicals group that has performed strongly and has a widely admired manager. That a firm is doing well does not mean it couldn't do better, but the case gets harder to make.

Even if activists start to attack unwisely, though, the outcome for America Inc could still be good, because the lazy money is be-

ing roused from its slumber.

Rather than face a proxy fight the typical CEO cuts a deal—awarding the activist, say, two board seats out of a total of 12 and promising to consider the spin-off idea. If the activist is one of those prone to theatre he will boast, inaccurately, of his total victory. The CEO considers resigning. But what if, after six months, the activist starts to agitate again, calling for a drastic cut in capital investment—not routine, but not unheard of? At this point, something unexpected happens. The CEO consults the index funds and traditional managers, with whom he now has a more intimate relationship. This time they support the firm not the activist.

This scenario is more likely than it may seem. Provoked by the activist wave, big passive money managers are waking up. In 2014 Larry Fink, the head of BlackRock, the world's biggest asset manager, declared "we need to work for the long-term interest". Vanguard, another big passive manager, has said it wants to intensify its contact with companies' boards. Most big companies are also making more effort to talk to index funds directly, says Abe Friedman, of Camberview, a consulting firm. Once viewed by companies as dumb bystanders, passive funds may come to be seen in a new light. Since they own stocks indefinitely they should have a longer-term perspective than almost anyone else.

Meanwhile mutual- and pension-fund managers are being forced to engage in more intense debates about strategy with managers and activists. Since their support is vital for any activist campaign, they are enablers but also potential restraints. "Activism is about floating balloons," says Mr Ackman. "If the ideas are good, they will happen. If they are bad, they won't get support. It is hard for activism to be harmful."

Natural selection will ensure that activists who make foolish suggestions fade away over time, says the head of a big equity-fund manager of the old school. He says his firm is becoming more involved in companies than in the past. Mr Ubben of ValueAct, says he has a "symbiotic" relationship with such managers.

Over the long run activism will evolve in one of two ways—both of them positive. It could mature to become a complement to the investment-management industry—a specialist group of funds that intervene in the small number of firms that do not live up to their potential, with the co-operation of other shareholders. Alternatively it could overreach—and in so doing force index funds and money managers into taking a closer interest in the firms they own. If that is the way things go, activists could eventually become redundant.

Until, that is, stockholders return to lazy ways and managers feel they have nothing to worry about. Then it will be time once again for the phone call of fear. ■





German-Americans

The silent minority

KOHLER, WISCONSIN

America's largest ethnic group has assimilated so well that people barely notice it

ON A snow-covered bluff overlooking the Sheboygan river stands the Waeldehaus, a faithful reproduction of an Austrian chalet. It was built by the Kohler family of Wisconsin in the 1920s as a tribute to the homeland of their father, John Michael Kohler, who had immigrated to America in 1854 at the age of ten.

John Michael moved to Sheboygan, married the daughter of another German immigrant, who owned the local foundry, and took over his father-in-law's business. He transformed it from a maker of ploughshares into a plumbing business. Today Kohler is the biggest maker of loos and baths in America. Herbert Kohler, the boss (and grandson of the founder), has done so well selling tubs that he has been able to pursue his other passion—golf—on a grand scale. The Kohler Company owns Whistling Straits, the course that will host the Ry-

der Cup in 2020.

German-Americans are America's largest single ethnic group (if you divide Hispanics into Mexican-Americans, Cuban-Americans, etc). In 2013, according to the Census bureau, 46m Americans claimed German ancestry: more than the number who traced their roots to Ireland (33m) or England (25m). In whole swathes of the northern United States, German-Americans outnumber any other group (see map on next page). Some 41% of the people in Wisconsin are of Teutonic stock.

Yet despite their numbers, they are barely visible. Everyone knows that Michael Dukakis is Greek-American, the Kennedy clan hail from Ireland and Mario Cuomo was an Italian-American. Fewer notice that John Boehner, the Speaker of the House of Representatives, and Rand Paul, a senator from Kentucky with presi-

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dential ambitions, are of German origin.

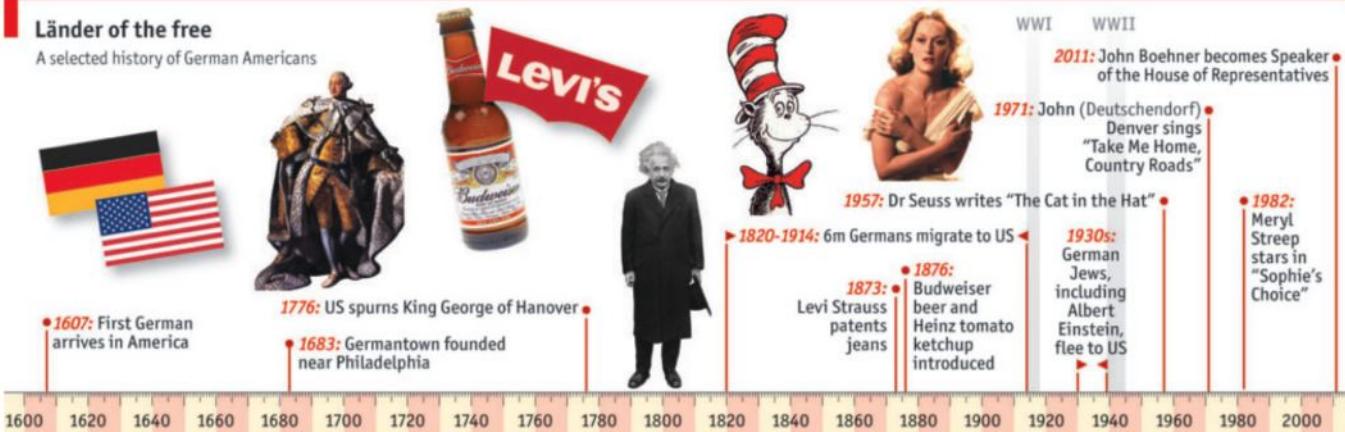
Companies founded by German-Americans tend to play down their roots, too: think of Pfizer, Boeing, Steinway, Levi Strauss or Heinz. Buried somewhere on their websites may be a brief note that "Steinway & Sons was founded in 1853 by German immigrant Henry Engelhard Steinway in a Manhattan loft on Varick Street". But firms that play up their Germanic history—as Kohler does, in a short film shown at the Waeldehaus—are rare.

German immigrants have flavoured American culture like cinnamon in an *Apfelkuchen*. They imported Christmas trees and Easter bunnies and gave America a taste for pretzels, hot dogs, bratwursts and sauerkraut. They built big Lutheran churches wherever they went. Germans in Wisconsin launched America's first kindergarten and set up Turnvereine, or gymnastics clubs, in Milwaukee, Cincinnati and other cities.

After a failed revolution in Germany in 1848, disillusioned revolutionaries decamped to America and spread progressive ideas. "Germanism, socialism and beer makes Milwaukee different," says John Gurda, a historian. Milwaukee is the only big American city that had Socialist mayors for several decades, of whom two, ►

Länder of the free

A selected history of German Americans



► Emil Seidel and Frank Zeidler, were of German stock. As in so many other countries where Germans have settled, they have dominated the brewing trade. Beer barons such as Jacob Best, Joseph Schlitz, Frederick Pabst and Frederick Miller made Milwaukee the kind of city that more or less had to call its baseball team the Brewers.

"Germans were not part of the colonial aristocracy," says Rüdiger Lentz, director of the Aspen Institute Germany. Many Italian and Polish immigrants were middle-class, and they quickly became politically active. German immigrants tended to be poor farmers, which is why they headed for the vast fertile spaces of the Midwest. "The Italians stormed the city halls; the Germans stormed the beer halls," went the saying.

During the first world war, parts of America grew hysterically anti-German. Some Germans were spat at in the street. The teaching of their language was banned in schools. Sauerkraut was renamed "liberty cabbage". German books were burned, dachshunds kicked and German-Americans forced to buy war bonds to prove their patriotism. When New Ulm, a predominantly German town in Minnesota, refused to let its young men join the draft, the National Guard was sent in. After the war, German-Americans hunkered down. Many stopped speaking German and anglicised their names.

The second world war saw less anti-German hysteria, although some 10,000 German-Americans were interned as enemy aliens. President Franklin Roosevelt conspicuously appointed military commanders with names like Eisenhower and Nimitz to fight the Axis powers. But the Holocaust gave German-Americans yet another reason to hide their origins.

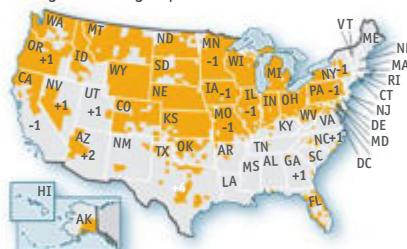
Today German-Americans are quietly successful. Their median household income, at \$61,500, is 18% above the national norm. They are more likely to have college degrees than other Americans, and less likely to be unemployed. A whopping 97% of them speak only English at home.

They have assimilated and prospered without any political help specially tailored for their ethnic group. "The Greeks and the Irish have a far stronger support network and lobby groups than we do," says Peter Wittig, Germany's ambassador in America. There was no German-American congressional caucus until 2010, though there were caucuses for potatoes, bicycles and Albanian affairs. The German caucus has quickly grown to about 100 members, who lobby for trade and investment as well as the preservation of their common cultural heritage.

Five years ago a small German-American Heritage Museum opened in Washington, D.C. "Germany has never been as popular as it is today," says Petra Schürmann, the museum's director. German fests and Oktoberfests have sprung up all over the

Welcome home, Frau Merkel

Counties where German-Americans are the largest ethnic group



Source: US Census Bureau

country, and they are not only about brats and beer, but also about tracing genealogy and displaying traditional dress and craftsmanship. Stuff made by Germans sells. And Americans travel to Germany in droves: the young to hip Berlin and older folks to pretty Heidelberg.

On February 9th Angela Merkel, Germany's chancellor, will meet Barack Obama in the White House. They will discuss the war in Ukraine, transatlantic trade, the wobbling euro zone and the upcoming G7 summit in Bavaria. Unlike Indian-Americans, who went wild when their new prime minister visited America, German-Americans will barely notice. ■

Immigration

Rolling out the welcome mat

BALTIMORE AND DETROIT

Two cities hope that embracing immigrants can reverse their decline

THREE years ago Jenny Salgado, a Dominican shop assistant, moved to Highlandtown, a neighbourhood of pleasant terraces and unpleasant derelict factories in Baltimore. She moved because the cost of living in New York was too high. When she arrived the shop she works in, stuffed with piñatas and religious statuettes, was one of only a few Hispanic businesses. Now there are many more. "It's good now if you speak Spanish," she smiles.

Baltimore has been losing people for 60 years. To address this its mayor, Stephanie Rawlings-Blake, wants to make it the most immigrant-friendly city in the world. Its libraries provide Spanish-language exercise classes. To help those with no papers, the city is introducing micro-loans which require no credit checks. In 2012 Ms Rawlings-Blake announced that city police would no longer routinely check the immigration status of citizens or enforce any federal immigration law unless explicitly required to. The then governor, Martin O'Malley, a Democrat, made it possible for

illegal immigrants to get driving licences.

Such welcoming policies are spreading. Rustbelt cities like Cleveland, Dayton and Philadelphia all avidly court immigrants. Rick Snyder, the Republican governor of Michigan, has asked the federal government to offer 50,000 visas to people who agree to live in Detroit. His administration has directed cash towards NGOs that market Motown to immigrants and made it easier for skilled migrants to get professional licences. Like Baltimore, Detroit woos refugees brought to America under federal programmes—and even tries to poach those who may have settled elsewhere.

A welcome mat is a powerful weapon against urban decay. When a city's population falls, tax receipts tumble and services atrophy. Half-deserted neighbourhoods breed crime, driving yet more people to leave. No city has escaped this death spiral without attracting new residents, says Steve Tobocman of Global Detroit, an NGO. Immigrants are especially likely to move into the most blighted neighbourhoods and spruce them up.

Several studies suggest that when immigrants arrive, crime goes down, schools improve and shops open up. In Detroit, immigrants living near the tiny separate city of Hamtramck have formed local watches to guard against thieves. Their neighbourhoods are not just safer; they are also among the only places where it is as easy to buy fresh vegetables as drugs and alcohol.

But attracting new immigrants to the cities which most need them is hard, argues Audrey Singer of the Brookings Institution, a think-tank. They care about the same things as everyone else: safe streets, good schools and jobs. Cities which have lost population for decades struggle with all of these. Detroit and Baltimore have not fared equally well. The number of immigrants in Baltimore, long stagnant, increased by 50% between 2000 and 2013, helping the city to record its first growth in population in decades. Detroit's immigrant population, by contrast, fell slightly, adding to its overall decline.

In Baltimore immigrants such as Ms Salgado are settling because they are drawn by cheap housing in a region that mostly lacks it. New arrivals from New York buy ruined houses and shops, typically paying \$40,000 or \$50,000 in cash. In places such as Highlandtown, which battles with Ethiopian, Moroccan and Mexican restaurants, that has started a cycle of gentrification, as affluent young whites have been lured by the new urban vibe.

Detroit has not failed to attract new immigrants, says Mr Tobocman: Mexican restaurants and Bangladeshi mosques are proof of that. But it has struggled to retain them. "Yeah, you can buy a house for \$20,000, but pretty quickly you realise that it's dangerous, the schools suck and all of the jobs are in the suburbs," he says. ■

THE ULTIMATE GUT CHECK



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Migration policy

Going where they are wanted

WASHINGTON, DC

How Canada and Australia let regions sponsor immigrants

MOST immigrants to Canada must pass a points test, administered by the federal government. If you don't like the idea of collecting points, but wouldn't mind becoming a farmer in Saskatchewan or a carpenter in Alberta, you can apply to those provincial governments directly. Canada is one of a few Western countries to make special allowances for immigrants willing to move to particular parts of the country. Australia is another.

In Australia's case, the system exists to increase migration to places other than Sydney, where many newcomers congregate. Canada's evolved out of Québécois demands to be allowed to woo French-speaking immigrants. In Australia, 40% of economic migrants (as opposed to family-reunion migrants, students or refugees) have such visas. In Canada a quarter do. In places unused to much migration, the numbers are higher. In one Canadian province, Manitoba, provincial nominees are 91% of all economic immigrants.

Under both systems, most migrants ultimately get permanent residency and, with it, the right to work anywhere. But states and provinces try to nominate those who are likely to stay. Visas are

typically limited to people who have specialist skills or else have already lived in a place on a temporary work visa (which Canada and Australia both issue plenty of). This tends to work: in 2008, around 70% of workers who had arrived under the Canadian scheme in the previous five years were still living in the province they arrived in.

An American scheme could work in much the same way, says Demetrios Papademetriou of the Migration Policy Institute, a think-tank. Many immigrants have temporary work visas that tie them to particular employers; new visas could tie them to states, which is less restrictive. A path to permanent residency could be provided for workers who can prove that they actually lived in a particular state for an allotted time.

One problem would be ensuring that migrants who are thus constrained can still thrive. Canada's and Australia's regionally-selected immigrants tend to be sent to specific regions and industries where the demand for their labour is high. Some parts of America lack jobs but want immigrants anyway, hoping they will buy up empty homes and pay local taxes. It's worth a try.

Mr Carter and Mr McCain agree that military spending needs to rise. They are equally exasperated by the failure to find a solution to the problem of the caps, which Mr Carter has described as "purely the collateral damage of political gridlock".

Sadly, there is little chance of a grand bargain that would finally lift the threat of sequestration from defence. The Republicans want to pay for more of it with spending cuts elsewhere; the Democrats (and the president) want to pay for it with higher taxes or by adding to the deficit. Each approach is abhorrent to the other side.

Thus the task for Mr Carter in the slightly less than two years he has (unless Mr Obama's successor keeps him on) is to find a way to live with a budget that is too small, while dealing with everything else. This includes bringing some coherence to the campaign against Islamic State; improving deterrence against Russia; preparing for the consequences of the talks aimed at preventing Iran from building nuclear weapons; and supporting the new government in more-or-less forgotten Afghanistan.

At the same time, he must aim to leave America's defence establishment in better shape than he found it. This involves modernising its ageing nuclear forces and ensuring that America keeps its technological edge over potential enemies (the "offset strategy", now mainly concerned with robotics, miniaturisation, hypersonics, cyber-warfare and the handling of "big data"). High on the wish-list of new weapons are unmanned carrier-strike aircraft and stealthy unmanned underwater vehicles that can creep close to enemy shores.

To fund new weapons and technologies, Mr Carter will need help from Congress to reform military pensions and health care, axe legacy weapons (such as the A-10 tank-busting aircraft) and close unwanted bases: all horribly hard. He will need to be a consummate politician. ■

Ashton Carter

A brain in charge of the brawn

BARACK OBAMA'S nominee for defence secretary impresses the Senate

EXACTLY two years ago, an excruciating Senate hearing nearly did for Chuck Hagel, America's outgoing secretary of defence. Hapless, shaky on his brief and stumbling in his answers, Mr Hagel's performance in front of the Armed Services Committee undermined his authority at the Pentagon from the start, allowing the White House an opportunity to meddle that even it eventually tired of.

It was never likely that Ashton ("Ash") Carter's confirmation hearing for the same job on February 4th would be a repeat of that. Many consider him supremely qualified. He has served at every level of civilian leadership at the Pentagon (most recently as its chief operating officer until 14 months ago). When out of office, Mr Carter, a physicist, has been an influential national-security scholar with a particular expertise in

nuclear strategy and technology. Although a lifelong Democrat, he enjoys a rare degree of support across the aisle, even from Republican hawks such as John McCain, the committee chairman.

That did not mean that Mr Carter's hearing was a cakewalk. Senate Republicans despise what they see as Barack Obama's passivity in the face of mounting threats from abroad and his reluctant use of American military power to confront them. Mr Carter managed not to be disloyal to his boss while hinting at a more robust approach in the future. For example, he said he was "very much incline[d]" to send defensive weapons to Ukraine. By the end, a mood of almost cosy bipartisanship had descended. Mr Carter is expected to be confirmed easily next week.

His hearing was preceded two days earlier by the president's 2016 budget request to Congress, which included a defence base budget of \$534 billion, \$35 billion more than the spending cap required by the controversial 2011 Budget Control Act, plus \$51 billion for funding wars. Unless the administration can cut a deal with Congress, sequestration—automatic across-the-board cuts—will kick in, making a nonsense of Mr Obama's request.



Plenty more fires to put out

Atlantic City

Christie to the rescue

ATLANTIC CITY

Will the governor's latest bet pay off?

SIGNS all over Caesar's casino in Atlantic City advertise vacancies for blackjack dealers. The jobs, however, are 150 miles away in Baltimore. Atlantic City, once the gambling mecca for America's north-east, lost its casino monopoly in the region when neighbouring states began legalising gambling a decade ago. Casino revenue fell by half in just eight years. Pennsylvania, which opened its first casino only in 2006, passed Atlantic City in 2012 to become the country's second-largest gambling market.

Last year Atlantic City was dealt a devastating hand: four of the 12 casinos closed, including Revel, the newest and brightest. Some 7,600 jobs were lost. Those casinos represented 20% of gaming revenue in the city. Besides, the casino industry is the city's largest employer, and unemployment was already high. Property taxes are high, too. The city's tax base continues to decline. Even before the closures, a third of its citizens lived in poverty. The cards are stacked against the city.

New Jersey has a big stake in Atlantic City. Gaming revenue swells the state's coffers. And the city and surrounding county make up nearly a fifth of the tourism industry's \$38 billion of annual sales in the state. After many attempts to shuffle the city's cards over the years, including efforts to make it more like Las Vegas, Chris Christie, New Jersey's governor, thinks he has one last ace up his sleeve. He has set up an emergency management team to pull Atlantic City out of "an enormous hole". The team includes Kevyn Orr, who ushered Detroit through its bankruptcy proceedings last year. The team must come up with a financial plan within 60 days.

The order surprised local officials, who felt the city was starting to turn round despite the closures. Just days before the announcement Don Guardian, the mayor, joked "At least we are not Detroit." Violent crime is down. Most of the remaining casinos had a decent, if not flush, year. More than two-thirds of spending in the city is unconnected with gaming. Stockton College is moving into the former Showboat casino site and a new conference centre is opening at Harrah's.

The skittish response from the markets suggests Mr Christie's move might have been a bad bet. His order comes just as the city was refinancing \$12m in municipal debt. Its borrowing costs have now tripled, from 1.65% to 5%. "Emergency manager" and "Kevyn Orr" are scary words for wary

Life in Los Angeles

Vans of the rich and gridlocked

LOS ANGELES

Vehicles that make waiting in traffic a pleasure

"**I HATE** driving in Los Angeles—the traffic makes you want to shoot yourself," says Dr Dre, a rapper. So he buys wheels from Becker Automotive Design, a Californian firm that customises rides for the rich and gridlocked. His latest purchase is a stretched Cadillac Escalade with a flat-screen television and a digital system that allows him to browse his home film library in the car. "I like to close the curtains, relax and watch Martin Scorsese films," says Dr Dre.

Todd Doney, a property broker, used to spend three or four hours a day stuck behind the wheel of his Bentley. Now he spends that time talking to clients on the telephone, returning e-mails, and going over documents. His chauffeur-driven car is, in effect, a tricked-out mobile office. "I feel like I'm beating the system because I can work while everyone else is stuck in traffic," he says.

For three years in a row, congestion in Los Angeles has been the worst in America. That is good news for Howard Becker, the founder of Becker Automotive. He began his business in the 1970s, installing sound systems for the Beverly Hills glitterati. Today, he customises cars and vans for clients such as Mark Wahlberg, an

actor, and King Abdullah of Jordan.

The vans take up to seven months to complete and come with such features as touch-screen computers, wireless Internet, cable TV, seats for half a dozen people, bathrooms—and, in one case, an exercise bicycle welded to the floor so the owner could work out.

Becker cars are not cheap: they range from \$150,000 for a basic rolling palace to more than \$500,000 for an armoured one. (These are apparently popular in the Middle East and Africa, where security is a priority, as well as with nervous celebrities.) On the inside, Mr Becker's cars can be as opulent as you like, but most customers prefer the outside to be understated. If you are a star stuck in traffic, it is unwise to advertise the fact. Who wants to be mobbed by fans on the freeway?

Two decades ago in "Let me ride", Dr Dre boasted that his car had "16 switches" and "sounds for the bitches", adding that he was "clockin' all the riches". Today, nearly 50 years old and worth \$800m, he no longer feels the need to show off. "When I was younger, I wanted Ferraris and Bentleys and Rolls Royces," he says. "But now, I'm beyond that. I just want to sit in the back of the car and relax."



lenders. Before the order, bankruptcy was a remote possibility; now it feels more likely. Standard & Poor's and Moody's have both dropped the city's credit rating to junk. Moody's said the order was "credit-negative" for other troubled cities in New Jersey. Both agencies fear the state may not provide enough money to prevent a municipality from defaulting.

Traditionally New Jersey has been kind to its cities, intervening when needed and offering aid when required. For instance, it took over Camden's failing school system. There has been no default or bankruptcy in

the state in over 80 years. Atlantic City is not insolvent yet, so it may be a good time to intervene. Mr Christie explained the appointment of emergency managers by saying, "I can't wait any longer."

Cynics may wonder if his impatience has more to do with voters in Iowa than Atlantic City's solvency. It would be difficult to run a presidential race with Atlantic City doing poorly. But by employing Mr Orr, Mr Christie is inviting comparison with the last man who did the same, the governor of Michigan, widely hailed as having saved Detroit. ■

Fraternities

Beware of Greeks bearing snifters

WASHINGTON, DC

Universities are thinking hard about troublesome fraternities

MOST of the world thinks of the Greek system as one where reckless voters elect wild parties, binge on debt and really annoy their neighbours. Americans use the term to describe something similar: a system where reckless students throw wild parties, binge on vodka and really annoy their neighbours.

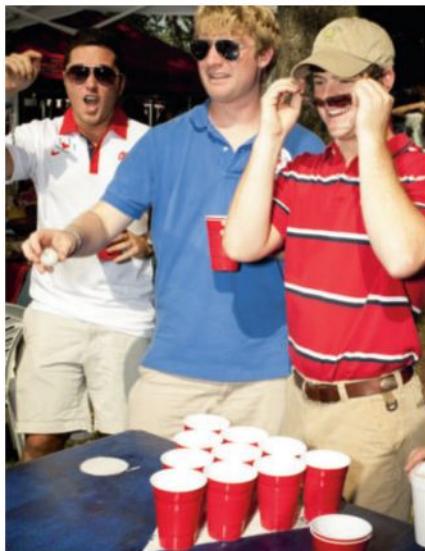
Like actual Greeks, members of college fraternities and sororities have had a miserable year. Fraternities, which are usually all-men, have made headlines for hazing, boozing, racism and allegations of rape. This has spurred some universities to consider curbing or even banning them.

Take the University of Virginia, where a *Rolling Stone* article describing a horrific gang rape at a fraternity house set off a fire-storm last year. The piece was later discredited, but other students came forward to say that they had been raped at frat parties. So the university banned fraternities until January, when it announced new restrictions on how they serve alcohol. National sorority organisations told their all-female members to avoid fraternity houses on a recent night of big parties—an order that was widely ignored.

In just the past few months several universities have grappled with sexual misconduct in fraternities. One is Brown University in Rhode Island, where men at a fraternity house are said to have served punch spiked with a date-rape drug. In response, the school banned alcohol at most parties. Across the country nearly 100 universities are under investigation by the Department of Education for mishandling allegations of sexual misconduct.

Despite the furore, American campuses are safer than other places where young people congregate: female students are less likely to be raped than their non-student peers. Still, complaints on campus have risen. And in 2007 the Justice Department found that women who regularly attended fraternity parties were more likely to be sexually assaulted than women who did not. Other studies have shown that fraternity members are more likely to commit rape than the average student. They also drink more, a contributing factor in many assaults. Sorority members are more at risk than other female students, the Justice Department says, probably because they are “more likely to drink and to associate with fraternity men”.

The vast majority of fraternity members are not rapists. But as dispensers of al-



Beer pong diplomas

cohol, often to under-age drinkers, they court trouble. Over 40% of students admit to binge-drinking at least once a month. (In your correspondent's old fraternity, the rate was much higher.) To curb booze-fuelled misbehaviour, Dartmouth College in

New Hampshire recently banned hard liquor on campus. The college, which inspired “Animal House”, a movie celebrating raucous fraternity life, may yet go further. If the Greek system does not engage in “meaningful, lasting reform”, it could be ended, warned Phil Hanlon, Dartmouth's president.

Despite their problems, fraternities have no shortage of prospective members. The number of students initiated each year has risen by 45% since 2006. They are lured by the parties, the camaraderie and the alumni networks, which open doors in later life. A startling number are prepared to undergo painful or humiliating hazing rituals to join. Last year a pledge (aspiring initiate) of Pi Kappa Phi at California State University, Northridge died during an 18-mile hike—with no shoes and little water.

Some fraternities are trying to fix things. Sigma Alpha Epsilon, one of the largest, has done away with pledging rituals. Some colleges have produced creative solutions. Last year Wesleyan University in Connecticut ordered on-campus fraternities to admit women. Other ideas have been mooted, like allowing sororities, which often ban alcohol in their houses, to throw parties, thus giving women more control over what they imbibe.

Universities may find it tough to crack down hard. Fraternities boast a long list of powerful alumni that includes two living former presidents, over 25% of Congress, and 15% of Fortune 100 CEOs. This suggests the clubs play some role in building character—and ensures they will not be disappearing soon. ■

University endowments

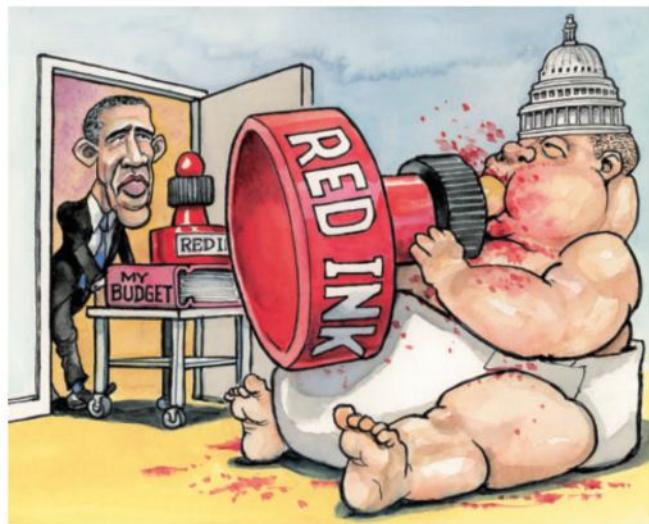
Cambridge has the largest endowment of any British university, at £4.9 billion (\$7.4 billion). It sounds impressive until you look at Cambridge, Massachusetts, where Harvard and MIT manage endowments worth \$36 billion and \$12 billion respectively. A recent survey of 851 post-secondary institutions in North America finds that their coffers hold more than \$500 billion, but some are much better endowed than others (see chart 1). The richest 10% of universities control around 70% of the wealth in the survey. The eight Ivy League universities have amassed more than \$110 billion, or 21% of the total. This means their investment income often exceeds what they make from tuition fees.

Investment styles differ. The richest universities are far more aggressive, punting large sums on risky ventures such as private equity and hedge funds (see chart 2). Poorer colleges play it safe with a traditional mix of stocks and bonds. A school and its money are seldom parted.



Lexington | Fun on a budget

Congress is incapable of restraining spending. It should let the president try



AT THE end of Barack Obama's budget, which was published on February 2nd, the administration thanks 614 people by name for putting the thing together. It adds that "hundreds, perhaps thousands" of nameless others also helped. There is something depressing about the effort that went into producing the document. The budget is an admirable piece of work which contains many good ideas, from cuts in farm subsidies to an increase in tax credits for childless workers. There is, however, a grammatical mistake repeated throughout it. "The budget will", the president writes, when what he means is that his budget would, in the unlikely event that Congress were ever to pass it.

As a guide to what the federal government might look like if America were a monarchy, or as a compendium of interesting policies, the president's budget is a good read—but not much more. A similar criticism applies to most proposals that come out of the budget committees in Congress. This is because no group or individual is responsible for the \$4 trillion federal budget, a fact that helps explain how it manages to be both profligate and stingy, and is forever in the red.

The president's budget would not change that. He has declared an end to "mindless austerity", but does not seem to care much for the thoughtful sort either. In previous budgets he offered to trim entitlements a bit in return for tax increases. Republicans in Congress rejected this, and Democrats who supported the president's budget were rewarded with attack adverts in the mid-terms claiming that they wanted to raise the retirement age and slash Medicare. He now proposes higher taxes, more spending and continued deficits. Public debt would stay at its current level, around 75% of GDP, for the next decade. By 2025, according to the bipartisan Committee for a Responsible Federal Budget, annual interest payments would rise from 1.3% to 2.8% of GDP (nearly \$800 billion, or enough to pay a year's tuition at Harvard, at current prices and with no financial aid, for 18m students).

Mr Obama's tax-and-spend priorities may be regrettable but they matter little in practice, because no president really controls how much his administration spends. The president's budget was an innovation of the 1920s. Before then, Congress set the budget as the Founders, ever suspicious of a strong central authority, intended. This worked well until the civil war, when the federal

government's principal peacetime duties were to run customs houses and post offices and to give away land. By the beginning of the 20th century the federal government had become much more complicated. The first world war increased federal spending from \$726m to \$18.5 billion in five years (\$17.2 billion and \$253 billion in today's money.) In 1921 an overwhelmed Congress asked the president to submit a budget for the first time.

Since then every president has done so, but the exercise has become drained of meaning since Congress took power over the budget back. This evil can be traced to Watergate. Richard Nixon, worried about inflation and the deficit, decided not to spend all the money Congress had appropriated. At one point he vetoed nine spending bills in one go. Congress took advantage of the scandal that was enveloping the president to reduce his control over federal spending in the 1974 Budget Act. Nixon duly signed the law in July and resigned the following month.

One of the new law's stated aims was to control the deficit, but it has had the opposite effect. From 1950 to 1974 the deficit averaged 0.7% of GDP; since Congress retook control it has averaged 3.2%. Part of the problem is that the budget Congress comes up with only covers a fraction of what the federal government actually spends. Over \$1 trillion of tax expenditures—rebates on anything from mortgage-interest payments to health-insurance plans provided by companies for employees—are excluded. Another \$2 trillion is off-limits because it is classified as mandatory spending. The staggering sums pumped into entitlement programmes (Social Security, Medicare and Medicaid) increase every year on the accounting equivalent of cruise control, with no need for a vote. Since the youngest of the baby-boomers are now in their early 50s, and since no politician would dare touch the benefits of those close to retirement, America's biggest generation has now protected itself from cuts to Social Security.

Bring back Dick

As entitlement spending has risen, it has squeezed the other bits of the budget. What remains is just over \$1 trillion in discretionary spending: 6.5% of GDP, or less than a third of the total spent by the federal government. This is up for discussion every year. The resulting compromise is known as the budget, but that gives an inflated sense of what it really is.

According to textbooks the budget is a thing jointly agreed by both houses of Congress and then signed by the president by the end of September each year. This is how the budget has worked six times in the past 40 years. The rest of the time it has often consisted of last-minute negotiations to avoid a government shutdown or a breach of the debt ceiling. Agreement is reached only by putting off difficult decisions indefinitely. Attempts by well-intentioned super-committees and gangs of congressmen to get to something more thoughtful have come to nothing. This failure to steer the budget has been bipartisan. Since 1974 the federal government has run a deficit in all but four years, 1998-2001. Now that both the House and the Senate are controlled by Republicans the budget should be more orderly, but the process must be made to work when Congress is divided.

One solution would be to forgive Nixon and hand back some authority to the executive. Another would be to make the president's budget the default one unless Congress can agree, by a simple majority, on something else. That would stop the proliferation of no-compromise budgets, and would make a president content with a budget forever in deficit a figure from the past. ■



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Politics in Brazil

Awkward allies

BRASÍLIA

The new Speaker of the lower house will make life difficult for Dilma Rousseff

THE new Congress was always going to be awkward for Brazil's president. Having won re-election last October with the slimmest of majorities, Dilma Rousseff has a weak mandate. She faces power cuts, water shortages and a probable recession. She must curb the growing fiscal deficit to maintain Brazil's prized investment-grade credit rating.

On top of all this she must contend with a far-reaching corruption scandal at Petrobras, the state-controlled oil giant. Its embattled boss, Maria das Graças Foster, an ally of the president, has resigned along with five other executives (see page 60).

Ms Rousseff has now been given a first taste of just how obstructive Congress is likely to be. On February 1st, against her wishes, the lower house elected Eduardo Cunha of the Party of the Brazilian Democratic Movement (PMDB) to be its Speaker.

On paper, Mr Cunha is an ally of her Workers' Party (PT). Her vice-president, Michel Temer, is the PMDB's national boss. The party has filled six of 39 ministries in the new administration. But as an independent-minded congressman, the new Speaker has been an irritant to the president throughout her first term. "Most government defeats have his fingerprints," says João Castro Neves of Eurasia Group, a consultancy. Mr Cunha backed her centrepiece challenger in last year's election.

His backroom wiles and intimate knowledge of the congressional rule book

prompt Brazilian fans of "House of Cards", an American television drama about Washington politics, to compare him to the show's ruthless protagonist, Frank Underwood. As Speaker, Mr Cunha can sit on bills he does not support or spur on those congressmen like. A federal deputy for Rio de Janeiro since 2003, he has become a champion of backbenchers.

This helps explain his lopsided margin of victory—and the scale of Ms Rousseff's defeat. From the start Mr Cunha was favoured to beat Arlindo Chinaglia, the bumbling candidate of the president's PT, and Júlio Delgado of the opposition Brazilian Socialist Party. That Mr Cunha managed to pull it off in the first round, with almost double the number of votes that went to Mr Chinaglia, took everyone by surprise. Worse, in a vain last-ditch attempt to sway congressmen to its side, the PT relinquished other leadership positions in the Chamber of Deputies and control of the choicest commissions.

This is a setback for Ms Rousseff's planned legislation, which she outlined in a message to Congress on February 2nd. It includes auctioning off infrastructure projects to the private sector, streamlining environmental licensing, boosting private-sector credit and building 3m cheap homes. The results of the race for Speaker suggest that the government's core of support is well below half of the 513 seats in the Chamber of Deputies, notes Thomaz Fa-

varo of Control Risks, another consultancy.

The toughest fight will be over the reform of entitlements, such as pensions, in order to put public finances on a surer footing. "Congress will charge a high toll for every single measure that passes through it," worries Marcos Lisboa of Insper, a business school. Mr Cunha has already pledged to put to a vote a constitutional amendment that would stop the government from pruning extra spending mandated by Congress through earmarks. It could remove the president's discretion over 8 billion reais (\$2.9 billion) in annual spending. That would make it harder for the government to hit its target of a primary surplus (before interest payments) of 66 billion reais, or 1.2% of GDP, in 2015.

An uppity Congress will also give Ms Rousseff more grief over Petrobras. The opposition is clamouring for a third congressional probe into the affair. Mr Cunha seems willing, but he has ruled out moves to impeach Ms Rousseff, who is so far personally untainted by the scandal.

In the wake of its congressional rout, the Planalto, as the presidential palace is known, has launched a charm offensive. The president congratulated the newly elected Speaker. Pepe Vargas, the minister in charge of relations with other branches of government, joked that even after a nasty football game "friends sit down and drink beer". Ms Rousseff can, in exchange for support from congressmen, distribute cushy jobs in ministries and at a handful of big state-controlled firms (though not Petrobras, where Ms Foster's replacement is likely to be a seasoned manager).

Mr Cunha is not a dogmatic oppositionist—and says he is open to persuasion. But, as he vowed after his election, Congress on his watch will be intent on exerting its independence, "whether it is to the Planalto's liking or not". ■

Scandal in Panama

No Chávez, but no prize

PANAMA CITY

An ex-president's colourful tale

FROM ex-president Ricardo Martinelli's plush 43rd-floor offices overlooking the waterfront of Panama City, the view is good. Below is a Ferrari distributor; nearby are flamboyant skyscrapers, such as a twisted green one known as the "Screw", which sprouted during his 2009-14 tenure. In those five years, Panama's growth averaged a blistering 8%, the best in Latin America, though debt also ballooned. A supermarket millionaire, Mr Martinelli touted his country as the Latin Singapore.

Those who championed him as a pro-business alternative to left-wing zealots like Hugo Chávez of Venezuela are thinking again. Seven months after stepping down from office, he has left the country on his private jet, amid accusations that his government ran a corruption and political espionage racket. He denies wrongdoing.

In January, the Supreme Court voted to launch an investigation into his role in a corruption case involving a \$45m programme to deliver dried food to poor schoolchildren. On February 3rd the prosecutor's office said that 44 people had testified as either victims or witnesses in a wire-tapping scandal. Accusations against Mr Martinelli by at least five people have been forwarded to the Supreme Court, which handles high-profile political cases.

Mr Martinelli says he is the victim of a vendetta by Juan Carlos Varela, his former vice-president, who succeeded him as president. One of Mr Martinelli's lawyers, Carlos Carrillo, says that before carrying out the investigation the Supreme Court

must persuade the Central American Parliament (a do-nothing body of which his client is a member) to lift his immunity. He says Mr Martinelli is free to remain outside Panama while the court investigates.

The allegations, however, are the latest turn in a downward spiral that began when Mr Martinelli's handpicked candidate unexpectedly lost to Mr Varela in a presidential election last May. At the time, Mr Martinelli's supporters dominated the National Assembly, the Supreme Court, the attorney-general's office and the comptroller-general's office—that is, almost all the centres of power in Panama except the electoral tribunal. His hold on the Supreme Court weakened when one of his appointees was suspended for amassing inexplicable wealth.

On winning the election, Mr Varela, jettisoned from Mr Martinelli's government three years earlier, vowed to look into the corruption allegations. His aides said they expected the first targets to be the massive infrastructure projects that were the hallmark of the former administration. Instead, the first allegations emerged from an inconspicuous anti-poverty agency based in a townhouse next to the presidential office. Contracts worth \$1.2 billion are under scrutiny. Two of its former directors have been arrested. One, Giacomo Tamburrelli, has twice testified to prosecutors about the dried-food programme, allegedly implicating Mr Martinelli.

Compounding the ex-president's woes, last month prosecutors arrested two former members of his national-security agency on charges relating to the political-espionage scandal. Álvaro Alemán, Mr Varela's chief of staff, says around 150 political and other leaders, including the archbishop of Panama, are believed to have had their phones and other communication devices tapped, based on dossiers and hard disks obtained by investigators. On February 2nd, Juan Carlos Navarro, a for-

mer presidential candidate, issued an affidavit alleging that his emails and cellular phone were bugged during the campaign, as were those of his staff. He accused Mr Martinelli of racketeering. "This was a massive, illegal spying operation," he says.

Mr Martinelli's spokesman, Luis Eduardo Camacho, says the evidence in the spying case is thin. But Panamanians are losing faith in the mercurial leader who once charmed them with his sharp-tongued charisma (one former fan hums a tune by a Panamanian singer, Rubén Blades: "You can see their faces, but not their hearts").

Abroad, his backers have gone quiet. One long-standing critic, Juan Carlos Hidalgo of the Cato Institute, a Washington-based think-tank, recalls how right-wing Americans used to urge him not to bash Mr Martinelli because he was "one of us"—a Chávez foe who presided over a growth miracle. Now he is dismissed as just another tarnished Latin American populist. ■

Corruption in Mexico

The right place to start

MEXICO CITY

In a crackdown, the president targets himself first

IT IS not every day that a president launches an investigation into his own affairs, but that is what Mexico's leader, Enrique Peña Nieto, has just done. On February 3rd he announced that he, his wife and his finance minister will become the first subjects of a conflict-of-interest investigation. This startling decision was part of a package of anti-corruption measures that Mr Peña hopes will re-establish his credibility and popularity, which has been battered by scandal and public anger over crime.

To succeed, Mr Peña must first of all establish that he is blameless in a scandal triggered by revelations that he, his wife, and Luis Videgaray, the finance minister, bought houses on credit from affiliates of a building firm that has benefited from government contracts. All declare that they have done nothing wrong, though Mr Videgaray received a mortgage at below market rates. Now Mr Peña has opened an inquiry that he hopes will vindicate them.

It will be conducted by Virgilio Andrade Martínez, a civil servant. Mr Peña has appointed him minister of public administration, a post that has been vacant for more than two years. The ministry's duty is to monitor whether government officials are abiding by the law.

Anti-corruption activists question how impartial Mr Andrade's probe will be, ►



Ricardo Martinelli, doing nothing with style

► since he owes his job to Mr Peña. A panel of experts will scrutinise his findings, which will provide some reassurance. In most countries, though, an independent commission would be doing the investigating, says Eduardo Bohórquez, head of Transparencia Mexicana, an NGO.

To complicate matters, the regulation of conflicts of interest is murky in Mexico, which means that the legal basis for the inquiry is unclear. Opposition parties in Congress say that Mr Peña's Institutional Revolutionary Party (PRI) has delayed the launch of their own investigation. But they have been conspicuously quiet on the af-

fair because, experts suspect, many have skeletons in their own cupboards.

A whitewash could discredit a broader effort to cure systemic corruption that plagues Mexico from the highest tiers of government to the lowest. The president called on Congress swiftly to approve a constitutional reform, put forward by the opposition National Action Party (PAN), to create an interlocking system of enforcement and supervision, rather than a single anti-corruption agency. The PRI and the PAN are haggling over the details, but it is expected to include a strengthened auditor-general's office, the Ministry of Public

Administration, an anti-corruption agency to be created under a more autonomous attorney-general and a new tribunal. Mr Peña also wants to require all federal employees to disclose potential conflicts of interest in their annual declarations of assets.

The involvement of both parties suggests that the reform has a good chance of passing. It has the backing of many anti-corruption NGOs. But it is probably not enough to change the behaviour of politicians, which is rooted in using public office to make enough money to win elections. Mr Peña can improve those odds, if he clears his own name first. ■

Bello | Peru's no-convictions politician

A failed labour reform exposes the limits of pragmatism

OLANTA HUMALA is Latin America's political weather vane. A former army officer, in 2006 he ran for Peru's presidency (and lost) as a sympathiser of Hugo Chávez, his campaign financed in part by Venezuelan money. In 2011 he ran again, this time as a disciple of Brazil's left-leaning but pragmatic former president, known as Lula, calling for "a great transformation". To win a run-off election that year he moved further to the centre, promising to maintain the liberal economic policies that helped to give Peru the fastest growth rate of South America's larger economies over the previous decade.

In office, that is what he has done, while recently drifting to a kind of mild populism of the centre-right—the default mode of Peruvian politics since the 1990s. His government has a schizophrenic quality. It has been marked by a superficial instability—he is on his sixth prime minister and sixth interior minister—and an unceasing current of intrigue.

The most recent scandal involves claims by opposition leaders and some of the president's former supporters that they have been spied upon. The current interior minister, Daniel Urresti, is a retired army general who is being investigated on a charge of murdering a journalist during the war against the Shining Path terrorist group in the 1980s. Mr Urresti has helped to push up the president's approval rating by behaving as a hyperactive police chief, forever seeking headlines even as crime worsens.

At the same time Mr Humala has appointed a core of capable technocrats to run socio-economic policies. His government is undertaking an overhaul of the country's schools, and encouraging innovation and diversification of the economy. It is trying to free projects for new roads and metro lines from the red tape



that binds them to the drawing board.

Such efforts are urgent and should go further. The end of the commodity boom has hit Peru hard. The economy grew by 2.4% last year, less than half the government's forecast. Alonso Segura, the finance minister, insists growth will rebound to 4.8% in 2015. But there is no reason to believe the performance will be any better this year than last. The fall in the price of copper, Peru's biggest export, will offset cheaper imports of oil products. Public investment will slow because newly elected regional governors and mayors are still figuring out how to do their jobs.

The finance ministry's forecasts have lost credibility. It has misdiagnosed a permanent structural shock as a temporary lack of demand. It shovelled money at the economy last year, with tax cuts and extra bonuses for lower-paid public workers. This would have been better spent on attracting better teachers and administrators: a lack of proper finance is undermining the education reform and another aimed at professionalising the civil service. But Mr Humala has blocked this, because he fears criticism of wage rises for senior

public servants, says one insider.

While Mr Humala accepts the need for structural reforms, his efforts have been timid. Two-thirds of Peruvians work in the informal sector, bereft of all labour protection. Fearing union opposition, the president vetoed the economic team's plan to liberalise Peru's extraordinarily rigid labour legislation. Instead in December Congress approved a measure encouraging employers to hire 18-24-year-olds under a slightly more flexible regime. Modest though it was, this law prompted marches by thousands of students. On January 26th Congress decided the law was not worth the fuss and repealed it.

In a country that has lost faith in its political leaders, Mr Humala's approval rating of around 30% compares favourably with that of his predecessors at the same stage in their terms. In 2011 his coalition, called Gana Peru, won 47 of the 130 seats in Congress. But his legislators were elected on his Lula-esque platform; 13 have deserted him, either because of his rightward shift or over palace intrigues. He risks losing control over the legislature in the final 18 months of his government.

Sadly for Peru, that means it is unlikely to get the reforms it needs to cope with the tougher economic world it now faces. In today's Latin America, it is hardly alone in that. Whatever his failings in tackling corruption, Mexico's Enrique Peña Nieto, with his ambitious reforms of energy and telecoms, stands out as an exception. "It is not by chance that reforms are so difficult," observed Fernando Henrique Cardoso, who as Brazil's president in the 1990s enacted many. Reforms require conviction, communication and the mobilisation of the potential winners, usually a more diffuse group than the losers. On these counts Mr Humala is letting Peruvians down.



Japan after the tsunami

Grinding on

RIKUZENTAKATA

Rebuilding the north-eastern region of Tohoku is being bungled

NEARLY four years after north-eastern Japan's huge earthquake, tsunami and nuclear meltdown on March 11th 2011, more than 170,000 people are still stuck in temporary housing along the ravaged coast. One of them is Sumiko Yoshida, a woman in her 70s who lives with her husband in cramped, mouldy quarters in Rikuzentakata, a fishing port that was washed away by the tsunami. More than 1,750 people died there, including the Yoshidas' son, Isao, a city official who was helping others to get to higher ground. With no place to call home and no *butsudan* (household altar) for her son, Mrs Yoshida says she cannot properly mourn him—a photograph on a makeshift table has to do. She has suppressed her grief for so long, she says, that the tears will not come.

Japan's prime minister, Shinzo Abe, says that the devastated north-east is a crucial test of his plans to revive the country's economy. Indeed, an early campaign stop for the general election last December was one of many prefabricated housing blocks crammed into school grounds in Rikuzentakata. Yet other national priorities seem to trump the region's reconstruction. A building boom fuelled by Mr Abe's monetary and fiscal stimulus has sucked construction capacity away from the north-east to Tokyo, where deals are more lucrative. Locals ask why the capital is building an ostentatious stadium for the Olympic games in 2020, when the poor and elderly who

lost their homes in the tsunami are still not rehoused. Takuya Tasso, governor of Iwate, one of the worst-hit prefectures, says the government is losing interest in the region.

From the start, reconstruction called for money, energy and vision. In the months following the disaster locals showed great resilience, and volunteers from other parts of the country flocked to help. Some 20m tonnes of debris were quickly cleared. Hopeful planners sketched out new towns built on higher ground, powered by renewable energy. Some people even wondered whether rebuilding the north-east could pull the whole country out of its economic stagnation.

Given those early hopes, the slow progress has been hugely disappointing. Up and down the coast, much infrastructure has not been replaced and only a sixth of planned new construction of public housing has been finished. Drive through the wasteland of Rikuzentakata, and satellite-navigation screens eerily show where every house, petrol station and municipal building formerly stood. The city is only at the stage of moving earth from a nearby mountain to fill in land that sank by a metre (three feet) during the earthquake.

As for Ishinomaki, a city in Miyagi prefecture where 3,700 residents drowned in the tsunami, only 150-odd households have moved into permanent new housing, with 12,700 people still in temporary quarters. City officials in part blame the bu-

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reaucracy in Tokyo for delays in reconstruction. Ishinomaki's mayor says it took six months for the farm ministry to allow paddy fields to be rezoned as land for a new city district.

In many towns and villages, the early solidarity is now fraying as those with money build new homes. There have been disagreements between generations. Older residents are reluctant to leave coastal villages and family graves for good—many made a good living from oyster farming and fishing. Younger generations, by contrast, want to live in bigger, consolidated communities on higher ground behind the coast. Doubts that such towns will ever be built have quickened the region's depopulation, under way even before the tsunami. The population of Iwate, the most northerly of the three prefectures that bore the brunt of the tsunami, has declined by 46,000 or nearly 3% since.

After the disaster the central government pledged ¥25 trillion (\$213 billion) over five years. Yet the system bars much public money going directly to the victims. Those who lost homes can get a maximum of around ¥3m (many houses were uninsured). Many folk are in financial straits, often still paying mortgages on houses that were swept away and too poor to join communities planning to move to new towns.

Meanwhile, it is often the bosses of construction companies, rather than local officials or central government, who pick and choose what is built. When Rikuzentakata's city government recently asked companies to bid for the construction of a new junior high school, developers said the budget was a third too low, and the project failed. A consequence is that local banks are brimming with government cash that is not being spent. In Kesennuma, a fishing port in which over 1,360 people died, the first new public-housing block for ➤

► evacuees has only just opened. Construction firms are generally refusing to build such housing, says its mayor, Shigeru Sugawara. Japan's reconstruction agency insists that project budgets are reasonable. But with labour and materials costs high, and a boom elsewhere, construction firms can cherry-pick what they take on.

In Kesennuma, for instance, they are happy to pour concrete into the first of over 70 new sea walls planned for the city of 67,000. These are walls, up to 90m wide and 15 metres high, which the central government decreed in 2011 were necessary to protect the north-eastern coastline. Up to ¥1 trillion is to be spent on them. Yet the sea walls are using up money that could be better spent elsewhere. The monstrosities are both unpopular and of little use. Even the land ministry admits that the planned walls would not have coped with the earthquake and tsunami of four years ago. Local leaders say they are moving ahead with the walls mainly because the central government insisted on them.

As for the evacuees, the real deadline

After Japan's hostage nightmare

Abe agonistes

TOKYO

A tragedy in Syria pits Japanese hawks against peaceniks

MORE than most countries, Japan has long wished to remain divorced from the world's worries, which seldom reach its shores (the last terrorist attack, in 1995, was home-grown). So the news that Islamic State (is) had murdered a second Japanese hostage, Kenji Goto, brought anguish to many. It also shone a light on the foreign-policy ambitions of the prime minister, Shinzo Abe.

Mr Goto, a noted war journalist, had entered is territory in hopes of securing the release of another Japanese, Haruna Yukawa. In vain: Mr Yukawa, a disturbed soul who for unclear reasons had been fighting with Syrian rebels, was executed first. is released a video of Mr Goto's beheading after fruitless negotiations involving Jordan acting as an intermediary (see page 45).

Mr Abe has since been unusually forceful for a Japanese leader, promising to work with other countries to "make is atone for its crimes". He had already promised \$200m in humanitarian and development aid to countries fighting is—the same sum that the hostage-takers then demanded in ransom.

Mr Abe and his backers say that the tragedy is precisely why Japan needs to play a bigger part in the world. At the least, Japan's rather weak diplomatic and intelligence presence in the Middle East will need to be boosted. Some hope for



for their rehousing may prove to be 2020, says Satoru Ito, who set up a non-profit organisation to help residents of Rikuzentakata after he lost his mother and home in the tsunami. For if they are still in temporary housing by the time of the Olympics, Mr Ito asks, "what will foreigners think?" ■

Fukushima Dai-ichi

Mission impossible

FUKUSHIMA

An industrial clean-up without precedent

THE stricken Fukushima Dai-ichi nuclear plant is the world's most complex and costly industrial clean-up. The first three of Fukushima Dai-ichi's six reactors melted down in March 2011 and the fourth was damaged. TEPCO's early guess was that decommissioning would take 30-40 years. That is certainly optimistic.

Engineers are grappling with problems with little precedent. Akira Ono, the plant manager, says cameras have begun peeking into the first reactor to check the state of 100 tonnes of molten fuel. A robot needs to be developed to extract the fuel. Last October the utility pushed back the start of this removal work by five years, to 2025. Dale Klein, a former chairman of America's Nuclear Regulatory Commission, says that the schedule for decommissioning the plant is pure supposition until engineers figure out how to remove all the fuel.

One victory for engineers is with reactor four. Late last year the last of 1,535 highly toxic fuel rods was plucked from the spent-fuel pool a year ahead of schedule. The fear was that the complex could not withstand another strong earthquake.

Solutions create new problems. Water is pumped in to keep melted uranium at the bottom of reactors one, two and three from overheating. A purification system, known on-site as the "seven samurai", is struggling to keep up with the flow of contaminated water being produced—370,000 tonnes and rising is stored in vast tanks. Even when the worst nuclides are filtered out, TEPCO will face huge opposition with plans to dump the water into the Pacific.

Then there is the ice wall. TEPCO is attempting to freeze the ground in a huge ring around the four damaged reactors to prevent toxins from reaching the groundwater and flowing into the sea. Workers have dug vast holes and filled them with coolant. In May they will begin refrigerating the coolant to up to -40°C. Whether the wall can take another big earthquake or work in the baking summer is not proven. The cost for this so far: ¥32 billion (\$272m).

Meanwhile, a lower-tech clean-up is taking place beyond the Dai-ichi site over a big swathe of Fukushima's rolling countryside. Armed with Geiger counters, men in mechanical diggers or with shovels are skimming off contaminated soil. Once the land is clean, at least some residents have a hope of returning home—71,000 nuclear refugees remain in temporary housing. But it could take years. ►



Remembering Kenji Goto

► The price tag for the whole clean-up is as uncertain as its duration. For one, decontamination costs depend on lowering annual radiation to 1 millisievert, a goal now widely seen as unrealistic, says Tatsujiro Suzuki, a former vice-chairman of the Japan Atomic Energy Commission.

TEPCO says decommissioning Dai-ichi's four damaged reactors will cost ¥980 billion, but that does not include the clean-up, fuel storage or compensation. On a broader reckoning, the Japan Centre for Economic Research, a private research institute, puts the bill over the next decade at ¥5.7 trillion-¥20 trillion, but that still excludes compensation to the fisheries and farming industries. A still broader calculation by the same institute puts the entire cost of the disaster at ¥40 trillion-¥50 trillion. Thanks to government bail-outs, the company that so mismanaged Fukushima Dai-ichi carries on. It even says it will make a profit this year. ■

Showdown in Bangladesh

On fire

DHAKA

A country on the brink

WHEN Amulya Chandra Barman, a 45-year-old rickshaw-puller, boarded a bus in Dhaka last month, it was to go home to his village in the north of Bangladesh. Instead, he ended up in the burns unit of a hospital in the capital. A bomb was thrown into the bus, landing on the bag on his lap. His face and hands were burnt. The bag—holding a month's savings in cash—was reduced to ashes. He is at least alive. This week eight people were killed in a fire-bombing attack on a bus in eastern Bangladesh. In all, about 60 people have died in a month-long transport blockade called by the main opposition, the Bangladesh Nationalist Party (BNP).

The BNP's leader, Khaleda Zia, who has twice served as prime minister, has been confined to a party office in Dhaka, while the blockade of roads, railways and waterways has paralysed the country. This week the BNP added a national strike to the country's agony. The trigger for the unrest was a banned protest to mark the anniversary on January 5th of last year's farce of an election, in which the incumbent Awami League, led by the prime minister, Sheikh Hasina, was re-elected easily thanks largely to an opposition boycott. Since the protests began, more than 10,000 opposition activists have been detained. BNP leaders are mostly in jail, in exile or in hiding. This week the government temporarily cut the electricity and internet cables to Mrs Zia's

redoubt, presumably to put pressure on her to call off the blockade. But she seems determined to see this through to the end.

Bangladesh suffers a dysfunctional two-party system in which the two leaders, the "battling begums", wage mutual vendettas at the country's expense. For nearly a quarter-century they have rotated in office. The Awami League, in power since early 2009, has used its majority to entrench its power and make it impossible for the BNP ever to replace it. It has done so by abolishing the system under which neutral caretaker governments used to oversee elections, hounding BNP leaders and barring the BNP's largest coalition partner, Jamaat-e-Islami, for its avowedly Islamic platform. Now the government claims to be combating acts of vandalism and terrorism by the BNP. The opposition accuses the government of trying to create a one-party state. Both sides have a point.

The personal animus between the begums has fostered a winner-takes-all politics in which the futility of habitually rigged elections forces the opposition on to the streets. Mrs Zia's now seems to want to bring the country to such a pass that the army will feel obliged to intervene. It will be loth to do so. It is mindful of its reputation and of lucrative UN peacekeeping duties that might be jeopardised if the West took exception to its actions. And when in 2007 the generals stepped in to back a non-party "technocratic" administration for two years, the country's politics ended back at square one anyway.

However, with the BNP's transport blockade, and violence and repression worsening, the army may sooner or later feel compelled to act. Nothing suggests the government will accept it faces a political crisis rather than a simple law-and-order problem. In other words, it will be highly reluctant to call an election. Politics has broken down. As Mr Barman puts it: "We, poor people, do not belong to any political party... Yet we are suffering immensely from the conflict of two parties." ■



Anti-blockade blockaders

Extremism in South-East Asia

The looming shadow

SINGAPORE

A region on edge over Islamic State's influence

ON THEIR own, the numbers do not seem frightening. Of the more than 20,000 foreign fighters with Islamic State (Is), just over 500 are believed to have come from Indonesia, along with up to 50 from Malaysia, perhaps 100 Filipinos and a very few Singaporeans. That is a minuscule share of the hundreds of millions of Muslims in South-East Asia, a region whose peaceful forms of Islam are far removed from those of Is.

But the influence of Is is being felt—and feared—all the same. In January more than 40 policemen were killed in the Philippines in an extended gun battle on the island of Mindanao during an attempted raid on the Bangsamoro Islamic Freedom Fighters (BIFF), a rebel group that has pledged allegiance to Is. Two days earlier a car bomb, also in Mindanao, killed two people. The authorities blamed Abu Sayyaf, another militant group that made the same pledge as BIFF.

Indonesia's counterterrorism chief warned late last year that increasing numbers of his countrymen were heading to Iraq and Syria. In the past year the Malaysian authorities have arrested at least 51 people for suspected Is links. Fighters from nearby countries have travelled through the country to reach Iraq and Syria. In August Malaysian police arrested 19 pro-Is militants who were allegedly planning bombings in and near Kuala Lumpur. Indonesia tightened security around Borobudur, an ancient Buddhist temple, after an Is-inspired threat.

The immediate danger comes not from returning fighters but from home-grown militants who have "self-radicalised" online, helped by Is's effective use of social media. Rohan Gunaratna of Nanyang Technological University in Singapore says that al-Qaeda's videos tend to be "long, ranting and boring". Is, however, churns out propaganda "like Hollywood thrillers", he says. Many online pledges of support for Is are bluster. But returning fighters skilled at organising and fighting could change that. Mr Gunaratna estimates that across the region a tenth of those who have gone to Iraq have returned to their countries. Some have become disillusioned; others may want to carry on the fight at home.

Regional governments have begun mobilising to meet the threat. Malaysia's parliament will probably consider a new anti-terrorism act when it convenes in March. ►

► Malaysia's home-affairs minister has promised it will not be a return of the dreaded Internal Security Act, which permitted indefinite detention without charge. But he said it would contain unspecified "preventive measures". Indonesia plans to revoke the passports of anyone who has gone to fight with is, or who plans to do so. Singapore's touted deradicalisation programme involves detention, rehabilitation and intense surveillance.

Sidney Jones of the Jakarta-based Institute for Policy Analysis of Conflict, a think-tank, says that mainstream Muslims in South-East Asia view supporters of is as unrepresentative of their kind of Islam. That may help to limit the numbers of radicals, but it will not assuage worries. Al-Qaeda failed to gain widespread support among South-East Asian Muslims. But bombings on the Indonesian island of Bali in 2002 that killed more than 200 people convinced many in the region of the lethal power of the militant few. ■

Air pollution in India

Breathe uneasy

DELHI

The air that Indians breathe is dangerously toxic

IN THE early hours of a January morning, all lanes of a motorway into Delhi are crammed with hundreds of rumbling lorries. These are brightly painted, with signs imploring overtaking drivers to "Honk please". Every night immense convoys like this one snake their way into the Indian capital, belching sulphurous diesel smoke. The sinking winter air presses the resulting smog tight over the city.

The lorries are a chief reason why Delhi's air is now more toxic than any other city's on earth. Admittedly Beijing has a worse reputation, with its visible smog from particulates of 10 microns or smaller, known as PM10. Delhi's grim distinction is that it has even higher levels of PM10, as well as of the smaller particulates, PM2.5, that are more likely to kill because they go deeper into the lungs. Levels of PM2.5 in Delhi are routinely 15 times above levels considered safe by the World Health Organisation. New data suggest that, on this score, Delhi's air has been 45% more polluted than that of the Chinese capital for the past couple of years.

Last year the WHO assessed 1,622 cities worldwide for PM2.5 and found India home to 13 of the 20 cities with the most polluted air. More cities in India than in China see extremely high levels of such pollution. Especially to blame are low standards for vehicle emissions and fuel.

Nor, for different reasons, are rural people better off. Indoor pollution inhaled from dung-fuelled fires, and paraffin stoves and lights, may kill more than 1m Indians a year. The WHO says the vast majority of Indians breathe unsafe air. The human cost is seen in soaring asthma rates, including among children. PM2.5 contributes to cancer and it kills by triggering heart attacks and strokes. Air pollution is likely to cause vastly more deaths as Indians grow older and more obese. Indoor and outdoor pollution combined is the biggest cause of death, claiming over 1.6m lives a year.

Michael Greenstone of Chicago University has led research into pollution-affected lifespans in China that has implications for India. The lives of northern Chinese, he found, are 5.5 years shorter on average because of air pollution. In a forthcoming article, he applies the same methods to assess the 660m Indians most exposed to toxic air. He concludes that they would each live over three years longer, on average, if their air met national standards.

A former UN chief negotiator on climate change, Yvo de Boer, suggests that air pollution costs China the equivalent of a tenth or more of GDP and he warns India to avoid that fate. He urges India to "industrialise in a cleaner way". And a study of agriculture in India from 1980 to 2010 found soaring levels of ozone and other air pollution, which has led to wheat yields a third lower than would otherwise have been expected.

India's leaders are starting to act, pressed by anti-smog campaigns such as the one by the *Times of India* to "let Delhi breathe". Prakash Javadekar, the environment minister, says that monitors have been installed on thousands of industrial chimneys to gather data on emissions. Now officials have identified the country's 17 most polluting industries.

In theory, at least, every Indian city is now supposed continuously to measure air quality. But state governments are slow to enforce national orders, while the Central Pollution Control Board, India's main environmental agency, does little. Mr Javadekar promises "aggressive action" to improve fuel standards, which would cover

those belching lorries coming into Delhi. In March the Supreme Court may anyway order standards to be tightened, by reducing sulphur, as well as instructing carmakers to cut vehicle emissions.

Some good initiatives to improve air quality are under way. A research project near Patna in Bihar proposes retrofitting the chimneys of brick kilns in ways that reduce smoke. The scrapping of subsidies on petrol and diesel in recent years has had the welcome effect of raising the costs of running especially noxious generators, which may account for nearly a third of all installed electricity capacity. Given that most people, even in the city, still commute by foot, bus or bicycle—and that only 5% of households own cars—India still has time to set up systems for mass public transport before the car becomes king. Already 14 cities have or are building metros. As for farmers, Sunita Narain, a green activist, says they should be pressed to use modern harvesting machinery that renders it unnecessary to burn stubble in fields, a big cause of air pollution.

One experiment could prove particularly welcome. Three industrialised states—Gujarat, Maharashtra and Tamil Nadu—are about to launch the world's first market for trading permits in emissions of particulate matter. In the town of Surat, in Gujarat, 300 textile plants, which typically burn coal to produce steam, are likely to be the first to trade such permits. Monitoring equipment has already gathered emissions data from these and other plants.

Factories could quickly cut emissions by a lot once they have incentives to do so. They could, for example, clean their equipment better or burn fuel more efficiently. The market can function once India's central government gives the order. That is likely to happen, however, only once the law allows financial rather than criminal penalties for owners whose plants breach legal standards. No one knows how long the change will take. Lots of bright ideas exist for tackling air pollution. Their widespread implementation, however, depends to a great degree on how much the public makes a fuss about inaction. As lorry drivers might say, honk please. ■



India's shroud

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Banyan | Still fighting

In Asia memories of the second world war still bring more recrimination than reconciliation



AS WARS fade from living memory, time should heal the emotional scars. In Asia, however, it seems only to deepen wounds left by the second world war. The 70th anniversary this year of the conflict's end is likely to attract more attention than even the 50th or 60th. That would seem to offer a chance to pursue an elusive reconciliation between Japan and the countries that were victims of its aggression in the 20th century. But such countries continue to complain that successive Japanese governments, and notably the one led by Shinzo Abe, the present prime minister, have not done enough to atone and want to rewrite history. Little suggests that reconciliation is on the cards.

For a start, China's government does not seem in the mood for it. For the first time, it will mark the anniversary of victory over Japan with a big military parade. *China Daily*, an official newspaper, insists this is not to taunt Japan, and that the government is merely following "international practice" by highlighting China's important but "underreported" role in the "World Anti-Fascist War", in which, the paper says, it suffered some 30m casualties.

The insistence rings hollow. The Chinese Communist Party's legitimacy is rooted in part in its role in the resistance to the Japanese occupation (in, as it might also like to recall this year, a united front with the Nationalist Party, the Kuomintang, now in power in Taiwan). In the context of China's bitter current dispute with Japan over the uninhabited Senkaku islands (Diaoyu in Chinese), which has at times seemed to risk open conflict, it is hard not to see a display of military might in Tiananmen Square as bearing a political message for Japan.

China is also making a point of linking its celebrations to those of Russia, which is staging its own party in May to mark the anniversary of the defeat of Nazi Germany. When they met in Beijing in November, their presidents, Xi Jinping and Vladimir Putin, agreed they would attend each other's celebrations. Intriguingly, Russia also says that Kim Jong Un, North Korea's young dictator, has agreed to show up in Moscow for what might be his first foreign excursion since taking power three years ago. The Soviet Union declared war on Japan only on August 8th 1945, after Hiroshima was bombed and the Japanese surrender was imminent. Soviet troops then occupied islands—still held by Russia—that Japan claims as its Northern Territories.

As Xinhua, the Chinese news agency, reported it, the purpose of linking Chinese and Russian commemorations would be jointly to "safeguard the outcome" of the war and the "post-war international order". That sounds aimed at Mr Abe, who argues that "the biggest issue for Japan is truly escaping the post-war regime". He means that Japan should become a normal country, not weighed down by guilt at its imperialist past and neutered by a pacifist constitution imposed on it as a result of the war. His right-wing supporters argue that Japan is unfairly singled out. Their forebears were not Nazis; many armies were guilty of atrocities; some of the "victims" were willing collaborators; and apologies, such as Germany's, are the exception. Even the many Japanese troubled by their country's past feel that its suffering—at Hiroshima and Nagasaki, for example—is forgotten.

It has become expected that the sitting Japanese prime minister will issue a statement about the war to mark each tenth anniversary of Japan's surrender, which is commemorated in Japan on August 15th. Some of Mr Abe's advisers hope he will use this to try to bring a close to the endless rows with Japan's neighbours over history. Indeed, Mr Abe seems to be signalling that his statement will not merely repeat the expressions of remorse offered by his predecessors. Rather he will use his own words to express regret, and concentrate on the model, law-abiding international citizen that Japan has been since.

That might be enough for parts of South-East Asia, where Japanese wartime occupation was a prelude to independence from European colonial powers and where attitudes to Japan are relatively benign. But it is unlikely to satisfy either China or South Korea, where schoolchildren are taught in graphic detail the cruelties of Japanese occupation. Their governments cannot forgive Mr Abe for his visit, in December 2013, to the Yasukuni shrine in Tokyo where war criminals are among those honoured. And they accuse him of belittling wartime aggression and denigrating women forced by the imperial army into sexual slavery.

This last issue rankles in particular in South Korea, where the numbers of the few dozen surviving wartime "comfort women" brave enough to identify themselves are diminished by death nearly every month. Japan says it settled all its debts to the comfort women in 1965, when the two countries normalised relations. In fact, it has come close at times to agreeing to a further settlement and apology. But, soured by history, relations remain poor. It seems unlikely that the 50th anniversary in June of the normalisation treaty will be marked with more than a token nod.

Bashing Japan, one at a time

In South Korea 1945 is remembered both as the end of Japanese occupation and, more sadly, as the beginning of the peninsula's division. And so the president, Park Geun-hye, who has put eventual Korean reunification back on the political agenda in the South, is unlikely to want to join in Chinese-led triumphal celebrations: Korea is still waiting for its victory. And, says Hahn Chai-bong, president of the Asan Institute, a think-tank in Seoul: "We don't need Chinese help in denouncing the Japanese; we do it much better ourselves."

Nor is Ms Park likely to accept Russia's invitation to Moscow in May, despite the tantalising prospect of an inter-Korean summit with Mr Kim, whom she has said she is ready to meet. For the Koreas as for China and Japan, anniversaries that might have been a chance to come together in the shared memory of past suffering seem likely to become another reason to drift further apart. ■



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Pollution

The cost of clean air

SHIJING

Measures to combat air pollution are biting hard in industrial areas already hit by an economic slowdown

A DESOLATE scene surrounds Little Zhang's Tyre Repair in the dusty rock-mining township of Shijing, in the northern province of Hebei. Zhang Minsheng, the owner, still gets some business from passing traffic. But the recent closure of nearby rock quarries, because of air-pollution restrictions, has taken its toll. He reckons his monthly income has fallen by 30-40% to around 4,000 yuan (\$640). Next door a wholesale coal business has closed. So too have a small family-owned barbecue restaurant and an alcohol, tobacco and grocery store. Red characters posted by their entrances still forlornly proclaim their "grand opening".

Last year on a typically smoggy day in Beijing, Li Keqiang, the prime minister, declared "war" on air pollution—a problem that has become a national fixation. Smog remains a grave danger in most Chinese cities, but environmental measures are beginning to show teeth. Regulators in the most polluted provinces are ordering mass closures of offending enterprises. In some areas officials are being punished for failing to control pollution. Policymakers are placing less emphasis on GDP growth—long an obsession of officials at all levels of government—and talking up greenness.

The transformation will be painful. China's new toughness on polluting quarries, mills and factories coincides with an economic slowdown that will make it harder to create new jobs for those laid off.

Slower growth is in line with the government's efforts to curb wasteful investment, and with it a dangerous build-up of debt. The slowdown also happens to be helpful in curtailing pollution: China's consumption of coal, a huge contributor to smog as well as to climate-change emissions, fell slightly in 2014 after 14 years of growth.

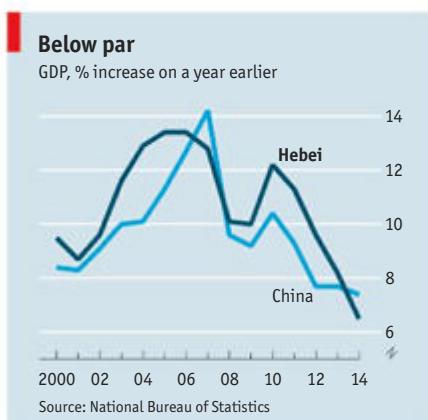
Mr Li's war is especially bloody in Hebei, which is blamed for much of the smog in Beijing. Keeping the air of the capital clean is a political priority. Chinese leaders have been embarrassed by the damage caused to China's international image by the city's relentlessly grey skies. They worry that the smog could fuel dissatisfaction with the government and undermine stability in the capital, as well as affect their

own and their families' health. Dutifully, Hebei, which surrounds Beijing, has been trying to clean up. Since the beginning of 2013 it has reported closing down 18,000 polluting factories. In January *Hebei Daily*, a state-run newspaper, said that in Mancheng county, to which Shijing township belongs, 37 rock quarries and rubble pits had been shut.

Hebei's economy has suffered. Until 2014 real GDP growth in the province had outpaced national GDP growth for all but one year since 2000 (see chart). But as China's GDP growth slowed from 7.7% in 2013 to 7.4% last year, Hebei's fell much more sharply, from 8.2% to 6.5%, according to official figures. The slowdown in Hebei's industrial sector last year was particularly severe, from 10% growth in 2013 to just 5.1% last year, compared with a much gentler decline nationwide from 9.7% to 8.3%.

Hebei has its own reasons for wanting cleaner air. On February 2nd the Ministry of Environmental Protection named China's ten most-polluted cities in 2014. Seven of them were in Hebei province (a perennial winner of this grim contest). Baoding, close to Shijing township, came top of the list, displacing Xingtai (pictured above), another city in Hebei which took the crown in 2013. The ministry said that of 74 large cities in China, only eight had met air-quality standards.

The closures may be having some effect. The environmental ministry reported that in the region encompassing Beijing, Hebei and the city of Tianjin the average level in the air of PM_{2.5}, the smallest measured particles which are most harmful to health, was 93 micrograms per cubic metre last year, down from 106 in 2013. In Beijing itself the level dropped by 4%, to 85.9 micrograms per cubic metre. A daily level above 35 micrograms per cubic metre is considered unsafe. Beijing's is sometimes ➤



► above 500.

Farther from Beijing, in places where the anxieties of leaders in the capital are felt less keenly, some officials have been trying to shift attention away from the polluting industries that keep people in work. In Dazhou, in the south-western province of Sichuan, officials last month blamed their city's smog on the smoking of bacon (a popular practice in local cuisine), provoking mockery online.

In November a senior planning official, Xie Zhenhua, said China would have clear skies by 2030, when carbon emissions are also expected to reach their peak. But public resentment will be slow to ebb. On the road to Baoding the reason is plain. The chimneys of paper mills spew white smoke into the slate-grey sky; the air smells as acrid as ever. ■

Internet censorship

Plugging the holes

BEIJING

Circumventing internet controls is getting harder

TWO of the first things that strike visitors to China are irritants to which some residents have become inured: bad air and poor internet service. For those with money to spare, a (very expensive) solution to the first problem is to buy air purifiers. For the second the solution is much cheaper and, until recently, far more visibly effective: a “virtual private network” (VPN), a software service that tunnels through the government’s extensive obstacles to content it dislikes.

Selling air purifiers remains a growth industry in China, but the VPN business is in trouble. For years internet censors largely tolerated it, perhaps because users of paid VPN services were, at first, mostly foreign residents. In recent weeks, however, the government has changed tack. It has been making unusually strenuous efforts to block access to VPNs. Foreign companies which provide them have been warning customers that these problems will persist as China’s countermeasures become ever more sophisticated.

The censors have also been speaking more openly about their efforts to protect China’s “cyber-space sovereignty”. On January 27th Wen Ku, a senior official in the Ministry of Industry and Information Technology, said that the country needed “new methods to tackle new problems” in its management of the internet. State media have suggested that offering VPN services in China without registering should be seen as illegal, even though the companies that do it are based abroad and are not

Floriculture

Let a million flowers bloom

KUNMING

Love fuels rose-price inflation

FROM midnight until 4am trading is keen and fast at the Dounan Flower Market in a suburb of Kunming, capital of the south-western province of Yunnan. Trucks laden with radiant, perfumed blooms clog the surrounding roads. By mid-morning petals litter the ground and most of the 14m stems sold each day are on their way to destinations around China and beyond. Since the local government turned a budding local enterprise into China’s biggest wholesale flower market in 1999, Dounan has become the main supplier of blooms to courting couples and contrite husbands across the country: demand fuelled by a middle-class boom.

Yunnan has rapidly emerged as China’s dominant flower-growing region. In 1994 it had a mere 133 hectares (329 acres) of flower farmland. By 2013 it had 67,400 hectares and accounted for about a third of China’s blossom exports—helped by expanding international air links in a province that was once isolated from global markets. China now accounts for more than a quarter of land worldwide devoted to growing flowers and pot plants, according to the International Association of Horticultural Producers, a trade association based in Switzerland.

China is not yet a global flower-power. Its exports amount to a little over 4% of the world’s total flower trade by value. Over two-thirds of the blooms it sends abroad are sold in Asia. (Myanmar is the biggest buyer.) Freight costs are a barrier to expansion into the more lucrative markets of Europe and America.

But the adoption of Western tastes is helping to cultivate demand at home.

violating laws in their own countries.

Without these services, China’s 649m internet users are blocked from all manner of forbidden fruit, including sites covering sensitive political topics as well as social media such as Facebook and Twitter. Interference with Google services, which had for years been reduced to excruciatingly slow speeds, is now near-total.

It may be tempting for China’s regulators to think of this as merely a nuisance to foreigners, who can be safely left to steam over their inability to get on to YouTube. But it is also causing serious disruption to many Chinese users, who wish to heed the government’s call to boost innovation and who need to collaborate with foreign colleagues in business or academia. It represents “a huge tax on efficiency”, says Dun-

Roses, though not traditionally a symbol of love in China, are the most commonly grown flower. Valentine’s Day far surpasses China’s own lovers’ day (which this year falls on August 20th) as a generator of sales. As February 14th approaches the wholesale price of roses doubles, according to the Kunming International Flower Auction Centre. This year it may rise even more steeply, thanks to a joyous coincidence: Valentine’s Day, Chinese New Year five days later and International Women’s Day on March 8th (which Chinese often mark by giving bouquets) fall within three weeks of each other. Life for Dounan’s floriculturalists is indeed a bed of roses.



From China with love

can Clark, chairman of BDA, a Beijing-based technology consultancy.

Some Chinese officials, however, see the controls as good for business. They boast that blocking access to swathes of the internet has created the space for China’s internet giants such as Alibaba, Tencent and Baidu to prosper. Foreign companies suspect that China is using internet security as a pretext for protectionism. On January 28th 18 American industry groups complained to Chinese leaders about a “growing trend” in government policy-making towards limiting access by foreign information-technology firms to the Chinese market on “cyber-security” grounds. No such complaints have yet come from foreign manufacturers of air purifiers, which continue to sell like hot cakes. ■



Nigerian politics

Bad luck for Nigeria

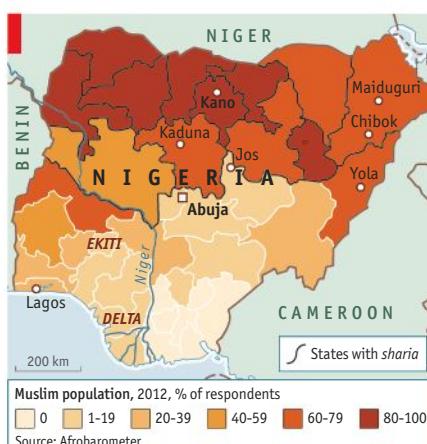
ABUJA

A discredited ruling party faces its greatest electoral test yet

A THREE-CAR convoy is considered modest for leading Nigerian politicians, and modesty appeals to Muhammadu Buhari, the leading opposition candidate in the presidential election due to be held on February 14th. From his rented house made of simple concrete with few windows, his cars drive into a busy street and are almost immediately stuck in traffic. Without the armed outriders and flashing lights that ease the passage of officials in the ruling party he inches his way to the airport in Abuja, the capital, his aides glancing around nervously.

The aura of power catches up at the terminal building as he prepares to start the day's campaigning. Courtiers, jobseekers and hangers-on in colourful garb and headgear rush in. Shyly he shakes hands. Mr Buhari, a 72-year-old retired general who ruled Nigeria for 20 months in the mid-1980s (and then spent 40 months in detention), may be on the verge of triggering the first democratic change of power in the country's modern history. Polling and observers suggest the race between him and the incumbent, Goodluck Jonathan (pictured) is too close to call, with each commanding about 42% of the vote (see chart on next page).

Ever since 1999, when the army relinquished power, Nigeria has been ruled by the People's Democratic Party (PDP), a sophisticated political machine greased by billions of dollars' worth of oil money. Yet



less cash is available these days. A sharp decline in the oil price has coincided, unluckily for Mr Jonathan, with the election. Government revenues have halved in recent months and the currency has tumbled by a quarter. Civil servants are paid late, if at all. Infrastructure projects have stalled.

But the government's biggest liabilities are the result of its own greed. Officials have never been shy about dipping into public troughs but the present lot is, by common consent, especially avaricious. Last year the governor of the central bank said that \$20 billion had gone missing. He was sacked for his trouble. A report into his allegations is now on Mr Jonathan's desk. Rampant theft has not only harmed the

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economy and exacerbated poverty but it has also contributed to public insecurity.

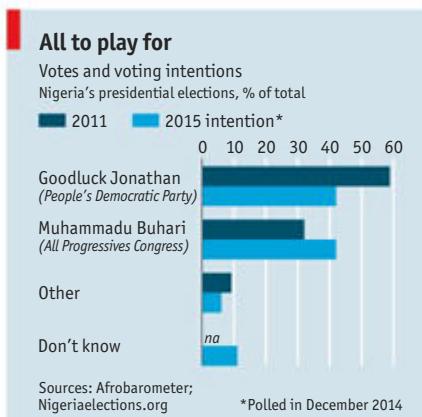
With corruption endemic even in the army, soldiers are sent to the front line short of ammunition and rations. Demoralised and poorly led, they have failed to quell a jihadist insurgency in the north-east that has killed thousands. Almost a year ago militants from Boko Haram, a jihadist group that claims to have established a "caliphate" over a chunk of the country, kidnapped more than 250 girls from the town of Chibok. The government barely stirred until it was goaded into action by an international outcry.

With much of the north-east in flames—around 1.5m people have been forced to flee their homes—many voters believe Nigeria's situation today is worse than at any time since the civil war in the late 1960s. To be sure, large parts of the country remain secure and the economy has boomed in recent years, but insecurity is spilling southward. Left unchecked, the insurgency could tear Nigeria apart.

At rallies, Mr Jonathan encounters unenthusiastic supporters; many are paid to turn up and so leave before his speech ends. Chairs are provided, perhaps to make the crowd seem larger. At a rally in Yola in late January they were thrown at him. Elsewhere his convoy has been stoned. Some election billboards are guarded by soldiers, giving rise to calls that the men should fight Boko Haram instead.

The candidates, and their parties, exhibit few ideological differences. The election revolves around questions of honesty and competence as well as ethnic and religious identity—unsurprisingly, given Nigeria's diversity, with 500 languages spoken among its almost 200m people. Mr Jonathan is a Christian from the south whereas Mr Buhari is a northern Muslim (see map).

The key to victory for either candidate ►



► may lie partly in whether people vote along religious lines. To win, Mr Buhari must convince Christian voters, predominantly in the south, that being Muslim is not synonymous with Islamism. The atmosphere at Buhari rallies—even those held away from his northern heartland—suggest that momentum is on his side. Many attendees are euphoric with optimism that he can fix the country.

They also hope that, as a former military man, he knows “how to make soldiers fight, not run away.” He has some form. Under his command in the early 1980s the Nigerian army drove out Chadian rebels from areas now held by Boko Haram (and which, ironically, are now being contested by Chadian soldiers who have been sent to assist Nigeria).

They also look at his record in fighting corruption. When he was head of state he, rather unusually for the office, kept his fingers out of the till. He locked up hundreds during an anti-corruption campaign and launched a “war against indiscipline” in which he got whip-wielding soldiers to enforce orderly queuing. Civil servants who arrived at work late were forced to perform “frog jump” squats.

Yet, during this period thousands of political opponents were detained without trial, political meetings were banned and the press was tightly controlled. Hundreds of people were tried before secret military tribunals and many were executed for crimes that were not capital offences when they were committed. Eager to play up his past the PDP has been publishing photos of him in military uniform with the headline, “Once a dictator, always a dictator”.

Activists and foreign diplomats are unworried by his past. His running mate, Yemi Osinbajo, is a lawyer and pastor with a strong record of championing human rights. Mr Buhari, for his part, told *The Economist*: “We have to stick to the constitution of the country. Once upon a time I was a military man. But I do not want to militarise democracy.”

If anything, Mr Buhari’s biggest flaw is the opposite of what the PDP alleges. He has never been a forceful character; he can

Election fraud

By hook, crook or chequebook

LAGOS

Genuine democracy has been slow to take root

NO GOVERNMENT in Nigeria has ever come to power through credible elections. Even in colonial times stuffing ballots was the norm. Since independence few aspiring leaders have troubled much with the niceties of elections. Until 1999 military coups were more prevalent than ballots. Since then votes have been marred by violence and fraud.

The election in 2007 marked a particularly low point, when candidates reportedly garnered millions of fake votes in some 30,000 fake polling stations. A European Union observer mission noted that it “fell far short of basic international and regional standards for democratic elections”. The 2011 elections were an improvement but ballot-stuffing was still evident. One innovative wheeze was, as the EU observed rather drily, “the high number of under-age registered voters” who took part in the election.

This time the Independent National Electoral Commission (INEC) says it has wiped millions of duplicated voters from

the electoral roll, issued voter cards and installed biometric machines to stop people casting more than one vote.

But where there’s a will—by hook, crook or chequebook—there’s a way to rig an election. Officials fret that party thugs may smash biometric machines. Using the police or army to influence the vote is also common. Last year the All Progressives Congress (APC), the main opposition, complained that the army had rounded up its officials and supporters ahead of a vote to elect the governor of Ekiti, a key southern state. Politicians from the ruling party say that it played no part in instigating the arrests and that it won the election fairly.

Even if neither party tries to rig these elections, Nigerians may not see them as having been free and fair. With ten days to go before the vote, only 44m of 68.8m voter cards have been distributed. Opposition strongholds such as Lagos are among the worst affected, activists say.

Another problem is the Islamist insurgency in Nigeria’s north-east, an APC heartland. The electoral commission has already cancelled polling in almost a quarter of the districts in the three north-eastern states most affected by Boko Haram, a jihadist group. Many of the 1.5m people displaced within Nigeria by the fighting will not be able to vote because by law they must cast their ballots in their home constituencies.

Little wonder that a recent Gallup poll found that only 13% of Nigerians trust the ballot (see chart). With such question-marks hanging over the election, losers are likely to cry foul. An outbreak of violence seems all too likely.

Vote of no confidence

% of total



be Reagan-esque in his inclination to set the tone and direction of policy but leave the details to others. His party, the All Progressives Congress (APC), is the product of a recent merger of the four main opposition groups. Ruling-party bigwigs dismiss it as a “party of candidates” squabbling for power. Attempts to form a united opposition party at previous elections failed because the leaders could not agree on a joint candidate. This time they did, holding a credible primary before choosing Mr Buhari.

The APC has, moreover, already shown it can govern competently. It runs the two most populous urban areas, Kano and Lagos, and almost half the federal states. Supporters on both sides have threatened to protest violently against a loss. Tempers will probably also flare if there are wide-

spread irregularities in the conduct of the vote (see article above). Some fear a Buhari victory could lead to an eruption of violence in the Niger Delta, the home region of Mr Jonathan, where the government has bought a precarious peace by paying off former militants. A victory for Mr Jonathan could, meanwhile, spark unrest in the north. The vote in 2011 was judged one of the country’s fairest, and yet almost a thousand people died in communal fighting.

This election could mark a permanent shift in Nigerian politics away from one-party rule. The powerful used to crowd around one big trough, awaiting their turn. Now they must choose between two troughs. That makes for potentially nastier politics. But if Nigeria can hold together, there is a hope of better government. ■

South Africa's democracy

A one-man demolition job

CAPE TOWN

The institutions of democracy are fragile and being sorely tested

NELSON MANDELA, South Africa's first post-apartheid president, dedicated himself to strengthening institutions of the country's nascent democracy; not least by stepping down after a single term. Bar the occasional blow, his successor, Thabo Mbeki, kept them broadly intact. Sadly, the current president, Jacob Zuma, seems to bent on smashing their very foundations.

Under attack are some of the most efficient and respected bits of the state: its justice system, its revenue service and the office of the public protector. The criminal justice system, which was rebuilt after the end of apartheid, was widely admired for its boldness. Among those it prosecuted was a national police commissioner and stalwart of the ruling African National Congress (ANC), Jackie Selebi, who was jailed for corruption.

Yet in recent months several senior prosecutors and investigators have been sacked or have left office, many citing "family reasons", after probing allegations of corruption with a little too much vigour. Several were looking into allegations that taxpayers had footed more than their share of the bill for a 246m-rand (\$21m) "security" upgrade to the president's palatial private homestead, known as Nklandla, in the hills of KwaZulu Natal. The taxpayers' funds were meant to cover only security improvements such as fences and guard-houses around the complex. Yet they also paid for the construction of a swimming pool (ostensibly to provide a water reservoir for emergency firefighting), a chicken coop, a tuck-shop and an amphitheatre.

On January 26th came the resignation of Vas Soni, the head of the Special Investigating Unit (SIU), a corruption watchdog examining whether Mr Zuma had benefited illegally from state spending on his home. A few days later his lead detective in the investigation also handed in her resignation citing "personal" reasons.

Lest anyone probe again, the government is preparing a new law that will give the president and the justice minister "additional oversight" over the SIU's work. If that's not enough to defang it, the law will also give the heads of government departments and regional governments—often the targets of SIU probes—the right to "request" updates on its investigations.

Other investigative agencies are also being brought to heel. Anwa Dramat, the head of a crime squad called the Hawks, has been suspended, ostensibly for illegal-

ly deporting several Zimbabweans. But Mr Dramat claimed in court papers that he was being turfed out after probing the Nklandla scandal.

The South African Revenue Service, an apolitical tax collector, has also come under fire after clashing with the ruling party. Two senior officials, including the unit's deputy commissioner, were suspended after their boss, a Zuma appointee, accused them of illegally investigating Mr Zuma.

A more colourful explanation for their suspension may be that they crossed paths with the government over a consignment of bright yellow T-shirts bearing the president's grinning face. The T-shirts had been

imported ahead of presidential elections in 2014 and were sported by Mr Zuma and his allies at all big election rallies. Yet the revenue service reportedly impounded them and refused to release them until import duties and taxes were paid, apparently to the chagrin of the ruling party.

Mr Zuma's presidency has at least four more years to run unless the ANC decides to "recall" him—as it did Mr Mbeki. The "one man wrecking ball", as a leading commentator, Max du Preez, described him, might yet survive. He is, after all, a seasoned political streetfighter. Some wonder, though, whether South Africa's democracy will survive Mr Zuma. ■



The war against Islamic State

It will be a long haul

RIYADH

The fight against Islamic State is making some progress, but the jihadists are hardly on the back foot

THE repertoire of new horrors keeps expanding. On February 3rd the jihadists of Islamic State (is) released a video showing the immolation of Flight Lieutenant Moaz al-Kasasbeh, a Jordanian pilot captured after he ejected from his F-16 jet, over Syria in December. The sickening footage appears calculated to attract potential is recruits; scare and provoke its enemies into actions that would feed is's propaganda; and create cleavages between the leaders and populations of countries who have joined in coalition against it.

Sure enough, within a few hours Jordan responded by hanging two convicted terrorists, including one whose freedom is had demanded in exchange for Lieutenant Kasasbeh. But in other respects is may

have miscalculated. Jordan, which along with the United Arab Emirates (UAE) had stopped flying sorties against is after the pilot's capture, vowed a "severe" response. The Jordanian people, many of whom had just days earlier been protesting the monarch's decision to join the coalition against is, now seem united in outrage and demands for revenge. Even jihadist groups have expressed outrage at the killing.

Despite the ghoulish propaganda, the coalition can claim to be making slow progress. It is six months since Barack Obama gathered 60-odd countries into a coalition to "degrade and ultimately destroy" is. Since the first air strike in Iraq on August 8th, the campaign has extended into Syria and widened to include arming and train- ►

ing allies such as Syrian and Iraqi Kurds, and Iraqi government forces.

America's Central Command claims that about 6,000 IS fighters have been killed, including up to half the group's "top commanders". Some reckon it has 30,000 fighters in fray. At the end of January Kurdish fighters in Kobane, a Syrian town on the border with Turkey, said that they had expelled IS after four months of grim fighting with help from coalition bombers.

More than 1,000 IS fighters are thought to have been killed in that battle. Syrian Kurds have also extended their control into surrounding villages previously held by IS. Rebels in provinces to the west of Kobane say their front lines with IS have been quiet, suggesting that the jihadists are struggling to fight on multiple fronts.

The biggest setback appears to have been to the aura of invincibility that IS acquired last year when its advance through Iraq and Syria seemed unstoppable. Although IS still controls an area of Syria and Iraq about the size and population of Jordan, it has been unable to expand into areas of Iraq where Shias or Kurds are a majority. Threatening Baghdad or Erbil now appears beyond IS's capacity.

IS sees no distinction between Iraq and Syria, as the coalition does. As the group gets squeezed in Iraq, it is likely to expand into Syria where there is little the coalition could do but increase the number of air strikes. The population of potentially-friendly Sunnis is far greater than in Iraq and the atrocities of Bashar Assad's regime continue to stir Sunni resentment. Outside the Kurdish areas there are no local forces to partner with. Until the coalition can resolve its conflicting interests in Syria, above all how it intends to get rid of the Assad regime, IS will at most be contained.

Foreign fighters appear to be flowing in to replenish losses as fast as ever, reckons Rami Jarrah, a Syrian journalist who lives on Turkey's border with Syria. In January the International Centre for the Study of Radicalisation and Political Violence, a London-based think-tank, suggested there were at least 20,000 foreign jihadists, surpassing the number that flocked to defeat the Soviets in Afghanistan in the 1980s.

On the ground the battlefield remains fluid. In November Iraqi government forces, with help from coalition air power, retook Baiji, the site of Iraq's biggest oil refinery, in a major reverse for IS. A month later they had lost it again. Though IS appeared to have consolidated its grip on the mainly Sunni province of Anbar, some Shia militias, invited in perhaps surprisingly by local Sunni tribal leaders, have made advances. In late January, Iraqi government and Shia forces pushed IS out of its remaining stronghold in Diyala province, north-east of Baghdad.

Further north the jihadists are also on the retreat. American commanders say

that air strikes combined with a ground offensive by Iraqi Kurdish forces have pushed back IS from their positions west of Mosul, Iraq's second-biggest city, which fell to jihadists last June. IS supply routes from its territory in Syria are being cut. Talk of an early summer assault on Mosul has also resumed. That seems premature. Efforts to rebuild the Iraqi army are unlikely to bear fruit so quickly. And the city could not be taken without a heavy toll in civilian lives.

The coalition is also having some success in hitting IS in its wallet. By destroying oil installations, the air strikes have denied IS its main source of cash. Oil receipts may have dropped by two-thirds to \$750,000-\$1.3m a day from \$2-3m in June. Banks in areas under IS control may have run out of cash. IS is killing rather than ransoming hostages, having raised at least \$20m in 2014. "The key thing is these sources of fi-

nancing aren't renewable," says Matthew Levitt of the Washington Institute for Near East Policy, a think-tank. "While IS is a rich terror group, it is a poor state." People in Raqqa, IS's Syrian headquarters, say salaries are still being paid, but services—cruicial to IS's claim to rule—are drying up.

These setbacks may help explain the group's turn to ever more ghoulish acts to bolster morale and keep up the flow of new recruits. That suggests an opportunity, says Mr Levitt. Stories are emerging of IS fighters who are killed or jailed by the group when they try to leave it, but they are not widely circulated. "We need [videos of] foreign fighters who have returned saying: 'I went but was cleaning toilets';... 'I went and wanted to leave and they killed my two brothers,'" says Mr Levitt. A long war needs not just guns and planes but also a comprehensive strategy and the patient waging of a battle of ideas. ■

Netanyahu v Obama

An Israeli campaigning in America

JERUSALEM

Israel's prime minister takes his re-election bid to Congress

BINYAMIN NETANYAHU, Israel's prime minister, could not have hoped for a better soapbox. Two weeks before Israelis go to the polls, he will take his stand on the Congress podium at the invitation of the Speaker, John Boehner, a Republican friend of Israel. From this most visible stage Mr Netanyahu will present himself as the guardian of Israel's security—in contrast to Barack Obama, who will be chided for his supposed readiness to yield in negotiations with Israel's arch-enemy, Iran. To the

ire of Mr Obama's team, which tends to hold its nose when Mr Netanyahu approaches, the American administration was not even consulted in advance of the visit. In turn, the president refused to receive the Israeli prime minister.

Mr Netanyahu's rivals at home have been quick to accuse him of putting himself before his country's ties with its chief ally. Mr Netanyahu is "harming the security of Israel and its soldiers for politics," says his former minister, Tzipi Livni, now the main opposition party's co-leader. Some Israeli generals, too, are worried. "Officially the level of co-operation in military affairs and the intelligence-sharing is as high as ever," says a senior officer. "But on a more personal level, the suspicion between the two leaders trickles down and makes things more difficult."

Mr Netanyahu's advisers say his speech will nonetheless please voters back home. "They care more about standing up for Israel's interests than a diplomatic spat with the administration," says a ministerial colleague. Not only is Mr Netanyahu strong enough to face down America's president, he adds, but whatever the personal rancour between the two men "the White House has been very good at safeguarding Israel's strategic alliances".

Bad blood between Israeli leaders and American presidents ahead of Israeli elections is nothing new. In 1992 George Bush, annoyed by the expansion of Jewish settle- ►



The best of frenemies

ments on the West Bank, withheld some loan guarantees sought by Israel. This helped Yitzhak Rabin's Labour party clinch the election. In 1996 Bill Clinton convened a "peacemakers' summit" of world leaders in the Egyptian resort of Sharm el-Sheikh to boost Shimon Peres's flagging campaign against Mr Netanyahu—in vain.

Israeli politicians working Congress with their lobbies in the face of a recalcitrant president can wield a lot of influence. Mr Netanyahu, a political attaché at Israel's Washington embassy in the early 1980s, is an expert. In October, after Mr Obama again complained about settlement-building, Mr Netanyahu even pontificated on "American values." His close friendship with Sheldon Adelson, a Jewish-American casino magnate who is a leading donor to the Republican Party, gives him extra leverage. His ambassador in Washington, Ron Dermer, has close ties to Republicans, too.

Some Israelis fear Mr Netanyahu is unnecessarily ruffling feathers. His relations with Mr Obama never fully recovered after Mr Adelson spent \$100m-plus on Mitt Romney's presidential campaign in 2012. Israeli pundits wonder whether Mr Netanyahu could lose Israel its long-standing bipartisan support in Congress. Mr Obama's people have so far limited their latest criticism to irate private asides and minor public remonstrations. But Nancy Pelosi, the minority leader in Congress, suggested Democrats might skip Mr Netanyahu's congressional appearance. She says: "I see him on TV every Sunday morning." ■

Israel's Palestinians

Our home too

JERUSALEM

Long sidelined, Arab parties are emerging as a force to be reckoned with

SOMETIMES even the best-hatched plans go awry. A year ago Israel's foreign minister, Avigdor Lieberman, pushed for a law to raise the threshold parties needed to enter the Knesset, from 2% to 3.25%. Mr Lieberman has long campaigned to reduce the presence of Arabs in Israel's parliament and, like others on the right, hoped the move would sideline if not eliminate three small Arab parties each of which holds three or four seats.

The ploy had the opposite effect. Fearing political purgatory in Israel's March 17th elections, the three parties pulled off the impossible and joined forces to create a single bloc, the Joint List. It could become the fourth-largest party and determine Israel's next government.

Meanwhile Mr Lieberman's party, Yisrael Beiteinu ("Israel Our Home"), faces oblivion. Buffeted by a series of corruption

Marriage in Iran

The No.1 mullahs dating agency

TEHRAN

Iran's government tries to play matchmaker

AT A loss to explain why most youngsters are delaying marriage or altogether shunning the idea of a happy union, Iran's government is taking action. In Hamedan province, a senior ayatollah recently warned unmarried public workers to find a spouse within a year or risk losing their jobs. A gentler approach, announced in January, is the launch of a matchmaker website which, the government hopes, could lead to as many as 100,000 marriages.

For those who fret about such things, there is much to stoke concern. The traditional family unit is falling apart in Iran, as elsewhere: around one in three marriages in the capital, Tehran, fails.

The Shia form of Islam practiced in Iran allows *sighleh*, or temporary marriage that can last for as little as an hour. The government would prefer more durable pairings, however.

In any case, under-30s, who make up 55% of Iran's population of 77m, seem far more interested in brief flings than marriage. Hence some 300 "immoral" Western-style dating websites have sprung up of late. Unable to close them all down, the state's moral guardians have decided

to turn matchmaker instead.

But its website, which launches later this month, is unlikely to make much impression beyond religious neighbourhoods where, in any case, there is little premarital nookie. "I would never put my name on a government-run site... no matter how desperate I felt," says Farhad, a 32-year-old who has been single for the past three years.

For many of his peers the method is simply outdated. Rather than let their parents or the government arrange their future, many adolescents find inventive ways of meeting. One of the most common is *dor-dor* ("turn, turn" in Farsi) where telephone numbers are exchanged out of the windows of cars in the street—about as public as flirting can get in Iran. Facebook, although blocked by government censors, is also popular among those who have the illegal software to get around internet controls. So too are house parties.

For some, tying the knot has simply lost its appeal. Women make up more than 60% of university students and the better-educated no longer long to be wives first.

scandals and its leader's confusing flip-flops, it is fast slumping towards the minimal threshold. Many savour his comeuppance. "We won't shed a tear," chuckles Mtanes Shihadeh, an Arab pollster.

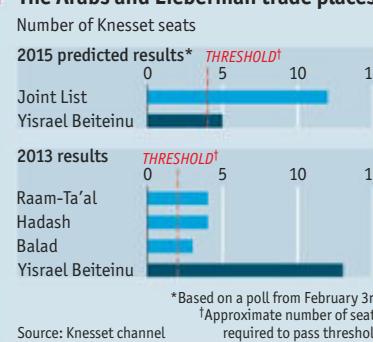
Arabs form about 20% of Israel's 8m population. Mainstream parties, both left and right, routinely field the odd Arab candidate and Arabic is often heard in the Knesset's corridors, where it survives as an official language. But there are far fewer Arabs in the Knesset than their demographic weight would suggest. Most Arabs in East Jerusalem, which Israel occupied in 1967, cannot vote. And many others elsewhere

choose not to. In the 2013 election 56% of Arabs voted against almost 70% of Jews.

That might now change. The new amalgam of Hadash, a communist party championing feminism and Jewish-Arab coexistence; Raam-Ta'al, a conservative faction led by Islamists; and Balad, a party of staunch Arab nationalists, makes an odd cocktail. Arab voters had long tired of their petty infighting. Such is the buzz inspired by the single bloc that some pollsters predict it may boost the Arab turnout to 70%, increasing the number of seats held by Arab parties by anything between one and four seats. "We might see a radical change," reckons Mr Shihadeh.

Some nostalgic leftists dream of electing a government like Yitzhak Rabin's in the early 1990s, when Arab parties provided enough support from the backbenches to secure an historic Israeli-Palestinian peace agreement. But such an alliance seems hard to repeat. Yitzhak Herzog's Labour Party, now part of the expanded Zionist Union, would probably rather align with right-wingers than stake its legitimacy among Jews by allying itself with an untested Arab bloc. Even that wish looks unlikely. For now the Likud party of the prime minister, Binyamin Netanyahu, maintains its narrow lead in the polls. ■

The Arabs and Lieberman trade places



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France and its Muslims

Apartheid, or just apart?

TRAPPES

The French prime minister's use of the word apartheid provokes reactions, and some soul-searching

WITH home-made rabbit pâté and fresh cuts of meat, Rémy Mirleau's boucherie typifies local France, like the tricolour above the town hall. But in Trappes, a formerly Communist-run town southwest of Paris, Mr Mirleau's butcher's shop is known for another quality: as the only non-halal one. With a big Muslim population, Trappes exemplifies what Manuel Valls, the French prime minister, has provocatively called "territorial apartheid". Yet the town also reveals the complex links between segregation, an assertive secular state and the rise of jihadism.

A working-class enclave that grew up around a railway yard, Trappes has the vibrant mix of languages and faiths that is common in many *banlieues* around French cities. The share of children born to at least one foreign-born parent in Trappes jumped from 9% in 1968 to 61% in 2005, say demographers. Once heavily Portuguese, today's population mostly has family roots in Morocco and Algeria. Nearly two-thirds of housing is publicly owned. The poverty rate of 24% in Trappes is almost twice the average for the Paris region. On the housing estates of Les Merisiers, near a new mosque fringed by mini-palms, it is 42%.

The government says such pockets have become a problem in themselves. "The risk in these territories," said Mr Valls, a one-time mayor of a multicultural *banlieue*, is that "extremism, criminality and radical Islam find fertile ground". He ar-

gued that France, which bans the collection of ethnic statistics, should face up to the de facto segregation in its suburbs. He is especially worried by the connection between criminality, armed gangs and drug-dealing, and jihadism. Amédy Coulibaly, who shot dead four Jewish shoppers and a policewoman in January's terror attacks, grew up on a rough estate in Grigny, south of Paris, and did time for armed robbery. Mr Valls says there are 50-100 similar ghetto-like areas in France.

In Trappes, however, the picture is not one of straightforward neglect. Like many *banlieues*, the town has benefited from vast amounts of public money pumped in by governments after riots in 2005 led to a state of emergency. Since 2006 some €350m (\$400m) has been spent renovating tower blocks and digging new roads. A developer is putting up private housing, as part of an effort to lure better-off types. In Les Merisiers, cycle paths have been laid out along avenues planted with saplings. A revamped gym and well-equipped primary schools are adorned with the French motto "Liberty, Equality, Fraternity". On the main square stands a brand-new post office and a gleaming business centre for start-ups. Across the road, in a deliciously French twist, the Maghnaoui butcher's shop sells halal foie gras.

Such changes have improved daily life. Town-hall staff talk of a return of "dignity", and note that the freshly painted walls of

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the estates are, so far, free of graffiti. Yet Trappes remains troubled. In the summer of 2013 riots broke out after a man violently resisted a police check on his wife, who was wearing a face-covering veil, which is banned in public in secular France. Soon after the attacks in January, two young men left Trappes for jihad, presumably in Syria. One had a job at the town hall supervising after-school activities.

"Poverty does not explain everything," says Guy Malandain, the Socialist mayor. "It's as much a question of ideological excess and manipulation." Nothing about the town-hall employee suggested he was preparing for jihad; he had no previous record. Young people receptive to a hard-talking Islamist message, spread by networks of recruiters, seem to be in a discreet but angry search for an identity and purpose that, to their mind, France denies them. France has supplied more jihadis (some 1,400) to Syria and Iraq than any other European country (though Belgium has sent more per head of population). Prison seems a particularly efficient incubator.

Perhaps the most delicate ingredient in all this is *laïcité*, a tough French brand of secularism entrenched by law in 1905. Born of bloody anticlericalism and revolutionary ideals, it is considered by left and right alike as a powerful force against extremism. But on the estates of towns like Trappes, it is often seen as a cover for measures that are anti-Islam.

Under French freedom-of-speech laws, for instance, blasphemy is not forbidden (no religious idea is protected from insult), whereas anti-Semitic hate speech is outlawed (for inciting violence against others). *Charlie Hebdo*, the satirical newspaper where 12 people were shot dead on January 7th, was able to publish caricatures of Muhammad, as well as the pope. But why, ask locals, is it acceptable to insult the pro- ➤

►phet but not to make jokes about Jews? A well-known black comedian is on trial for hate speech and anti-Semitism. Conspiracy theories are rife. "The immense majority of Muslims here are peaceful," says Othman Nasrou, an entrepreneur and local councillor. "But there's a significant minority that is 'not Charlie', and thinks *laïcité* is anti-religion and anti-Islam."

President François Hollande says he wants to reinforce *laïcité*, notably in the classroom. Dozens of schools reported disruption during a national minute's silence after the attacks on January 7th, exposing the gap between the outpouring of national sympathy on the streets of Paris and the angry defiance in some *banlieues*. But it will be hard to apply secular rules evenly. Malek Boutih, an outspoken Socialist deputy, accuses local mayors of turning a blind eye to breaches of the law in the *banlieues* in the name of social peace.

Back in Trappes, Bachir Hajjoubi prepares to collect his children from school. The son of a Moroccan labourer, he has an administrative job in a glass-engraving works in Mesnil-le-Roi, an hour away by train, and coaches boys in football. "I love France," he says. But he worries about youngsters who "become radicalised through rejection". Was Mr Valls right to speak of apartheid? His words were "a bit strong, but also a bit true". The paradox lies in the solution that Mr Hajjoubi has found for his own sons. He took them out of the local state primary and put them into a private Catholic school—where, with a big share of Muslim pupils, ethnic and religious diversity thrives. ■

Greek politics

Tsipras's travels

ATHENS

The new government ruffles feathers abroad but gains popularity at home

RATINGS for the evening news soared this week as Greeks tuned into a new show: of Alexis Tsipras, their new prime minister, and his colourful finance minister, Yanis Varoufakis, sharing the spotlight as they separately toured European Union capitals. For Greeks worn down by five years of austerity, it was cheering to see their new leaders "standing up to the eurozone bosses", as an official from PAME, the communist trade union, put it.

Mr Tsipras's Syriza party has lost no time getting its anti-austerity message across since defeating Antonis Samaras's New Democracy government on January 25th. Syriza fell two seats short of a majority in parliament, so Mr Tsipras signed up the Independent Greeks, a right-wing anti-



Italy's president

Matteo gets his man

MILAN

The choice of Italy's president is good news for the prime minister

SERGIO MATTARELLA, a 73-year-old Sicilian, constitutional-court judge and former government minister, became Italy's 12th president on February 3rd. Matteo Renzi, the prime minister who backed him, said his election would "turbocharge" his reforms. Mr Renzi (shown above with Mr Mattarella) is prone to exaggeration: he faces a long, hard climb. But he has again shown formidable political skills.

When the 89-year-old Giorgio Napolitano stepped down in mid-January, Mr Renzi promised a successor by the end of the month. That he delivered was no mean feat. Mr Napolitano agreed in 2013 to serve a second term only because parliament could not agree on his successor. This time Mr Renzi managed to unite his fractured Democratic Party (PD) behind Mr Mattarella, and secure the backing of the opposition Left, Ecology and Freedom party and of Angelino Alfano, his interior minister, who leads the New Centre Right party. That was enough: after three days of voting in which no candidate won a two-thirds majority, Mr Mattarella was elected on the fourth round, which required a simple majority, by 665 votes out of 1,009.

Silvio Berlusconi, leader of Forza Italia, the main right-wing opposition

party, and former prime minister, was against Mr Mattarella. That was mainly because he had not been consulted more carefully, despite his pact to support Mr Renzi's constitutional reforms. Most in Forza Italia backed Mr Berlusconi, but quite a few defied him.

The result has strengthened Mr Renzi's position both in the PD and in government, weakened Mr Berlusconi, and thrown the right into disarray. Mr Renzi will press on with his reforms, with or without Mr Berlusconi's backing. He hopes that opponents on both left and right will not risk an early election, since that could produce a more Renzian parliament. A new electoral law should be approved by the lower house by April. The reform of the Senate will take longer, but could be done next year.

The economy is at last showing glimmers of life. But as Mr Mattarella himself conceded, Italy's prolonged economic crisis has damaged the country's social fabric. He called for more reform of institutions, of public administration and of the judicial system. And he spoke of the need to combat corruption and organised crime—a highly personal theme, since he entered politics in 1980 only after the assassination by the Mafia of his brother, then Sicily's president.

austerity party, whose leader, Panos Kammenos, became defence minister.

True to Syriza's promises, Mr Tsipras and Mr Varoufakis challenged their first visitors, Martin Schulz, president of the European Parliament, and Jeroen Dijsselbloem, chairman of the eurogroup of finance ministers, demanding an end to austerity, the dismantling of the "troika" of the European Commission, the European Central Bank and the IMF, and an international

conference to restructure Greece's debt of 175% of GDP. In return, the Syriza government would crack down on tax evasion and corruption, which previous administrations ignored, and produce a programme of structural reforms in June.

To the delight of many Greeks, other cabinet members also announced measures to reverse many earlier reforms: pension increases, a 45% rise in the minimum wage, a return to collective bargaining and ►

► a freeze on privatisations. Poor households will get food stamps and free electricity. Mr Kammenos said that the armed forces would have their pay restored to pre-crisis levels, plus compensation for four years of pay cuts. Mr Varoufakis has not spelt out the budget cost of all this, though he promises still to run a small primary surplus (ie, before debt interest).

The reversal of reforms and the tough stance toward Greece's creditors have increased the new government's popularity. Opposition by the new foreign minister to more sanctions against Russia, albeit short-lived, was also welcomed by many who want the government to defend Greek interests, even against NATO and the EU. One opinion poll gave Mr Tsipras a 68% approval rating after his first week, better than any other recent Greek leader.

Yet the exhilaration could evaporate if Mr Tsipras and Mr Varoufakis fall out with the EU. They have watered down their demands: instead of a debt write-off, Mr Varoufakis now proposes a limited repayment via special bond issues. Greece's creditors insist it must stick to the terms of its bail-outs. Greeks are still removing cash from their bank accounts, though the pace of withdrawal has slowed since the election. On February 4th the ECB said it would no longer accept Greek government bonds as collateral. Earlier the same day an issue of six-month bonds was only just covered, because foreign investors failed to buy. The new government has a tough year ahead of it. ■

Germany and America

Ami Go Home

BERLIN

Anti-Americanism, always strong on the German left, is growing on the right

THEIR name sounds like a parody, but it is not meant to be. On January 24th about 1,000 Pegida, or "patriotic Europeans against the Americanisation of the Occident," took to the streets of Erfurt. In chants and on banners, they warned against a break with Russia and of a third world war, blaming the "terror power" of America. The spread of anti-Americanism in Germany worries John Emerson, America's ambassador. He is soon to attend an "anti-Americanism conference" in Munich. Joachim Gauck, Germany's president, frets that "Germans and Americans appear to live on different planets."

This new mood may even cloud Chancellor Angela Merkel's visit to Washington next week (see page 25). It affects everything from the West's response to terrorism and Russian bullying to free-trade talks be-

tween America and the European Union, now in their eighth round.

Anti-Americanism has long been endemic in Germany. In West Germany in the cold war, it was found mainly on the left. The right saw America as a protector against communism and a post-war mentor in democracy. Yet even conservative West Germans combined love for things cowboy with disdain for an American way of life they saw as uncultured. East Germans were anti-American and pro-Russian as a matter of policy. Even today, with that ideological kinship gone, "a crude mixture of anti-Americanism and a bizarre romanticisation of Russo-German affinities" persists, says Heinrich August Winkler, a historian with an interest in Germany's ambivalent integration into the West.

In theory reunification in 1990 anchored all of Germany firmly in the West, as defined by NATO, the European Union and shared values. And yet some old leftist anti-Americanism survived. Its political home became Die Linke (The Left), a party that descends from the communists of East Germany and has picked up a few western radicals. In a softer form, it persists among Social Democrats and Greens.

The newer element is anti-Americanism on the right. Once confined to the loony fringes of, say, Bavaria's CSU, the conservative sister party to Mrs Merkel's Christian Democrats, it has leapt beyond the CSU's beer tents to a young ultraconservative party, Alternative for Germany (AfD). AfD started life as an anti-euro party but it has now become anti-immigrant and anti-American as well.

Mrs Merkel, like Mr Gauck, is a former East German who is pro-American by inclination. But America's spy agencies have not helped relations by tapping her phone, as well as countless other electronic communications of ordinary Germans, as Edward Snowden revealed. Germans see this as a violation of sovereignty and feel betrayed by their ally. They also object to other American extraterritorial forays, such as checking airline passengers on German soil. All this has "created a toxic mistrust and fuelled anti-Americanism in Germany," says Norbert Röttgen, chairman of the Bundestag's foreign-affairs committee.

Such mistrust now threatens the transatlantic free-trade deal. Most EU citizens back it. But support is lowest (at only 39%) in Germany and Austria, says one recent poll. In Germany the controversy has become both hysterical and illogical. Thus Germans worry about planned tribunals to arbitrate between companies and governments, even though these have been part of most other EU trade deals. "If this were an agreement with any other country, it would not have such a big place in the public debate," argues Mr Röttgen. Increasingly, that is true of anything Germany and America try to do together. ■

Spain and Podemos

Can they?

MADRID

The Spanish answer to Syriza shows its strength ahead of November's election

THEY were hailed as heirs to those who fought Napoleon's troops with knives and stones in Madrid's streets in 1808 or who brought down Spain's monarchy in the 1930s. But the 150,000 people who gathered on January 31st in Madrid's Puerta del Sol for a rally by Podemos ("We Can"), Spain's answer to Greece's Syriza party, were not street-fighters. Most were middle-aged and middle-class. Podemos may ramp up the emotions, but this battle will be fought at the ballot box.

It was an impressive turnout for a one-year-old party, although Podemos's claim to a "social majority" remains unconvincing. A recent poll put it on just 24%. Yet that is more than the main opposition Socialist party, PSOE; and it sets up a three-cornered race against Mariano Rajoy's Popular Party (PP) in a general election that is expected in November.

Podemos's leader, Pablo Iglesias, talks of a country on its knees, humiliated by Germany and looted by corrupt politicians and neoliberal capitalists. Statistics give a rosier picture. Some 400,000 jobs were created in the year to January. Salaries are rising in real terms. Ana Botín, head of Santander bank, predicts that GDP growth will be above 2.5%, making Spain a euro-zone star. Yet too many Spaniards see none of this. Unemployment is running at ►



First Madrid, then Spain

► 24%, and four-fifths of new jobs are on short-term contracts. The economy and jobs come top of the public's list of worries, along with corruption.

Mr Rajoy's advisers called Podemos "freaks" just nine months ago. But the PP takes it seriously now. At a recent convention, PP speakers railed against being dubbed *casta*, the Podemos term for corrupt politicians, bankers, businesspeople and even trade unionists. Yet a former PP treasurer, Luis Bárcenas, who had just been released on bail, claimed that Mr Rajoy knew all about dodgy party accounting.

At one level, the rise of Podemos helps Mr Rajoy by bleeding the PSOE. But disgruntled PP voters are also fleeing, often to other smaller parties. Podemos remains light on policy. The Andalucia election on March 22nd, which requires a manifesto, may change that. Internal debate on the

economy revolves not just around shorter working weeks and a Syriza-style restructuring of public debt, but also possible haircuts on private debt.

The decision by Andalucia's PSOE president, Susana Díaz, to advance the regional election was a response to Podemos. Squeezed on all sides, the party risks being pushed down like Greece's Pasok. Andalucia, its heartland, is also home to many corruption scandals. If the PSOE cannot stem the tide there, it will fail across Spain when other regions and localities vote in May. Podemos faces a struggle in Andalucia, only its second-ever electoral outing after it took 8% of the vote in the European election last May. Yet even if Ms Díaz wins, she is not likely to get an absolute majority. Neither Podemos nor PP look like stable future partners. A similar instability threatens not just Andalucia, but Spain. ■

their belongings stuffed in a blue plastic bag. "Who is waiting for us now?" she asked. Her seven-year-old daughter did not even flinch at the sound of rocket fire.

Most of those who make it out of Debaltseve head north to temporary housing for the internally displaced (who number nearly a million). Most of those who stay end up at the Artemovsk morgue, whose director, Ruslan Fedonyuk, has already dealt with more bodies in 2015 than is usual in an entire year. The morgue has not had a weekend off in months. Yet Mr Fedonyuk and his staff have not been paid since November. "We've essentially been abandoned," he says.

Even as Ms Lashuk fled and Mr Fedonyuk laboured on this week, the latest round of peace talks in Minsk was faltering. The contact group's chairman laments that the pro-Russian rebels are "not even prepared to discuss implementation of a ceasefire". The rebels' leader, Alexander Zakharchenko, has announced plans to swell his fighting force to 100,000 men. He would struggle to find that many on his own, but his mobilisation may be used as cover for more Russian troops. Weapons continue to flow unobstructed across the border. And according to NATO intelligence, hundreds of regular Russian soldiers are in the Donbas region.

Some in the West argue that military aid to Ukraine is the only way to halt Russia's aggression—or at least raise the cost to Vladimir Putin. A new Atlantic Council report, written by eight former officials, proposes \$3 billion of military supplies over the next three years, including anti-tank missiles. "Only if the Kremlin knows that the risks and costs of further military action are high will it seek to find an acceptable political solution," the report argues. Barack Obama has resisted calls for military aid; Ashton Carter, his nominee as defence secretary, is in favour (see page 28). John Kerry, the secretary of state, flew to Kiev this week for peace talks. On February 5th Germany's Angela Merkel and France's François Hollande announced that they too would go to Kiev and then to Moscow.

Opponents of military aid, including Germany, warn of a proxy war with Russia that the West cannot win. No NATO country is ready to send in troops, and Ukraine's forces are underequipped, undertrained and poorly led. The suggested weapons are "needed, but will not be a game-changer," argues Konrad Muzyka, a defence analyst at IHS Jane's. Sending weapons could provoke a Russian response and play into Mr Putin's claims that Ukraine's army is a NATO foreign legion. Russia would just send more equipment to the rebels, says Dmitri Trenin of the Carnegie Moscow Centre. If Mr Putin called in the full force of the Russian army, no amount of arms would save Ukraine, as even the most hawkish would admit. ■

Fighting in Ukraine

Give war a chance

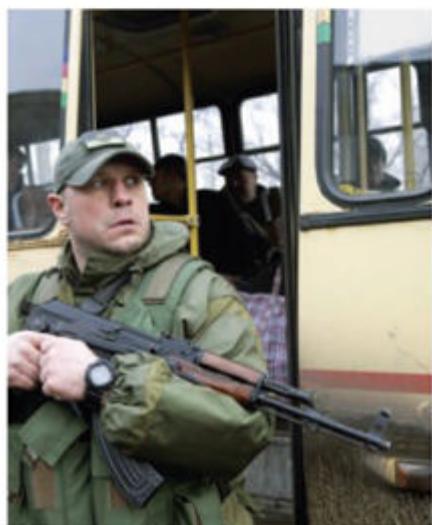
ARTEMOVSK AND DEBALTSEVE

The war in south-east Ukraine continues to expand in both size and scope

In a hospital yard an old Humvee is surrounded by soldiers with long faces, wide eyes and hollow cheeks. The doors are shrapnel-ridden, the windows misty and the Ukrainian flag hangs in tatters. The flag, the men and the Humvee have the dazed look of those who have cheated death. Artemovsk, once a backwater known for a salt mine and wine, has become the centre of Ukraine's mismanaged but dogged war effort. Inside the hospital, the trauma ward is filled with wounded from the battle for Debaltseve, some 45km (28 miles) to the south-east.

After their latest push on Debaltseve, pro-Russian rebels are hemming in thousands of Ukrainian troops on three sides, and are close enough to shell their supply route from Artemovsk. Ukraine's generals have ordered their men to hold the line while diplomats struggle to revive the Minsk peace deal. Their soldiers fight valiantly, but with little understanding of the strategy. "We've either got to attack and even out the line, or retreat," says one. "We're doing neither."

Debaltseve's strategic value lies in its rail and road links. With time, it has assumed symbolic importance. "There is not a tactical explanation for what Ukraine is doing," says Igor Sutyagin at RUSI, a London-based think-tank. "There is a political and psychological explanation." Losing Debaltseve would dent morale. Doctors in Artemovsk say official casualty figures are understated. Draft-dodging haunts Uk-



Watch out for the Russians

raine's mobilisation effort. Criticism of the generals has mounted since the loss of Donetsk airport. Although Ukraine's forces have so far given up little ground at Debaltseve, its fall is a matter of time.

The road to Debaltseve runs through fields dotted with craters. Inside the city, water, gas and electricity have all been cut. Artillery crumples relentlessly, driving thousands into their basements. On one recent morning, a haggard crowd gathered to await evacuation by volunteers who make the harrowing journey daily. Tatiana Lashuk and her three children stood with

Charlemagne | Europe's fault lines

Even sorting out Greece's debts may not be enough to repair the euro



WOLOFGANG SCHÄUBLE, Germany's flinty finance minister, summed it up neatly, if inadvertently. "Nobody is forcing anything on Greece," he told reporters in Brussels. "But the obligations apply." A day earlier Greek voters, chafing at those same obligations after many years of recession, had elected a government led by the anti-austerity Syriza party. Greece may have brought its problems upon itself. But after five years of control by a foreign "troika"—the European Commission, the European Central Bank and the IMF, which have enforced the terms of Greece's bail-outs—it is not hard to see why some Greeks believe that plenty of nasty things have indeed been forced on them.

Mr Schäuble, Europe's foremost ayatollah of austerity, may not have meant to highlight the tensions at the heart of the euro zone. But Greece has made them impossible to ignore. Working out how to redistribute the pain of reducing its huge debt burden is only a start. Yanis Varoufakis, the leather-jacketed new Greek finance minister spent the week touring Europe's capitals in search of a deal, spraying sound bites and inspiring fashionistas. His proposals were vague, but a uniform refusal among Greece's creditors to consider explicit debt write-offs led him to put forward ingenious schemes, including GDP-linked bonds (see Free Exchange), to engineer some relief in other ways.

That received a lukewarm reception. Greece's banks may anyway present a more urgent problem, especially after the ECB announced that it would no longer accept Greek government bonds as collateral (see page 67). European Union officials are frustrated by the Greeks' shambolic approach and would prefer to extend the current bail-out, which expires at the end of February. Mr Varoufakis appears to have ruled that out. Yet for all the *Sturm und Drang* of its early days in office, the signs are that the Greek government is learning the limits of its creditors' patience. More wobbles lie ahead, but the smart money is still on an eventual deal.

If the economics of this latest iteration of the euro crisis are no thornier than before, the politics have turned into a veritable gorse bush. For all the tough talk of firewalls, EU officials are far from relaxed about the risk of Greece leaving the euro. Yet the more they offer Syriza, the more they risk undermining moderates elsewhere. This irritates centre-right governments in such countries as Spain and Portugal that have told their voters there is

no alternative to austerity and reform; and it scares centre-left parties who stand to lose the most if voters turn to more radical alternatives. (Like many parties rooted in student hard-left politics, Syriza reserves its fiercest scorn for social democrats.) Some officials freely acknowledge that the dilemma is insoluble.

Euro-zone members have been surprisingly united, so far, over how best to handle Greece. But beneath the surface some intriguing new fissures are emerging. Mediterranean countries have joined the northern guardians of fiscal rectitude in urging a tough line on Greece. France and Italy deny Greek requests for debt cancellation, partly because they have large loans to Greece; but they also quietly hope that the debate may tug others into the growth-first camp. Much of Europe's political mainstream, even in Germany, faces challenges from upstart anti-elite parties exploiting discontent and a weakening of old loyalties.

Nor is Greece the euro's only problem. The ECB may be resisting calls to flood Greek banks with money, but it differs with Germany over quantitative easing and fiscal policy. It also faces dilemmas of its own. As Europe's economy founders, the temptation is for the bank to fill the political void left by squabbling governments. Yet central bankers enjoy no democratic legitimacy: the last thing Mario Draghi, the ECB president, wants is the job of deciding whether Greece stays in or leaves the euro.

Across Europe many lament that all would be well if only sinners saw the light. But their theology is contradictory. To some, the need is simply for the Greeks and others to accept that they must reform their economies and repay their debts. To others, the Germans must concede that some debts will never be repaid and get over their obsession with balanced budgets. If the sorry experience of the past few years teaches anything, it is that economic consensus does not lead to political consensus. An accommodation may be found for Greece's debt; but that will not dispel the populist challenge, in Greece or elsewhere.

An iron will is not enough

Most democracies contain institutions that channel and balance competing interests. In the euro zone, by contrast, politics has worked largely through crisis management and late-night deal-making. That cannot fix the problems of a 19-country currency zone whose members have very different ideas about how to run the place. Nor can politics be wished away. Great efforts have been made to construct defences against financial contagion, and to strengthen economic and fiscal rules. But in the absence of trust, bail-out funds and banking unions get you only so far.

Say this for Syriza's election: it has forced Europeans to confront questions they keep trying to ignore. Senior figures like Donald Tusk, head of the European Council, are thinking about how to improve euro-zone politics, perhaps starting with firing up the old Franco-German motor. But there can be no progress when Greeks and Germans see each other, respectively, as heartless austereans and recidivist rule-breakers. Each euro member made a great sacrifice of sovereignty by joining; what this crisis reveals is how few have yet faced up to its consequences.

Indeed, the games of the past week must leave many observers feeling gloomy. There is little reason to think that exhortations for more understanding now have more chance of succeeding than in the past. Europe will find a way to muddle through, and the fissures will grow mossy again. Until the next earthquake. ■



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Agriculture

Dig for victory!

FARCFET

Why British farmers are less productive than their international competitors

HEAR that?" asks Stephen Briggs. "That's the trees whistling." The branches in his young orchard have caught the wind that races across the open fens, creating a strange vibrato. Growing apples in this wheat field makes efficient use of the nutrients in the ground—the tree roots keep burrowing below those of the crops. The trees also provide homes for pollinating insects and extend the harvesting season deep into autumn. By interrupting the wind they hold the nitrogen-rich soil in place. Mr Briggs credits the innovation with turning this once unremarkable patch of eastern England into one of the most productive farms in the country. Sadly, he is a rarity.

In the post-war decades British farms were among the world's best. But that appears to have changed. Though it is hard to compare agricultural productivity across countries, attempts to do so by the United States Department of Agriculture (USDA) and the OECD, a think-tank, suggest that England is now less efficient than its competitors (see chart 1). The World Bank calculates that the country produces less cereal per hectare of harvested land than Belgium, France, Germany or the Netherlands. "British farming may no longer be the world leader it thinks it is," concluded Andersons, a consultancy, in a report in January. British officials agree.

What is more certain is that British farms are hardly improving. Productivity rose in the late 1990s as farmers managed to produce the same with fewer inputs—

that is, costs such as labour, fertiliser and fuel. But the government calculates that farming has improved only slightly since then. Other countries are doing much better (see chart 2 on next page).

Why so? The long stagnation rules out recent shocks such as supermarket price wars (which have put pressure on farm revenues), dismal weather in 2012 and high energy prices—though none of these things has helped.

The country's participation in the EU's Common Agricultural Policy might explain some of it. Subsidies from Brussels—now falling, but achingly slowly—help to keep unproductive farms alive. By contrast, the sudden withdrawal of handouts in New Zealand in 1984 forced farmers there to invest in their businesses and club

together to buy and sell. They are now among the most efficient in the world.

But subsidy cannot account for why Britain trails its EU competitors. A better explanation is that, although its top farms are among the most productive in the world, many others just trundle along. In parts of America drones herd cattle and spray crops; in the Netherlands robots tend livestock and weed fields. Meanwhile some British farms struggle with basic tasks such as benchmarking. They are often run by old, generalist farmers whose children have been lured away by good jobs in the cities. A Eurostat study of 27 EU member states in 2007 found that 62% of British farmers were over 55. Only in Italy, Portugal, Bulgaria and Romania was the proportion higher.

Another factor is a shortage of R&D investment. Britain's public research institutes were wound up in the 1980s. Over the past two decades the country's spending on agricultural R&D has fallen by an average of 6% per year in real terms. The current government is investing £160m (\$244m) in a farming-technology strategy, but this "may be insufficient", concluded a delicately worded report published last June by Parliament's rural-affairs committee.

Britain's hot market in agricultural land—a popular, lightly taxed investment asset—is another problem. Although land is not always counted as an input in measurements of productivity, its steep rise in value (by 12% year-on-year, according to the latest figures) can gobble up cash that farmers might otherwise invest. Mr Briggs's rent went up by 38% in its latest triennial review, curbing the number of fields he could afford to convert to a combination of trees and crops. Short tenures further limit investment. "Just not long enough," he sighs, shaking his head and pointing to a five-year rent advertised in the classified pages of *Farmers Weekly*.

Finally, Britons may be more sentimen-

Green, pleasant, inefficient

Ratio of farm outputs to inputs by value
Excluding subsidies, 2004-09 average*



Source: OECD

tal about their countryside than others. Farmers whose ancestors have tilled or herded on a property for centuries are reluctant to move or consolidate. One delegate at a farming conference in Oxford in January spoke of a friend who sold his family farm in Northern Ireland to buy and develop a more productive one in Scotland: "There was shock! It was unheard of!" Another suggested that Britain's early industrialisation distanced farming from business and technology in the national imagination; for policymakers, farms became things to conserve, not reform.

Farmers may be custodians of Britain's beloved landscape, but more of them also need to be entrepreneurs. The government could help by reforming subsidies, creating a clearer path into agriculture for go-getters with commercial acumen and underwriting long-term investment in skills, research and technology. But it is also up to farmers to take the initiative. Mr Briggs persuaded his landowner to lengthen his tenancy, studied agroforestry practices in China



and, implementing them in Britain, ploughed his own money into the rented ground. In short, he is an optimist. "Farming", he says modestly, "is simply turning sunshine into carbon." With that he glances up from his whistling trees to the grey sky above. ■

chemistry. So the small slice of mitochondrial DNA from the donor should not affect things like eye colour, height or personality, which will be influenced by the child's parents in the usual way. But since all the mitochondria in a person's body are descended from the original few in the egg, women born via the procedure will pass the modifications to their children in turn.

The noisiest opposition came from traditionalists and the religious—a weakening lobby in a country that is becoming ever more secular, and one that in this case was divided. The Church of England supports the idea in theory, although it wants more research, and some priests have spoken out against. The Roman Catholic church is opposed, as it is to all forms of IVF; Britain's Muslims are split. Polls suggest that a majority of the public, once informed about the procedure, are in favour.

IVF clinics will not rush to offer it. Assuming the bill clears the House of Lords, mitochondrial donation will remain illegal until October. Clinics will need a licence from the Human Fertilisation and Embryology Authority, which regulates fertility medicine, as well as specific permission to treat each couple. Any children born as a result will be followed up, to check for unforeseen complications.

Doug Turnbull, a scientist at the University of Newcastle who has led much of the research into mitochondrial donation, reckons that about 150 families a year could benefit. But he thinks that, while the technique is new and relatively untried, only a minority will go for it. Much will depend on whether the NHS agrees to pay, as it does for some but not all IVF patients. Yet the ranks of British early adopters could be swelled by couples from overseas. By the end of this year, Britain is likely to be the only place in the world where they will be able to have children who can hope to lead ordinary, healthy lives. ■

Reproductive medicine

A dad and two mums

MPs vote in favour of children with three genetic parents

EVERY year around a hundred children are born in Britain with seriously damaged mitochondria, those parts of a living cell that synthesise the chemical fuel that powers the rest of it. It is often a death sentence. Those who survive live a debilitating existence in which the tissues of their bodies—brains, muscles, nerves and the rest—are chronically short of the energy they need to function.

There is no cure. But there might be a way to help the roughly 2,500 women whose future children would be at risk. On February 3rd the House of Commons voted, by 382 to 182, to make Britain the first country in the world to permit "mitochondrial donation", a form of in-vitro fertilisation (IVF) designed to ensure that those children can be born free of the condition.

It was a free, unwhipped vote because, despite the potential benefits, the issue is contentious. The procedure involves transplanting the nucleus from an egg cell with damaged mitochondria into another egg with healthy ones. That second egg is provided by a donor.

Mitochondria are different from other cellular components. They are the distant descendants of free-living bacteria that, in the deep evolutionary past, became symbiotic with the cells they now inhabit. As such, they contain their own tiny genomes,

separate from the main human genome that resides in the nucleus. A baby created via mitochondrial donation will thus have genes from three people—its mother, its father, and the woman who donated the egg.

The amounts in question are small. Humans have about 22,000 genes. Mitochondria have 37, all of which are concerned with the nuts and bolts of low-level bio-



A new kind of threesome

Bagehot | A sure hand at the wheel

The Conservative election campaign is disciplined, convincing and unexciting



GIVEN the importance of Fountains Road to his job prospects, Ben Gummer MP seems oddly relaxed about the rather ambivalent views he samples along it. They are not hostile; most residents of the 1970s-built semi-detached houses that line the road, in south-west Ipswich, receive the hardworking Tory uncomplainingly, with often a glint of recognition. To have any hope of defending his slender majority in Ipswich in May, however, this is the sort of hard-up, middle-class terrain Mr Gummer must win—and a chill afternoon's canvassing provides no promise of that.

In a soft Suffolk burr, most people say they have not decided how they'll vote; almost none shows enthusiasm for the Tory-led coalition government and its toff leader, David Cameron. Yet Ipswich is enjoying its lowest rate of youth unemployment on record, so neither do they complain much. And even Labour Party voters say they have a poor impression of Mr Cameron's main rival, Ed Miliband: "He doesn't seem right," one says. Having long expected a tough fight, Mr Gummer and his team of eager activists find this adequately encouraging.

A similar sense of cautious satisfaction—confidence, would be putting it too strongly—suffuses the Tory party. MPs in marginal seats reel off similar lists of tentative positives. Their incumbency feels like an unusually big advantage in an election likely to be devoid of strong national currents. Labour's vote feels soft, reflecting Mr Miliband's unpopularity and a shambolic start to the party's campaign. Over the past couple of weeks Labour's positions on the NHS, universities and business have all come under attack; asked to name a single prominent Labour supporter from business, Ed Balls could do no better than "Bill somebody". (A gleeful Mr Cameron suggested this was not a name, but the shadow chancellor's default position.) The Tory campaign, by contrast, looks focused and disciplined—and this, for reasons good and bad, is perhaps the prime cause of Tory optimism.

The Tories failed to win their expected majority in 2010 at least partly because they confused voters, and themselves, by trumpeting a vision of hearty volunteerism, the Big Society, which they could not explain. There is no danger of a repeat; their Australian campaign chief, Lynton Crosby, has no bandwidth for ambiguity. His campaign is designed to assert the Tory strengths, leadership and the economy—and ruthlessly exclude any social,

foreign or other policy that does not support them. Any day the Tories do not spend talking about the economy, their American strategist Jim Messina said last year, is a day wasted.

An obvious quibble with this bold approach is that it is not obviously justified by the Tories' polling. Having steered the economy from recession to recovery, and with poor Mr Miliband for an opponent, the Tories expected to be ahead by now—and often sound as if they are. But they are level-pegging with Labour, at around 32%, which, given the skewing of the electoral boundaries, would put them behind on seats. And though it is quite possible to imagine them pushing ahead, as voters take stock of the choice they have, there is no sign of that happening. The better news is that, despite its narcoleptic predictability, Mr Crosby's campaign probably represents their best shot at that outcome.

That the recovery has not inspired more of a national feel-good, or Tory votes, is inconvenient. But on the assumption that an election is more a choice than a verdict, and Labour's polling on the economy is dire, the Tories consider that no more insurmountable than it was for Barack Obama in 2012. A Tory poster depicts a road stretching ahead through pleasant (and German, it embarrassingly turns out) countryside, alongside the exhortation: "Let's stay on the road to a stronger economy." The message is: We have come through tough times, stick with us. History, on both sides of the Atlantic, suggests this may well pay off: no party ahead on both leadership and the economy has failed to win a general election.

So your columnist does not fault the Tory pitch—save to hope it is more ambitious than it sounds. Because the choice for Britain's grumpy, increasingly fragmented, electorate is no longer between the two main parties, but also between them and the half dozen insurgents—the UK Independence Party, the Greens, the Scottish nationalists and so forth—who have grabbed just over a third of the vote. That reflects the inadequacies of both big parties, and if the Tories are serious about not merely beating Labour, but trying for a majority, they must attend to those weaknesses as well as to their strengths.

It is not enough to be right

After a decade under Mr Cameron—and despite his erstwhile efforts to detoxify the party, including by championing the Big Society—the Tories' reputation for being flinty-hearted apologists for the rich is as entrenched as ever. That cannot be fixed in three months. To Mr Crosby's credit, it is also the case that by enforcing rigid adherence to the economic message, he has put a gagging order on some of the party's toxic obsessions, including hatred of the European Union and windmills. Nonetheless, there are laudable aspects to the Tory's record in government—for example, their efforts to encourage the adoption of neglected children—which would surprise many voters, and which Mr Crosby's stark, primary-coloured campaign is also allowing little mention of.

A Tory minister appreciates the problem: "We need to be more counter-intuitive". He suggests that will come with the greater detail of the Tories' economic plans that is promised. Policies to boost skills, saving and house ownership, for example, will be spun to suggest a more paternalistic Conservative message: that the party has a plan for every phase of a British lifetime. That sounds nice, but hardly counter-intuitive. The truth is, the Tories are running a strong, intellectually compelling and steely campaign for tough times. But if they are ever to regain their lost supremacy, they must put their hearts into it. ■



Tackling tax evasion

Follow the money

As countries share more information, opportunities to squirrel away cash abroad will continue to narrow

AMONG the sins that have most angered the austerity-weary everywhere is the use of undeclared offshore accounts to stash the wealth of the rich. Greeks were particularly enraged when data stolen from Swiss banks showed in 2010 that politicians and other prominent Greek figures had been taking advantage of Switzerland's strict banking-secrecy laws. Their new prime minister was in tune with the times when he promised war on tax-dodging "oligarchs" during his campaign.

But the rich and tax-shy already have fewer places to hide. America's Foreign Account Tax Compliance Act (FATCA), passed in 2010, forces thousands of foreign financial institutions to report American clients' balances to its tax authority, the IRS, or face stiff penalties. The European Union is strengthening its savings-tax directive, which requires member states to exchange information. And last year more than 80 countries agreed on a "common reporting standard" (CRS) set by the OECD, a club of mostly rich countries. Though not loophole-free, the CRS is "potentially a giant step forward", says the Tax Justice Network, a campaign group.

America's gumshoes have not yet finished with the Swiss—they have just announced a new tax-evasion probe into UBS. But they are also following the money to other havens of secrecy (see chart on next page). Investigations are under way in

Asia: IRS officials are said to be stationed in the American consulate in Hong Kong. Late last year Bank Leumi, Israel's largest bank, paid \$400m to end a probe into help it allegedly gave to American tax evaders. Asked if any country has got off lightly thus far, a senior American official points to Panama, whose law firms are giants in offshore incorporation, and not always choosy about their clients.

Other countries, keen to replenish depleted public coffers, are following suit. Spain is going after footballers and a princess; Italy after fashion icons. Britain is investigating celebrities who used aggressive tax-avoidance schemes, one of which involved tax breaks for films. So keen are German states to catch cheats that they have bought stolen bank data. UBS has paid a €1.1 billion (\$1.26 billion) bond as part of a French investigation that could cost the Swiss bank a further €3 billion or more. And the hunt is moving beyond bank accounts. In December Italian police searched Credit Suisse's Milan offices for evidence of alleged tax evasion by Italians who bought insurance policies.

European countries are borrowing tips from America, which has collected more than \$7 billion from 50,000 evaders since 2009 under a programme that allows them to avoid prison by coming clean and paying a fine. Italy, which had accepted payment of as little as 5% of the undeclared

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58 The tax assault on the Swiss

money, has stiffened its terms. Fines can now equal the total amount hidden, and those who do not come forward and are later caught face up to eight years in jail.

As growth slows in emerging markets, they too are looking for new revenue. Argentina has filed a criminal complaint against HSBC for allegedly harbouring untaxed money. India's tax agency is scrutinising wheezes including the issuance of global depository receipts—shares that can be traded on multiple markets—by fake Indian firms to bring in black money under the guise of investment. Sanctions-battered Russia is targeting the "Cyprus sandwich", where money is routed through Cyprus (for tax planning) and the British Virgin Islands (for its combination of secrecy and English law).

The road to global tax transparency is not all smooth. Though FATCA has nudged China to do more on enforcement, Hong Kong's position as home to offshore shell companies and way-station for the foreign wealth of China's elite mean it is reluctant to clamp down hard. And it is unclear how the CRS will mesh with American and European plans, or whether poor countries with lots of tax cheating will benefit from the OECD initiative. A report published on February 1st estimates that Africa loses more than \$60 billion a year in illicit financial outflows—though most of this is misinvoicing and deliberately mispriced intra-group transfers by multinationals, rather than individual evasion.

And though FATCA makes stiff demands of foreign banks, America is being slower to agree to send reciprocal data elsewhere. Moreover, individual states are resisting calls to collect information on the beneficial (ie, human rather than corporate) owners of shell companies, which are used to shield corrupt officials and ►

Following the money

Sources and destinations of private offshore wealth
2013, \$trn



Source: Boston Consulting Group

▶ money launderers as well as the tax-shy. The sincerity of Switzerland's conversion to transparency is also open to question. It has signed up to FATCA, and its banks have been telling customers to comply or go elsewhere. But it may prove slow to swap data with other countries. Further reforms must be approved by parliament, and perhaps even put to a referendum.

Many tax agencies have seen their budgets slashed. Whether they will make full use of the data soon to be flowing across borders is not clear. Already, says a leading tax lawyer, the IRS has "reams of data that have been left unanalysed for years". Governments will also struggle to keep up as rich cheats' advisers come up with new tricks, from leasing schemes to annuities and complex insurance products. But the countries that matter have taken bigger steps towards transparency than most would have predicted just a few years ago. And public fury at tax-dodging by the global elite has not yet run out of steam. ■

Ebola

Predictions with a purpose

Why the projections of Ebola in west Africa turned out wrong

THE Ebola epidemic in west Africa appears to be nearing its end. The number of new cases per week has averaged around 120 for the past three weeks in Guinea, Liberia and Sierra Leone, the lowest level since July. A trial of a potential treatment has been halted for lack of patients. The last embers will be difficult to extinguish; the numbers ticked back up in the latest weekly data. But the World Health Organisation (WHO) is now focused, not on control, but on snuffing it out.

With more than 22,000 people infected, nearly 9,000 of whom died, this out-

The tax assault on the Swiss

Mission unaccomplished

But it is still time for America to move on from the Gnomes of Zurich

IN 2007 Bradley Birkenfeld, an American employed by UBS, approached officials in Washington. His revelations about the bank's surreptitious servicing of thousands of rich, tax-dodging Americans started a war on Swiss moneymen.

Eight brutal years later, far from being over, it has become bogged down. Some large banks, including UBS and Credit Suisse, have been punished. But America is refusing to strike deals with several others until a programme to penalise dozens of smaller banks has run its course—and this is behind schedule.

One reason is that Washington has asked for far more information from these small fry than it originally said it would. To some, this looks like overkill. The deterrent effect of continuing to act tough in Switzerland is minimal, says a lawyer who has worked on Swiss tax cases, since for any Swiss banker to carry on as before would "border on reckless". And the continued focus on Switzerland suits tax havens elsewhere, which might

otherwise attract more attention from American prosecutors.

America's battle against individual Swiss bankers, meanwhile, has been inconsistently fought, with some big losses along the way. The biggest potential scalp, Raoul Weil, formerly the head of wealth management at UBS, walked free last year after a trial in Florida. One of his former right-hand men, Martin Liechti, received a non-prosecution agreement—despite being described in court filings by Mr Birkenfeld's lawyers as the "chief architect, orchestrator and director of the entire UBS fraud committed against the United States". (Mr Liechti denied this, but testified at the trial in Florida that UBS was aware some clients were not tax-compliant.)

Not all his underlings were treated so gently. One spent three years in an American prison and, though he later received a hefty reward from the IRS for blowing the whistle, remains on supervised release. His name? Bradley Birkenfeld.

break was the gravest ever. But it confounded experts who had feared much worse. In September the WHO predicted more than 20,000 cases by November (there were actually about 13,000). Around the same time, a worst-case prediction by America's Centres for Disease Control and Prevention (CDC) of up to 1.4m cases (reported and unreported) by January 20th made the headlines. Others were similarly bleak. So where did models and reality diverge?

For a start, the models relied on old and partial figures. These were plugged into equations whose key variable was the rate at which each case gave rise to others. But this "reproduction number" changed as outside help arrived and those at risk went out less, avoided physical contact and took precautions around the sick and dead. So difficult are such factors to predict that epidemiologists modelling a disease often assume that they do not change at all.

The CDC produced several projections, some of which tried to account for effective interventions. But it was the "very unlikely" worst-case scenario that grabbed the headlines. This assumed not only a stable reproduction number, but that known cases were just 40% of the total (based on the gap between the baseline model and figures for the number of people in treatment on a single day in August).

By presenting such grim projections, the experts arguably made it less likely that they would come to pass. One of their pur-

poses, says Neil Ferguson, a member of the WHO's Ebola response team, was "to wake up the world and say that this could be really bad if we don't do anything". They succeeded, and resources poured in. Subsequent predictions seemed aimed at keeping the disease in the headlines. Although the outbreak began to level off at around 1,000 new cases per week in October, WHO officials warned there could be up to 10,000 per week two months later.

No big study focused on changes in behaviour, such as a rise in safe burials, now credited with checking the outbreak. And the CDC's attempt to estimate the number of unreported Ebola cases now appears far too pessimistic. In December researchers at Yale University showed that Ebola tends to cluster in small social groups, making it easier to find. They reckon that for each known case, fewer than had been thought lurk undiagnosed.

If that is right, not only were the numbers behind many projections wrong, but interventions such as isolating cases were more useful than expected. Other studies found that victims were most likely to transmit Ebola in its later stages, so finding cases early was more likely to disrupt transmission. In other ways, too, Ebola defied the prophets of doom. It never went airborne, and its economic effects were less painful than expected. Being wrong rarely feels this good. But it will be harder to catch the world's attention next time. ■



American energy exports

Crudely put

SWEENEY, TEXAS

Exports of hydrocarbons from America are already booming. Lifting the ban on crude-oil exports should be next

NAZI U-boats had a deadly hunting season in the Gulf of Mexico in 1942-43, prompting American military planners to put safety first when working out how to ship fuel for the liberation of Europe. Seven decades later, the Sweeny refinery in Texas is still safely (and oddly) inland, out of range of German guns—and playing a part in the rebirth of America as an exporter of hydrocarbons.

At Sweeny and the terminal it serves, Freeport, Phillips 66—America's sixth-biggest listed firm—is spending a combined \$3 billion on new facilities to export liquefied petroleum gas (LPG), and on an installation to process natural gas liquids (NGLs). These two products of gas wells are versatile fuels as well as valuable raw materials for petrochemicals.

Further west along the coast at Corpus Christi, a planned export terminal for a third hydrocarbon product, liquefied natural gas (LNG), has become the fifth such project to gain regulatory approval. The owner, Cheniere, is spending \$30 billion on this plant and another at Sabine Pass, on the Louisiana-Texas border.

These schemes exemplify a big switch in America's energy industry. The terminals had been designed to handle imports, at a time when the glory days of American oil and gas seemed gone for good. Linger-

ing memories of those days, and particularly of long queues at filling stations after the oil shocks of the 1970s, still leave politicians and the public twitchy about exports of energy products.

Crude-oil exports are mostly banned under a law dating from 1975; LNG can be sold without a permit only to the few countries with which America has free-trade agreements. Keeping precious hydrocarbons at home means low prices and stable supplies, the thinking goes.

Yet America already sends plenty of energy abroad (see chart on next page). It is the world's largest exporter of refined products such as diesel, petrol (gasoline) and aviation fuel (kerosene). It is a net exporter of coal and this year will become a net exporter of gas, too. American waterborne LPG exports have overtaken those of many big Arab producers and the country will surpass Qatar to become the world's largest by 2020, says IHS, a consulting firm.

Many factors have fuelled the boom. American coal is cheap. Oil and gas production have boomed thanks to hydraulic fracturing (fracking) and horizontal drilling of shale rock. A captive supply of cheaper oil and gas at home has helped American refineries, inefficient though they are, to make and export products that compete keenly against better-run rivals. European

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refiners, in particular, are howling at that.

America is already an exporter of crude, too, though that is a well-kept secret. This is chiefly thanks to "swaps", exports of oil that are balanced by imports of it. The law permits such exchanges on grounds of "convenience or efficiency". A lot of American crude is already swapped for Canadian. And now Mexico's state-owned oil company, Pemex, has asked the US Commerce Department for permission to import 100,000 barrels a day of light crude in exchange for the much heavier grades of crude it sends in the opposite direction (in far larger volumes).

Exporting more light crude could be a lifeline for beleaguered frackers, whose business has been overturned by the recent steep fall in the oil price. The bulk of the increase in their production is light crude, but American refineries are still mainly configured to deal with the heavy stuff—a legacy of past reliance on imports from Latin America and the Persian Gulf.

Boring and drilling

Legally speaking, the line between light crude and refined products is blurry. When oil is "stabilised", for example—heated to make it safe to transport via pipelines—that can make it count as a refined product, suitable for export. The administration has also exempted a kind of ultra-light crude called condensate from the export ban.

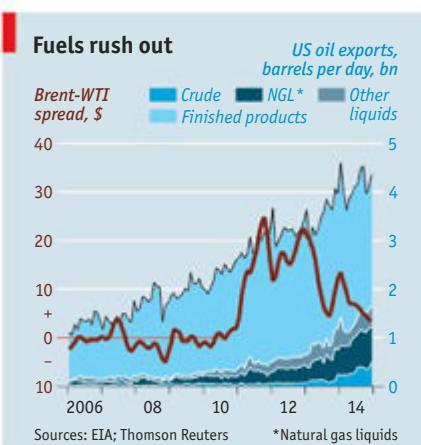
Enterprise Products Partners, a pipeline firm, has recently agreed two condensate export contracts for 1.2m barrels a month. Shell has won approval to export the stuff; ConocoPhillips is seeking a licence and BHP Billiton, a mining company, has sold at least two cargoes. Vague new rules issued last year create more scope for exports. ➤

The weak oil price has clouded this sunny landscape. Investment decisions made a year ago now look questionable. The once-juicy price gap between a barrel of West Texas Intermediate (America's benchmark) and Brent (the closest the industry has to a world oil price) has shrivelled (see chart), along with the scale of the incentive to sell American oil abroad.

Other effects of lower prices are more helpful. Americans should worry less about the cost of filling their cars' tanks. That ought to weaken the main protectionist pressure which constrains exports.

Allowing oil exports would raise production at home, helping local drillers. It would also put more oil on world markets, cutting the price. That would eat into the margins of refineries, but it would be a boon to consumers everywhere—and perhaps to American motorists, too, whose petrol prices are set on global, not national, markets. Even if crude-oil exports did not cut the costs of petrol at the pump, they would not raise them.

Vaclav Bartuska, the Czech Republic's energy envoy, is in Washington, DC, this week urging American policymakers to



liberalise energy exports for another reason: to safeguard allies under pressure from Russia. America should join the small club of "boring" oil exporters, otherwise known as democracies, he says. If freeing crude exports makes America richer, its allies stronger, its foes weaker and the world safer, what stands in the way? Having foiled the Nazis, Texas may yet have a role to play in thwarting the Kremlin. ■

Brazil's oil industry

Pitfalls at Petrobras

Changing the boss will not fix the problems at Brazil's oil giant

PETROBRAS used to impress the oil world with its expertise at tapping the black stuff thousands of metres beneath the ocean floor. Now Brazil's oil behemoth is better known for plumbing a different kind of depth. It is mired in a multi-billion-dollar bribery scandal, indebted to the hilt and worth a third of the 405 billion reais (\$250 billion) it was valued at shortly after its initial public offering in 2010. On February 4th its beleaguered boss, Maria das Graças Foster, succumbed to pressure and resigned, along with five senior executives.

Investors rejoiced: Petrobras's shares, which had sunk by 17% the previous week, rebounded. Yet most of its woes are not Ms Foster's fault. The government, which has a controlling stake, makes most of the big decisions. These have included making Petrobras hire and buy parts from inefficient local firms; telling it to build refineries in unappealing places, in the name of regional development; and making Petrobras the only principal operator in Brazil's vast offshore pré-sal ("beneath the salt") fields.

Worst of all, since 2006 the government has capped petrol prices to curb inflation. Unable to meet rising domestic demand, Petrobras has had to import petrol and die-

sel, selling it at a loss. In 2011-13 this cost it an estimated 48 billion reais.

Ms Foster's successor, who had yet to be chosen as we went to press, faces a sea of challenges. At current world oil prices, much of the pré-sal output barely makes money. Despite debt-fuelled investment of



Foster signs off

\$40 billion a year, production has flatlined at 2m barrels a day (b/d) for the past four years and is set to nudge up by just 4.5% in 2015. A goal set last year, of producing 4.2m b/d by 2020, looks fanciful.

Then there is the spectre of corruption. It first reared its head last March, with the arrest on money-laundering charges of Paulo Roberto Costa, who ran the firm's refining arm from 2004 to 2012. In a plea bargain Mr Costa confessed to channelling 3% of the value of his division's contracts with suppliers to slush funds for politicians. The public prosecutor has identified at least 2.1 billion reais of suspicious payments. Aggrieved foreign investors have filed lawsuits against Petrobras in New York, where some of its shares are traded.

Petrobras was expected to take a bribery-related write-down on its third-quarter earnings. It was supposed to publish these figures in November but has twice postponed them as it struggles to work out what the write-down should be. So far it has come up with two vastly differing figures. Applying Mr Costa's 3% cut to the value of those contracts it suspects, Petrobras comes up with a figure of 4 billion reais. But revaluing the assets created as a result of those contracts (mostly refineries), at the prices they might fetch in current market conditions, it reckons they may be worth 89 billion reais less than their book value.

The lower figure probably understates the write-down that will be needed, because the problem with dubious contracts may extend beyond Mr Costa's former fief. The higher figure is probably an exaggeration, because valuing each asset separately fails to account for economies of scale. What is more, all sorts of other factors, from currency moves to the weak oil price, may explain much of the impairment to the assets' values.

Without a credible write-down number, the firm's auditor, PwC, refused to sign off the accounts. Last week Petrobras published them anyway. It had to do so before March to avoid triggering a technical default. Should it fail to release an audited full-year statement by July, creditors may demand early repayment of up to \$54 billion of debt. With just \$25 billion in the kitty, \$16 billion-18 billion in debt and dividend payments due this year, and limited access to new financing because of the lack of audited books, meeting those obligations may require a government bail-out.

Tackling these troubles will require inordinate skills. Yet the hardest task for the new boss will be to resist interference from the state. Government intervention has made it the least profitable big oil firm, according to a report by Credit Suisse. But the bank also found that where meddling is minimal, such as in finding oil and getting it out of the ground, Petrobras is one of the best. Sadly, Brazil's government is unlikely to pay that much heed. ■

Alibaba

Love on the rocks

SHANGHAI

Alibaba runs into a regulatory ruckus

JACK MA, Alibaba's chairman, likes to be seen as a self-made man. Other Chinese firms may cultivate their relationships with important Communist officials, but the boss of China's biggest e-commerce firm has long insisted that he merely dates the government, and it will never lead to marriage. This week he stressed again that he is no red capitalist: "In Alibaba, I fiercely object to making all sorts of complicated, curious *guanxi* [connections]."

Mr Ma is also keen for Alibaba to be regarded as a global innovator: "We are an internet company [that] happens to be in China." His ambition is for Alibaba to serve two billion consumers and tens of millions of small companies worldwide. To further this aim, this week his firm unveiled a partnership with Lending Club, a peer-to-peer platform based in San Francisco, to extend credit to American firms buying Chinese goods on its site.

A regulatory kerfuffle shows how Chinese Alibaba remains, however, and how hard it is to have even a harmless flirtation with the government. The first sign of grief was an apparently official "white paper", published online in January, from the State Administration for Industry and Commerce (SAIC), an agency responsible for supervising China's internet firms. It described a meeting last July in which a middling official, citing a study of counterfeit designer goods on Alibaba's portals, lambasted the firm for not doing enough to fight fakes. The regulator claimed that he delayed releasing this document in order not to disrupt the firm's initial public offering (IPO) last September.

The posting was highly irregular and

has since been deleted, but it started a commotion. Investors, fearing a regulatory crackdown in China, punished the firm's shares. Lawyers, arguing that Alibaba may have failed fully to disclose pending regulatory action before its IPO in New York in September, began preparing class-action suits in America.

Such is the power of the state in China that local firms rarely protest at a regulator's official ruling. It is shocking, then, that Alibaba not only challenged the regulator but also denounced the study as unscientific. Mr Ma even demanded and got a meeting with Zhang Mao, the head of the SAIC, on January 30th. That seems to have smoothed things over. The agency now says that the document was not, in fact, official but rather the minutes of a routine meeting and, disappointingly for class-action opportunists, has no legal weight.

The storm appears to have subsided, therefore, but the episode points to two lingering threats. First, investors in Alibaba are now painfully aware that it is exposed to China's arbitrary and politicised regulatory system. That should worry them. Antitrust authorities elsewhere would probably not allow an e-commerce firm to control a whopping four-fifths of the market, as Alibaba does at home with its Taobao and Tmall portals. Can the company keep its privileged position?

The second risk arises from counterfeiting. It is wrong to blame Alibaba for China's love of making and buying fake bags, shoes and other luxury knick-knacks. The firm is fighting bogus goods: more than 2,000 employees work to take down more than 100m fraudulent listings a year. These efforts have won praise even from tough-minded American regulators, who removed Taobao from their annual list of "notorious" fake markets in 2012.

Yet shoppers on Taobao can still find counterfeits purporting to be Manolo Blahnik shoes, Coach purses and Ugg boots, all for a few dollars. A firm that aspires to be a world-class marketplace for quality goods needs to do better. ■

**Cinemas**

Just the ticket

NEW YORK

As the film business changes, IMAX is determined to stay in the front row

WHEN Richard Gelfond, the boss of IMAX, goes to China, people sometimes ask for his autograph. That is because for the Chinese, watching films on a screen 20 metres high is still a novelty, and IMAX is the best-known brand in giant-screen cinemas. No one in Hollywood has yet asked for Mr Gelfond's autograph, but he is happier being a star abroad. China is now the world's second-largest cinema market. Its box-office receipts rose by 37% in 2014, to around \$4.8 billion. Along with other emerging economies, it will drive the film industry's growth in the years ahead.

IMAX's roots are in museums and science centres, where audiences goggle at documentaries about sharks, dinosaurs and planets. Its fortunes were boosted when, in 2009, its cinemas did 3D screenings of "Avatar", a film about tree-hugging blue aliens. The film broke worldwide box-office records and introduced IMAX to millions more popcorn-chewers. Now, the company is in "the sweet spot of what is working well globally in the box office", says James Marsh of Piper Jaffray, an investment bank. The high-budget, high-octane blockbusters that Hollywood spews out these days are ideally suited to IMAX screens; and more than 55% of the company's 800 screens are outside America, mostly in high-growth markets.

IMAX's margins are more than double those of cinema chains such as AMC and Regal, because it does not bear the costs of owning theatres or employing ushers. It makes its money by selling or licensing its screens and other technology to cinema operators, and by taking a cut of their box-office receipts. It also makes money from studios by assuming the cost of remastering films so they look slick on its giant screens, in exchange for a slice of what the ►►



The storm subsides, but clouds remain

studios get from ticket sales. So, when films do well, IMAX gets a piece of the action; when they bomb, its costs are limited.

Mr Gelfond may not get mobbed by film fans on Hollywood Boulevard, but his number is in every studio boss's Rolodex. The studios want their big-budget productions to be shown on the largest possible screens; and negotiations to get them into IMAX cinemas can start a year or more in advance, says Michael Burns of Lionsgate, a big studio. Sometimes producers will delay a film's release until it can get a good slot. This has happened with "Mission Impossible 5", whose debut has been postponed from December 2014 to July 2015.

Worldwide ticket sales are expected to hit a record this year, as the latest instalments of such well-known film franchises as James Bond, Star Wars and the Avengers light up the screens. But it has not been a smooth walk down the red carpet. Last year America had its lowest cinema atten-

dance in two decades. With such sophisticated home-entertainment options on offer, "people need a reason to leave their house," says Mr Gelfond. Theatres are offering better food and plusher seats in return for higher ticket prices. To fill seats in quiet periods they are also offering new content, such as filmed operas, ballets and virtual museum tours. This month IMAX has been screening episodes of HBO's "Game of Thrones" television show.

As TV screens get bigger and sharper, and as streaming services like Netflix expand, cinemas may get an ever-shorter period of exclusivity before a film is made available for home viewing. So IMAX is hedging its bets: it plans to sell smaller versions of its screens for the homes of rich Chinese film buffs; and it is working on some sort of home-cinema technology (it won't say what) for the American market. Its bet is that some people will always be willing to pay more for a bigger picture. ■

line spending is accounted for by speakers of 13 languages, says Don DePalma of CSA. But others are becoming more important, for reasons of both politics and commerce.

The European Union's bureaucrats now have to communicate in 24 tongues. In Asia once-neglected languages such as Vietnamese and Indonesian matter more as those countries grow. Companies active in Africa regard that continent's languages as increasingly important. Big software firms like Microsoft find it profitable to localise their wares in small languages like Maya or Luxembourgish. Translation is no longer usually to or from English.

Technology, far from replacing humans, is instead a tool that helps them keep up with surging demand for high-quality translation. "Translation memory" (TM) was the first big useful tool. Since the 1980s translators have been able to dip into vast TM databases containing whole sentences that have already been translated in a given language pair, helping them to speed up repetitive work, such as translating instruction manuals.

"Machine translation" is the next step. Computers learn from huge databases of already-translated text to make ever-better guesses about how to render whole chunks from one language into another. Translators used to scorn this, seeing their human judgment as irreplaceable. Now, says Jiri Stejskal of the American Translators' Association, it has won respectability.

Technological change has not brought consolidation to a fragmented industry, however. Lionbridge, which has the largest disclosed revenues (\$489m in 2013), makes much of its money from services other than translation. Like most of its rivals, Lionbridge talks up technology, but is fairly traditional. The heart of the business is managing projects, acting as a go-between for customers and freelance translators on jobs like managing file formats and locations, client reviews and so forth.

Tedious project-management tasks like these may offer scope for disruptive innovation—perhaps from the translation world's equivalent of Uber, a taxi app. Software is unlikely to replace the translators, but it could co-ordinate their work with clients more efficiently. Smartling, an American company which seeks to cut out middlemen in this way, has clients including Tesla, an electric carmaker, and Spotify, a music-streaming service.

Jochen Hummel, a pioneer in translation memory, says that a real breakthrough would come from combining software, memory and content management in a single database. But making money may still be tricky. The American tech titan has not tried to commercialise Google Translate. A former executive says the firm experimented with content-management software but "decided to focus on easier stuff, like self-driving cars." ■



The translation industry

Say what?

Technology may not replace human translators, but it will help them work better

TALK into your phone in any of the big European languages and a Google app can now turn your words into a foreign language, either in text form or as an electronic voice. Skype, an internet-telephony service, said recently that it would offer much the same (in English and Spanish only). But claims that such technological marvels will spell the end of old-fashioned translation businesses are premature.

Software can give the gist of a foreign tongue, but for business use (if executives are sensible), rough is not enough. And

polyglot programs are a pinprick in a vast industry. The business of translation, interpreting and software localisation (revising websites, apps and the like for use in a foreign language) generates revenues of \$37 billion a year, reckons Common Sense Advisory (CSA), a consulting firm.

The market is growing, and widening. Translation in continental Europe was once dominated by the "FIGS" (French, Italian, German and Spanish); Japanese, Chinese and Korean were the only Asian languages to speak of. Roughly 90% of on-



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Schumpeter | The last 90 days

For successful bosses the end is almost as important as the beginning



BUSINESS leaders are obsessed with how to begin new assignments. One of the bestselling business books of all time is "The First 90 Days", by Michael Watkins, which provides a template for newly appointed managers to start with a bang. When Mitt Romney, a private-equity tycoon, ran for the American presidency in 2012 he had a 200-day action plan for turning round the free world, replete with floor plans and flow diagrams. Far less thought has gone into how bosses should leave successfully.

Lord Browne, who ran BP for 12 years, wrote in his memoirs that, as he pondered retirement from the oil giant: "My emotional self prevailed over reason. I did not know how to leave." Niccolo Machiavelli bungled his exit from the government of 16th-century Florence. "I am rotting away," he said after being fired. He went on to write a masterpiece on manipulation. But "The Prince" mainly dwells on how to acquire and retain power, not how to relinquish it. To fill the void, Schumpeter has drafted six rules to govern bosses' departures.

First, the wise executive is neither tardy nor rushed. Sometimes he has no choice in the matter. Hopeless bosses may be forced out fast. Great leaders may be ambushed by fate. Lord Browne left after a newspaper delved into his private life. Akio Morito, the co-founder of Sony, suffered a stroke and Emilio Botín, the patriarch of Santander, a bank, a heart attack. But for those with the luxury of choosing when to go, timing is everything.

The average boss of a big American firm is in the job for eight years. The longer the tenure, the greater the chances of a sticky end. Staying in the post too long greatly increases the chances of making a calamitous error or becoming stale. Some chief executives linger by heading for the chairman's office: think Larry Ellison at Oracle. Such cohabitation rarely works.

Premature evacuation is no better. Instead wise executives wait until their firm meets its long-term targets, ensuring them a bumper bonus. They are patient enough to manoeuvre their preferred successor into pole position and defuse any ticking time bombs. Sir Alex Ferguson achieved one but not the other at Manchester United, a hitherto successful British football club. He ensured the job of manager went to a friend and fellow Scot, David Moyes. But he left behind an ageing team of declining talents and slumping form. A poor run of results meant that Mr Moyes lasted

just ten months in the job. Bosses should behave like a brilliant guest who leaves a banquet while it is still in full swing.

Whether wicked or glorious, all leaders must steel themselves for the emotional shock of their abdication. This is the second rule and the most easily ignored. The unlucky will find that investors cheer—Microsoft's stock rose by 7% on the day Steve Ballmer said he would step down in 2013. Others will be showered with flattery. But all will see their power recede like a fast-ebbing tide. As Sandy Weill, who created Citigroup, recalled with horror, "I had become a lame duck...I felt numb." He eventually consulted a psychiatrist.

Even as they indulge the collective's need for nostalgia and tributes, resolute executives are as unsentimental in their last 90 days as in their first. They retain the counsel of trusted outsiders and focus on the important things, especially themselves. They obey the third rule; to keep a beady eye on their compensation. Most pay-offs are now governed by long-term contracts. Yet boards retain sovereignty over the interpretation of these agreements, including non-compete clauses. Wise chiefs flatter and dazzle the board members until the very end. They negotiate directly, not through lawyers or compensation consultants. They do not ask for petty perks, such as the use of country clubs and cars, that will look idiotic if they become public.

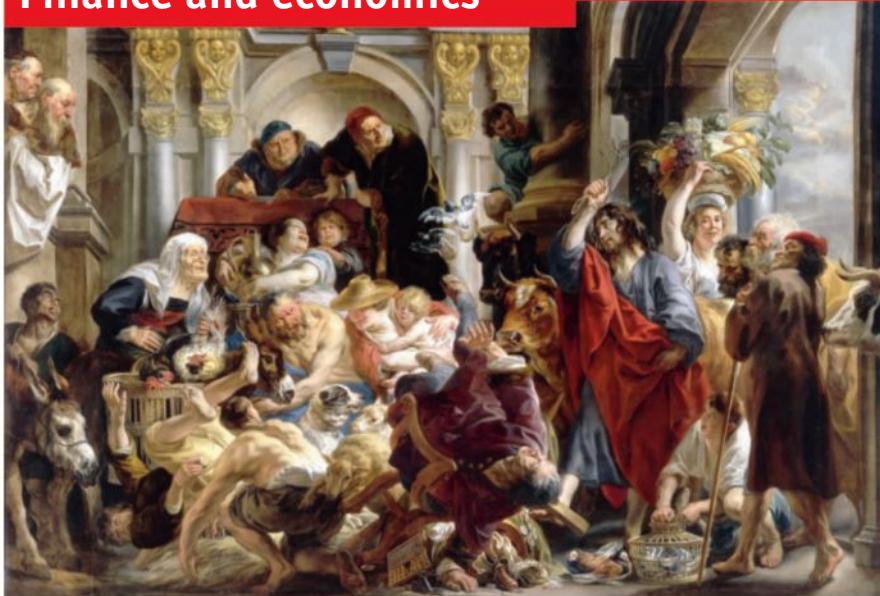
Glory is just as important as treasure and so the fourth rule is to create a narrative about the future and past. Leaders must be seen to be leaving for another great and noble task, and must mythologise their legacy. Winston Churchill recommended writing your own history. The best bosses go one better by writing the history while it is still happening. Lou Gerstner, who ran IBM between 1993 and 2002, published an account of his triumphs two months before he retired. A leader who is still arguing about his legacy years after he has gone has lost control of the narrative, as Terry Leahy, an ex-boss of Tesco, a fallen British retailer, is discovering. Laying the blame for the firm's slide since he left on Philip Clarke, his (since-sacked) successor, has won him few admirers.

The wise chief will grit his teeth and commit to the fifth rule: do not make big decisions in the last 90 days. Jack Welch, the boss of General Electric between 1981 and 2001, put together one of the most elaborate succession plans in corporate history, which included helping the two runners up find jobs at other companies. But he botched his departure, postponing retirement to oversee an ambitious takeover bid for Honeywell, a huge rival, which then collapsed.

When Harry met Dwight

Their legend secure and treasure-chest full, cunning leaders should obey a final rule: ensuring that the next occupant of the job does not outshine them. If they despise their successor, departing bosses can block access to a firm's important clients, suppliers and investors, and fail to explain vital procedures. President Harry Truman budgeted only half an hour to brief his successor, Dwight Eisenhower. The meeting lasted 15 minutes.

Even if they love their replacement, sensible departing bosses will keep back some information about their once-and-not-future subjects: the malcontents and the treacherous, the astute and the virtuous. They should make a vague offer of advice, safe in the knowledge that their successor will rarely, if ever, accept it for reasons of pride. And then they should walk out and never look back, praying that the new boss is successful—just not as successful as they were. ■



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Currencies

Money-changers at bay

Monetary policies and falling inflation are behind currency turmoil

EARLY trade was conducted in whatever currency was available. Coins circulated across borders in a bewildering variety of forms, creating the need for middlemen to value one token against another. These were the “money-changers” whom Jesus threw out of the temple.

Two thousand years later the foreign-exchange markets are still in turmoil. In January the Swiss National Bank abandoned its policy of capping the Swiss franc against the euro, catching many traders and investors by surprise. As the franc rose by 30% in a few minutes, many foreign-exchange brokers lost money (one went bust) and a hedge-fund manager, Everest Capital, lost so much that it had to close its main fund. Eastern Europeans who had taken out mortgages in Swiss francs also suffered—so much so that Croatia voted to peg its currency, the kuna, against the franc.

Other currencies are also under pressure. The Russian rouble has plunged against the dollar in the face of a declining oil price and sanctions by the West. This week the Reserve Bank of Australia unveiled a surprise rate cut, sending the Aussie dollar down to its lowest level against the US dollar since May 2009. Denmark has had to cut interest rates three times, further and further into negative territory, in order to discourage capital inflows that were threatening its peg against the euro.

What is behind this sudden burst of currency volatility, which follows a quiet period in foreign-exchange markets (see

chart 1)? In large part, it is caused by a divergence in monetary policy among the big three central banks—the Federal Reserve, the European Central Bank and the Bank of Japan. The Fed has stopped its asset purchases and may even push up interest rates this year. But the BoJ is still implementing a policy of quantitative easing (QE), and the ECB is just about to start one.

These diverging policies reflect economic fundamentals. The American economy is growing at a decent rate; both Japan and the euro zone are struggling to generate a sustainable recovery. Like Japan, the euro zone is teetering on the brink of deflation. Helpful though it is to consumers, the recent fall in the oil price has sent the euro area's headline inflation rate negative. Lower inflation is causing central banks

around the world to ease policy: 12 have done so since the start of November.

In such circumstances, a lower exchange rate is often one of the goals of monetary policy. Since the start of 2014, the yen has fallen by 11% against the dollar and by 17% against the euro. A weaker currency makes life easier for exporters (boosting the economy) and also pushes up import prices (making deflation less likely). But foreign-exchange markets are a zero-sum game: for one currency to fall, another must rise. A country with a rising currency will be tempted to seek a depreciation of its own, for fear of importing the deflation that others are trying to offload.

Foreign-exchange volatility can also cause problems for companies and investors. That is why the world used to favour fixed exchange-rate systems (such as Bretton Woods, which operated from 1944 to the early 1970s). It is also why many countries still choose to peg their currencies to the dollar or the euro. With the dollar rising and the euro falling, pegging countries have to follow suit. That may require tightening monetary policy in dollar-bloc countries and weakening it in the euro bloc (hence all those Danish rate cuts).

Pegs produce stability in the short term. Countries can use them to bolster the credibility of their economic plans. When Argentina was trying to shake off the hyperinflation of the 1970s and 1980s, it adopted a currency board that kept the peso at parity with the dollar. Britain joined the European exchange-rate mechanism (ERM) in 1990 in the hope of importing some of Germany's inflation-busting success.

But pegs have a number of problems. The first is that other economic goals need to be subordinated to the exchange rate. That may not be a problem if the economy with the peg is closely tied to the one its currency is pegged to: monetary-policy changes in the one will be appropriate in ➤



► the other. But that was not the case with Britain and Germany in the early 1990s: the tightening needed to keep the pound in the ERM proved too painful for the British economy to bear.

In the era of the classical gold standard, in the late 19th century, nations were governed by men drawn from the creditor classes. It was no surprise that sound money was their priority. But in an era of mass democracy, that is no longer the case. Few voters care about the exchange rate, but they do care about borrowing costs and jobs. Markets know this, giving them an incentive to attack pegs that lack credibility.

A second problem with pegs relates to the way that exchange rates are set. One theory, called purchasing-power parity, holds that currencies will move in line with the prices of tradable goods. If one country has a higher inflation rate than another, its goods will become more expensive and it will lose market share. If that happens, its currency should fall until prices are back in line. Our rough measure of currency values, the Big Mac index, reflects this logic. But as chart 2 on the next page shows, currencies can deviate quite a long way from their apparent fair value and stay there.

One reason for this divergence is the effect of investment flows. Most currency transactions have little to do with exports and imports. The daily value of world goods trade in 2013 was \$52 billion; daily foreign-exchange turnover in the same year was \$5.3 trillion, a thousand times larger. Investors are forever switching from one currency to another in search of a better return. A common tactic is the "carry trade", borrowing money in a currency with a low interest rate and investing the proceeds in a country with a higher one. Such huge flows of money make it harder to maintain pegs. The ultra-low rates that ►

Buttonwood | Not kicking the habit

The world is still addicted to debt

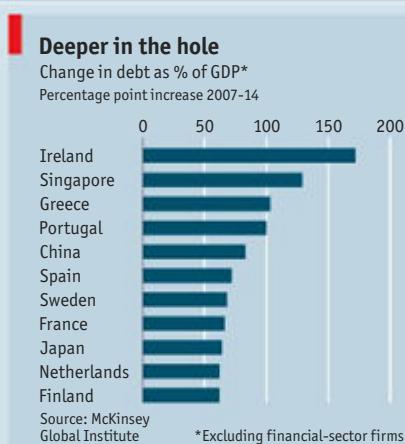
EIGHT years have passed since sub-prime mortgages started to go disastrously wrong, but the after-effects of the debt crisis are still around. So, as a new report from the McKinsey Global Institute* makes clear, is the debt. In fact, there is even more of it.

Global debt has risen by \$57 trillion since 2007—an annual increase of 5.3%. That is not dramatically slower than the 7.3% annual growth rate between 2000 and 2007, a period widely seen as a credit boom. If the financial sector is excluded, no leading economy has managed to reduce its debt-to-GDP ratio; 14 countries have seen their ratios rise by more than 50 percentage points (see chart).

In some cases, such as Ireland, this increase merely reflects the fact that financial-sector debt has ended up on the government's balance-sheet because of bank rescues. Shifting debt from the private to the public sector is in some respects a positive step; governments can borrow at a cheaper rate than companies and individuals and, if they have their own currency, have considerable scope to expand their balance-sheets.

Nor is higher debt automatically a problem: debt is a useful way for creditors and borrowers to spread their cash flows over time. In a developing country, rising debt levels may be a sign that the economy is getting more sophisticated. Even a developed economy has no definite threshold at which debt levels become "too high".

But high debt levels do matter. Quips that net global debt is still zero, whatever the sums being borrowed, are wide of the mark. The first problem is that a lot of debt is secured against property and, when prices fall, both creditors and debtors lose out. When credit expands, homeowners can afford higher house prices; their rising



demand pushes prices up further, which increases banks' willingness to lend. McKinsey finds a strong correlation between household debt and house prices in both the countries and the individual American states it studied. They also find that countries where a single city is dominant (as London is in Britain) have higher property prices and more debt. Seven countries, by McKinsey's reckoning, are still vulnerable to debt-laden housing busts: namely, Australia, Canada, Malaysia, the Netherlands, South Korea, Sweden and Thailand.

A second problem with high debt levels is the need to refinance regularly. Ten countries have debt ratios of more than 300% of GDP; if the average maturity of debt is five years, then 60% of GDP must be refinanced every year. If creditors lose confidence in debtors' ability or willingness to repay, a crisis can occur very quickly.

The lack of deleveraging since the crisis indicates the sheer difficulty of eliminating a high debt burden. Write-offs may merely transfer the burden from one party to another. Inflation can work for a while, al-

though eventually creditors will get wise to what is happening and demand higher nominal interest rates to compensate. The key to bringing down a high debt ratio is rapid economic growth, which the developed world has struggled to bring about. Keynesians would say that this failure reflects an excessive focus on public-sector austerity, but demography is also a constraint, and a lasting one: workforces in many developed countries are stagnant or shrinking.

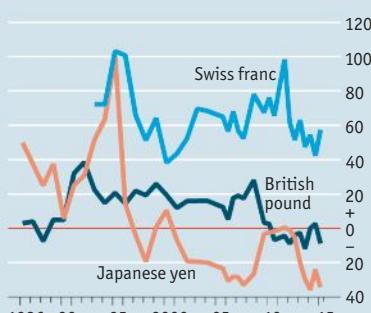
The report cites the examples of Sweden and Finland, which emerged from debt crises in the 1990s. But it points out that both countries were open to trade, and were able to use currency depreciation to boost their exports when the global economy was strong. Today's economic problems are widespread and not all currencies can depreciate at once. It is therefore hardly surprising that central banks have set interest rates near zero, or even below it: their economies could not stand the strain of higher rates.

The report has various proposals for reducing the impact of bad debts, such as shared-equity mortgages, which would enable lenders to enjoy some of the gains from higher house prices, in return for taking some of the pain from lower ones. It is not clear, however, whether such an idea would take hold without official help. Lenders would surely charge higher rates to compensate for the risk of loss. Reducing tax incentives for debt is another good idea, but one sure to meet fierce resistance, particularly in America, where tax relief on mortgages is regarded as a human right. After a while, like any feel-good drug, debt becomes addictive.

* "Debt and (not much) deleveraging", www.mckinsey.com/mgi

More carry, less trade

The Big Mac index, local currency under(-)/over(+) valuation against the dollar, %



Sources: McDonald's; *The Economist*

Interactive: Compare global currencies over time with our Big Mac index at Economist.com/bigmac

▶ pegs such as Denmark's require risk inflating asset bubbles; house prices there are rising. Negative rates can also cut into banks' net interest margins.

A related issue is that companies and banks in the pegging country may borrow in the target currency, particularly if it offers lower rates. If the peg breaks, such companies may get into deep financial trouble, since the cost of repaying foreign debts will soar.

That problem was at the heart of the Asian crisis of the late 1990s, when many trigger economies suddenly saw their currencies fall against the dollar. The episode echoed the "third-world debt crisis" of the 1980s, when many countries (mostly in Latin America) struggled to pay back their dollar debts. Both episodes occurred in the middle of strong dollar runs. So if the dollar is at the start of another bull market, as many commentators believe, there could be even more volatility ahead.

Where might it occur? Many Asian countries operate with trading bands against the dollar rather than targeting a specific rate. Singapore has already made an adjustment to its band, allowing its currency to weaken against the dollar to make sure its exports stay competitive. Other Asian countries may follow suit, largely by lowering interest rates. They have plenty of scope to do this since lower commodity prices have reduced inflation and improved their trading positions.

The big question is what China will do. After many years in which the yuan steadily appreciated against the dollar, markets expect a small depreciation in 2015. The Chinese have a fine line to tread: they will not want to lose competitive ground to their neighbours but, given their trade surplus, too aggressive a depreciation would annoy many Americans. The tectonic plates are shifting in the world economy, subducting some currencies and thrusting up others. But a few old grievances are unshakeable. ■

Greece and the ECB

The enforcer

How the European Central Bank can dictate terms to the Greek government

AS PART of his campaign to present a more conciliatory face to Greece's European creditors, Yanis Varoufakis, the new Greek finance minister, dropped by the European Central Bank (ECB) in Frankfurt on February 4th. He met Mario Draghi, its president, in an encounter Mr Varoufakis described as "fruitful". But there are sweet fruits and bitter ones. After his visit, the ECB's governing council served up a bitter variety by deciding to make life tougher for Greek banks, already beset by big outflows of deposits. The decision was a warning shot to the new government over its unwillingness to abide by Greece's bail-out arrangements.

When banks borrow from the ECB, they must provide eligible collateral. As a result of this week's decision, from February 11th Greek banks will no longer be able to present bonds that have been issued or guaranteed by the Greek government. Their ability to do so until now, in spite of the fact that junk-rated Greek debt is not strictly eligible, has rested on a waiver of the ECB's rules. That waiver has in turn depended upon the Greek government's compliance with the terms of a rescue undertaken by the euro area and the IMF. The ECB's council has rescinded the waiver on the grounds that is no longer possible to assume a successful conclusion of the review of that programme.

The ECB's decision brings forward something that would have occurred anyway at the end of February, when the bailout programme is due to expire unless the Greek government requests an extension (something Mr Varoufakis has said it will not do). A separate decision taken a year ago would have had a similar effect on

bonds issued by banks and guaranteed by the Greek government, which make up a much larger part of the collateral the banks have been using to borrow from the ECB.

The ECB's decision means that Greek banks will soon become much more reliant upon "emergency liquidity assistance" (ELA). Normally, ECB loans are subject to risk-sharing among the euro zone's 19 national central banks. In exceptional circumstances, however, a national central bank can lend to banks that have run out of suitable collateral, at its own risk and at higher rates of interest. This is ELA. Although national central banks can instigate its use, the ECB must be informed, and can restrict it if two-thirds of the governing council decide that is warranted.

Greek banks are therefore suffering a double blow. The uncertainty caused by elections and a change in government has prompted big deposit outflows, of €4.4 billion (\$5.4 billion) in December and more than twice that in January. To make up for this, banks have had to borrow much more from the ECB. But now they have much less eligible collateral available.

The growing reliance on ELA makes the banks, and thus the Greek government vulnerable. According to Karl Whelan, an economist at University College Dublin, the ECB has great discretion over how much ELA to permit and when to withdraw it. So Greek banks' growing dependence on ELA leaves the government at the ECB's mercy as it tries to renegotiate its bailout.

The ECB has form. In 2013 it announced that it would stop authorising the extension of ELA to Cypriot banks within days unless Cyprus entered a rescue programme to ensure their solvency. That forced the Cypriot government to accept a controversial bail-out programme. A threat to cut off ELA also forced Ireland into a rescue programme in 2010. Even a decision to cap ELA could have a dramatic effect, since it would be likely to trigger capital controls and limits on withdrawals from banks. Mr Varoufakis may be a specialist in game theory. Mr Draghi has had actual practice. ■



The last time someone messed with Draghi

Corporate-tax reform in America

An offer they could refuse

The president's plan makes no sense

IMAGINE \$2 trillion in untaxed corporate income. What politician could resist? Not Barack Obama. This week, as part of his latest budget proposal, he suggested both a one-time levy of 14% on the profit hoard American firms keep abroad, and a recurring tax on future foreign profits of 19%.

These proposed taxes stem from one of the many peculiarities of America's tax code: unlike the vast majority of rich countries, America levies tax on firms' (and people's) income no matter where in the world it is earned. The corporate-tax rate, at 35%, is the highest among the 34 members of the OECD, a club of mostly rich countries. Currently, however, corporations pay tax on foreign earnings only when they repatriate them. No wonder, then, that the amount American firms stash abroad has been growing steadily for years (see chart). GE alone has more than \$100 billion squirrelled away.

Politicians are unanimous that America needs corporate-tax reform. And Mr Obama says he would spend the increased revenue improving America's shoddy infrastructure—another bipartisan cause. Most Republicans abhor the idea of new taxes of any sort, so to sweeten the deal Mr Obama suggested lowering the corporate-tax rate on domestic earnings to 28%. All this ecumenicalism is important, since the president needs the approval of the Republicans who control Congress to raise or spend any money. But it is probably inadequate: the Republican response has ranged from lukewarm to hostile.

There is a certain logic to Mr Obama's proposals. Since America is an attractive place for big businesses—half of the world's 20 biggest listed companies are based there—Mr Obama feels his country

is uniquely able to tax their foreign earnings. Moreover, by lowering tax on repatriated profits, he doubtless hopes to lure some foreign-gotten gains back home.

That bet is probably wrong. The current system allows American multinationals to exclude a good chunk of their earnings from tax. The new one would not. Rather than seeing a 19% rate as a bargain, many would view it as an incentive to reincorporate abroad. As it is, some American firms have shed their nationality, and thus lowered their tax bill, through "inversions", a form of reverse takeover.

American firms with largely domestic operations, meanwhile, would probably see the new tax system as a reason to shift

more of their work abroad. That would lower the effective tax rate on any operations they relocated, without any impediment to bringing the profits back home.

America would do better to shift to a "territorial" system, whereby it taxes firms only on money earned within the country. Some worry that such a system would induce firms to shift operations abroad to avoid tax altogether. However, a transition to a territorial system could lead to the repatriation of about \$1 trillion, according to one estimate. That would give the economy a one-off boost as firms either invest more or hand cash back to their owners. If shareholders cough up on capital gains, the tax take could even go up. ■

British banks

The \$43 billion-dollar bill

Another ruinous tale of sharp practice may be reaching a close

FOR years British families have sat down to supper secure in the knowledge that they will be interrupted by an unsolicited phone call hunting for users of payment-protection insurance (PPI). "Have you ever taken out a loan?" the chirpy recording asks. The few undiscovered Britons who can answer "yes" are often in line for thousands of pounds in refunds, since most loans issued by British banks before 2011 came with expensive and unneeded "protection" in case borrowers fell ill or lost their jobs.

The irksome calls may soon be coming to an end. The Financial Conduct Authority, which has urged consumers to seek refunds after several court cases went against banks, on January 30th hinted that it was keen to draw a line under the PPI saga. It had previously waived a rule whereby aggrieved customers had to make a claim within six years of buying a financial product, but now seems minded to reimpose a limit.

Bankers are elated. Not only has the episode worsened their image (no mean feat), but the financial costs have been immense. Four years after the payouts started in earnest, they have handed out £17 billion (\$27 billion) in refunds. Despite expectations of a drop-off, they are still shelling out £300m-400m a month. Taking into account fines and administration costs, the debacle has cost banks \$37 billion, according to analysts at Morgan Stanley. They expect the tally to grow to \$43 billion by the end of 2016.

That puts PPI high up in the pantheon of bank fines—less than the \$107 billion shelled out by banks for assorted misdeeds related to America's mortgage market, but well ahead of the fines for fiddling benchmark interest rates, for

Should have got insurance

European and American banks: cost of fines or major litigation, 2009-14*, \$bn



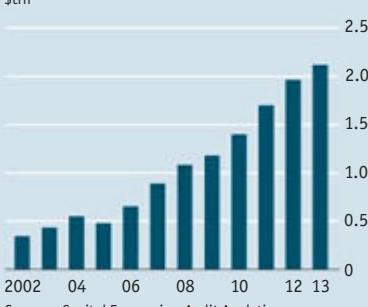
example, or violating American trade sanctions (see chart). PPI is also unique in that it was dreamt up by retail bankers: devising products that go on to attract billion-dollar fines is more usually the speciality of investment banks.

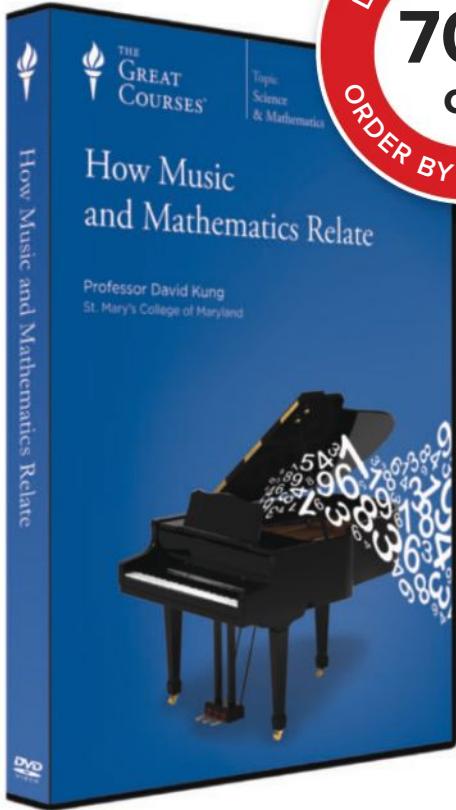
If PPI refunds do indeed stop, economists will mourn nearly as much as bankers will cheer. The accumulated payouts, which now amount to about 1% of GDP, were an unexpected stimulus for Britain's economy at a time of fiscal austerity. Better yet, because recipients were mostly poor, they were more likely to spend the money than save it. So many used their windfall—typically £3,000—to buy a car that dealers speak of the "PPI effect".

The phenomenon also gave birth to a veritable cottage industry. Banks hired thousands of people to process claims, pitting them against hordes of "claims-management consultants" trawling for victims. Given the popularity of bankers, few seemed to mind that a rising number of PPI petitions were probably fraudulent—one in four, according to industry lore.

A tempting target

US companies' estimated foreign cash holdings
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Loss aversion and development

No representation without taxation

A behavioural argument for higher taxes

HOW can poor countries get better governments? A recent paper* by Lucy Martin of Yale University suggests higher taxes could help. Low-income African countries levy taxes worth about 17% of GDP each year, whereas the countries of the European Union take in nearly 40% on average. In some cases, foreign aid makes up some of the difference: according to the IMF it constitutes about 10% of GDP in the Democratic Republic of Congo. In Liberia the figure is more like 15%. In 2012 the whole continent received \$51 billion in foreign handouts.

Low taxes and high aid flows, Ms Martin thinks, are a recipe for disengaged citizens and therefore for less effective governments. Her argument hinges on "loss aversion", an economic proposition that the pain of a loss is greater than the pleasure afforded by an equal gain. Most people, the thinking goes, care more about losing what they have than about getting something extra.

A similar rationale, Ms Martin argues, applies to aid and taxes. If aid money is siphoned off by corrupt politicians, people are miffed, but if they discover that their taxes have suffered the same fate, they are furious. In other words, taxpayers feel the loss of money they once had more acutely than that of funds they might have received. You would therefore expect a high-tax country to have more politically engaged citizens and thus better functioning institutions than one that depended on aid, even if their government budgets were a similar share of GDP.

Ms Martin tested her theory with an experiment in Uganda. In an "aid" game and a "tax" game, two players, a "leader" and a "citizen", split 1,500 Ugandan shillings (about 54 cents). In both games each received the same amount—the leader 1,000 shillings and the citizen 500—but by different routes. In the first the leader got "aid" of 1,000 shillings and the citizen a "wage" of 500 shillings. In the second the citizen was given 1,000 shillings, of which 500 was "taxed". The tax was supplemented with another 500 shillings (from "state coffers") and given to the leader.

The leader then had to decide how much of that 1,000 shillings to allocate to the citizen, and the citizen whether to accept

that division. The disgruntled could punish a leader they considered unfair with a "fine" of 400 shillings, but exacting the punishment was not free: the citizen had to pay 100 shillings to do so.

As loss-aversion theory predicts, embezzled tax provoked greater anger than stolen aid. Players in the tax game punished leaders when they received less than 460 shillings, on average, a figure 13% higher than the threshold for the aid group. For adult, wage-earning men (the group with most experience of paying taxes) the threshold was 30% higher. High taxes, it seems, make for high civic engagement. ■

Insurance in China

The big Anbang

SHANGHAI

A once-obscure Chinese financial firm leaps into the spotlight

CHINA'S insurance companies are boring. That is exactly what regulators want. Insurers are forced to fund themselves with plenty of capital and to restrict their investments to safe, low-yielding assets. So the rise of Anbang, an insurer that this week got the go-ahead to buy the Waldorf Astoria, a famous hotel in New York, has been an improbable one: dramatic, full of intrigue and, most of all, fast.

Founded in 2004 with capital of 500 million yuan (\$60 million at the time) and a narrow focus on car insurance, Anbang has in the past year transformed itself into one of the biggest Chinese firms in the industry and easily the boldest. Its \$1.95 billion acquisition of the Waldorf is just one



Home of a salad, way-station of ambition

of a series of deals that the privately held company has pursued in recent months. It bought Fidea Assurances, a Belgian insurer, and was the sole bidder for Woori, the second-biggest bank in South Korea.

Domestically, Anbang has been even more active, building up a 20% stake in Minsheng Bank, China's biggest private lender, as well as sizeable holdings in other banks and property developers. There is much speculation that it will eventually try to gain control of Minsheng—an unprecedented step for a Chinese insurer.

Many commentators have attributed the speed and self-confidence of Anbang's expansion to the connections of its chairman, Wu Xiaohui, who is married to the grand-daughter of Deng Xiaoping, China's deceased but still revered leader. Yet Caixin, a Chinese business magazine, said this week that Mr Wu had separated from his wife, suggesting that Anbang's growth is about more than his marriage.

Mr Wu, a former bureaucrat, knows many grandes. The official company registry lists Chen Xiaolu, the son of Chen Yi, a top military commander under Mao, as a director. Levin Zhu, the son of Zhu Rongji, China's former prime minister, and a successful banker in his own right, is an associate. This is not unusual in China: many firms cultivate ties with relatives of current or former senior officials.

Anbang has been unusually good at navigating China's bureaucracy, however. In 2011, when it decided to establish an asset-management company, rules that would have blocked it from doing so were relaxed, clearing the way. It has also timed its big moves well: Mao Xiaofeng, the president of Minsheng and a potential obstacle to a takeover, resigned this week after being detained by anti-graft investigators.

Investors have faith in the firm: last year Anbang raised some 50 billion yuan (\$8 billion) through two private financing rounds, quintupling its registered capital to 62 billion yuan—more than even PICC and China Life, the biggest state-owned insurers. It also has lots of cash in hand, thanks to a 38-fold increase in revenues from life-insurance premiums to 53 billion yuan in 2014. This has come at a price: Anbang has offered eye-watering yields of nearly 6% on some of its investment products. Yet in 2013 its return on equity was roughly 25%, thanks to good investments of its own.

Mr Wu's ultimate goal, apparently, is to transform Anbang into a conglomerate, in which insurance sits alongside banking, securities and fund-management. Fawning descriptions in the Chinese media talk of a "Warren Buffett model", whereby Anbang draws on steady income from insurance to fuel its ambitions. But margins are much thinner in China's immature insurance market, making Anbang's income hard to predict. And even Mr Buffett took a few decades to establish his empire. ■

*"Taxation, loss aversion, and accountability: theory and experimental evidence for taxation's effect on citizen behaviour", by Lucy Martin.

Free exchange | Linked in

Greece wants to index bond payments to economic growth. Not a bad idea



THE tie-less leaders of the new Greek government are short of neckwear but not of off-beat policy ideas. Their talk of reversing some hard-fought budget cuts, most notably by rehiring hordes of sacked bureaucrats, put markets in a panic. But the “smart debt engineering” mooted by Yanis Varoufakis, Greece’s new finance minister, shows more promise. At the heart of his proposal is a plan to swap lots of existing Greek debt for “GDP-linked bonds”—an old idea whose time may at last have come.

Since the 1980s globalisation has sent periodic surges of capital from the rich world to sovereign borrowers in the developing world. Many were ill-equipped to cope. Borrowing binges often ended in crises, prompting economists to think about ways to make swimming in the torrent of global capital less dangerous.

Indebted economies are more likely to get into trouble when the economic outlook changes. During booms borrowing often seems attractive to leaders, who reckon that rising incomes will make servicing the debt a doddle. Commodity exporters make similar calculations when the prices of oil, metals and the like go up. But good times inevitably end, dashing the borrowers’ assumptions and making their debts more difficult to bear.

The solution, as many economists have suggested over the years, is to link the interest on government debt to an economic variable such as net exports or GDP growth. A country with an average growth rate of 3% might sell bonds which pay 9% interest when GDP grows by 5% per year, for instance, and 1% interest when GDP grows by 1% per year. This approach would leave governments with smaller payments to creditors during rough economic periods and bigger bills in times of plenty. That, in turn, could help prevent government from resorting to “pro-cyclical” fiscal policy, whereby they exacerbate both busts, by slashing spending, and booms, by bingeing.

Linking bond payments to GDP should also make a country’s debt-to-GDP ratio less prone to sudden jumps, and thus lower the odds of a debt crisis. The total amount paid out over the life of a GDP-linked bond would vary according to the growth rates enjoyed during that period. A long boom would mean bigger payments to creditors. That would leave the government in question with less revenue to redeem debt, and thus a higher debt-to-GDP ratio than it would otherwise have had. But in a slump, a govern-

ment that had issued lots of GDP-linked bonds would pay far less interest, and would not have to issue so much new debt to cover its costs. That might save it from a vicious cycle in which interest payments and total borrowing chase one another ever higher.

In a working paper published last year, the Bank of England argued that such automatic moderation would be especially valuable not only to poorer countries, but also to members of currency unions.* In such places, the authors reckon, debt of more than 90% of GDP leads to a loss of confidence in a government’s ability to repay, and thus higher borrowing costs and a downward debt spiral. GDP-linked bonds, in contrast, give governments much more fiscal space: markets might not panic until debt ratios approach 150-200% of GDP, the authors suspect.

Despite these potential advantages, GDP-linked bonds are rare. Mexico has issued debt with payments linked to oil prices, but such instruments have mainly been used in restructurings. In 2002 Argentina issued GDP-linked warrants to investors who had held Argentine debt before its default the previous year. There was no principal associated with the warrants; instead, the government made dividend-like payments which varied with the performance of Argentina’s economy. Greece itself issued GDP warrants in 2012, as part of the package offered to participants in its first debt restructuring.

Why aren’t GDP-linked bonds more common? One reason may be the additional risk creditors are asked to assume. With conventional bonds, it is the issuer who pays the price if an economy fails to grow as expected. GDP-linked bonds transfer that risk to the lender, who would naturally demand higher interest in return. The average interest rate over the life of a GDP-linked bond should therefore be higher than on a conventional bond.

However, some research suggests that the premium investors would demand might not be so big. Different countries grow at different rates and on different cycles, so the risk of disappointing growth should be easy to minimise through diversification.

Coupon-clipping

Another potential headache—that the issuing governments might fiddle their growth numbers to minimise their payments—is harder to get round. There is much scepticism about Argentina’s economic data, for example. Fears of statistical funny business would presumably also add to the premium investors would demand.

The trouble then becomes persuading governments to accept higher borrowing costs during good times, when conventional debt is often available on good terms. Any regime willing to accept the short-term pain this would entail for uncertain long-term gains is prudent almost by definition, and therefore less likely to need the insurance GDP-linked bonds provide.

Yet even if they do not take the world by storm, GDP-linked bonds could find a home within the euro area. A transnational agency, Eurostat, oversees European economic statistics (although that did not prevent Greece from fudging its budget numbers before the euro crisis). Given the constraints of a shared monetary policy and restrictions on budget deficits, euro-area governments have less wriggle-room than their counterparts elsewhere. Flexible debt instruments could help. ■

* Studies cited in this article can be found at www.economist.com/GDPbonds15

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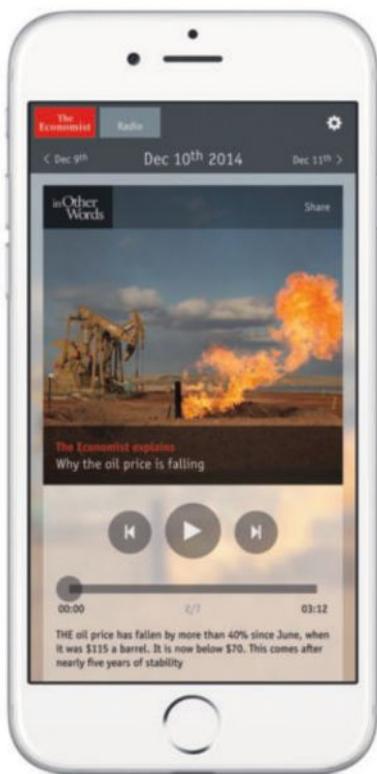
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Human mating strategies

Cads and dads

Promiscuity and fidelity seem to be specific biological adaptations. And their manifestations in men and women are not as different as you might expect

RECEIVED wisdom and biological theory both have it that males are (or, at least, would like to be) more promiscuous than females. That does not stop a lot of men settling down happily as faithful husbands. Conversely, wisdom and theory also suggest that once a woman has kissed the frog who turns into a prince, she will stick with him till death do them part. But that is belied by the number of females who wander from man to man, or simply do without a helpmeet altogether.

As with many biological phenomena—height, for example—propensity for promiscuity in either sex might be expected to be normally distributed; that is, to follow what are known colloquially as “bell curves”. The peaks of these curves would have different values between the sexes, just as they do in the case of height. But the curves’ shapes would be similar.

Rafael Wlodarski of Oxford University wondered whether things were a little more complicated than that. Perhaps, he and his colleagues posit in a study just published in *Biology Letters*, rather than cads, dads and their female equivalents simply being at the extremes of continuous distributions, individual people are specialised for these roles. If so, the curve for each sex would look less like the cross-section of a bell, and more like that of a Bactrian camel, with two humps instead of one.

To test this idea the team looked at two

sets of data which had been collected for other purposes. One was from almost 600 people who had completed the “sociosexual orientation inventory”, a questionnaire intended to elucidate the different tendencies of people to engage in sexual relationships without a deep emotional commitment. The other was of 1,300 people who had had the lengths of their index and ring fingers measured. The ratio of these lengths indicates the effect on an individual of exposure to testosterone in the womb. (A long ring finger compared to the index finger means a big effect.) This ratio corresponds, throughout the primates as a group, to the amount of promiscuity found in a species’s mating system.

The mating game

Both of these tests confirmed the idea that men are more predisposed to promiscuity than women. But Dr Wlodarski knew that already. What he wanted to determine was whether distinct sexual strategies exist in either or both sexes. Doing that from the relatively small samples available meant putting them through two statistical tests that asked how likely it was they really did come from bimodal, camel-shaped distributions rather than bell-shaped ones.

For both sexes, in the case of the sociosexual results, they clearly were bimodal. That pattern remained when the sample’s American and British participants were

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analysed separately. In the case of the finger data, all of which came from British participants, the men, but not the women, were bimodal.

These results suggest that—probably for men and possibly for women—caddishness, daddishness and so on are indeed discrete behavioural strategies, perhaps underpinned by genetic differences, rather than being extremes of a continuum in the way that tall and short people are. Although there is overlap in practice between the two strategies, they are, if Dr Wlodarski and his colleagues are correct, what biologists call phenotypes. These are outward manifestations of underlying genes that give natural selection something to get hold of and adapt down the generations.

Intriguingly, the difference in phenotypic mix between the sexes is not huge. Dr Wlodarski and his colleagues calculate that cads outnumber dads by a ratio of 57:43. Loose women, by contrast, are outnumbered by their more constant sisters, but by only 53:47. Each of these ratios tends in the direction of received wisdom. Both, though, are close enough to 50:50 for that fact to need an explanation.

In the case of men, there is an obvious one. The reproductive output of a male of any species (measured as the number of his offspring that survive to adulthood) is limited mainly by the number of mates he can inseminate. He therefore has an incentive to be promiscuous (which will promote caddishness). But humans are unusual in that a father often helps care for his offspring. Those offspring are (at least, in a state of nature) less likely to survive and thrive without him. That will promote daddishness.

A woman’s evolutionary reasons to play fast and loose are more complicated, ►

► for having many lovers will not bring her more children. It will, however, bring her children who are more genetically diverse—and that might be an advantage in itself. Such children would, for instance, be less susceptible to catching the same diseases as each other, since openness to infection by one pathogen rather than another is partly determined by genetics.

If their analysis is correct, Dr Wlodarski and his colleagues have probably stum-

bled on a type of equilibrium known to biologists as an evolutionarily stable strategy, in which a way of behaving becomes more advantageous as it gets rarer, and less so as it gets commoner. On this view dads succeed when dads are frequent, and vice versa. Neither can conquer so neither will vanish. Such equilibria are the subject of a branch of maths called game theory—a name both men and women might think eminently appropriate. ■

half as great as at sea level—it still trails the ECMWF model.

Nonetheless, the GFS's strong showing during January's nor'easter offers solace to critics who feared America would never catch up with Europe in matters meteorological. Weather forecasting is fiendishly complex, and improvements tend to arise not from great leaps forward but rather an accumulation of incremental advances.

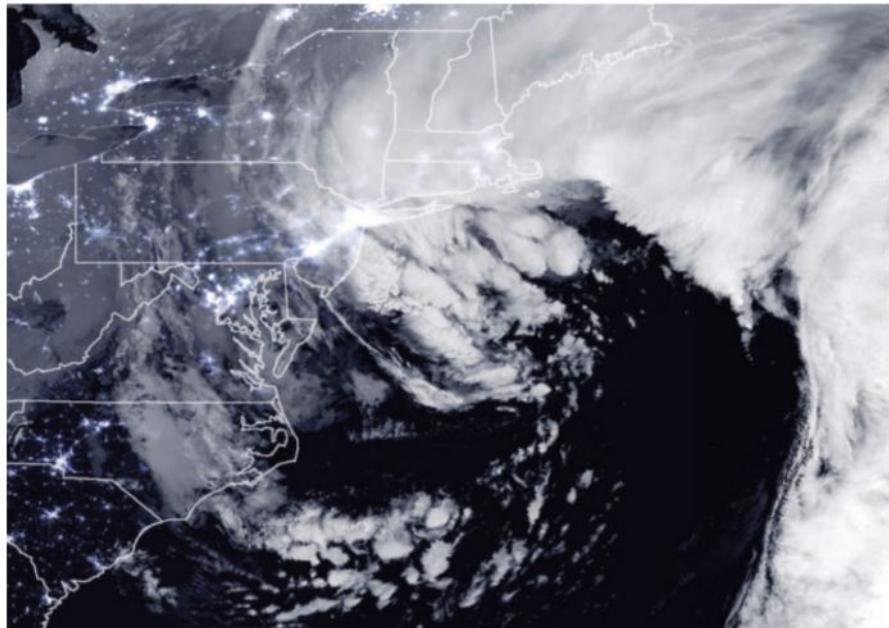
The ECMWF's most obvious advantage has been in raw computing power. Its Cray XC30 supercomputer can perform up to 2 quadrillion calculations a second, about ten times more than the GFS hardware before the recent upgrade. As a result, it carves up the Earth's atmosphere into svelte cells 16km square and 137 layers deep, compared with a bulky 27km and a mere 64 layers for the old GFS. The ECMWF's computing muscle also lets it start its projections with a replay of the past 12 hours of weather, using 40m data points derived from observations collected by ground stations, aeroplanes, balloons and satellites. In contrast, the GFS begins with a snapshot of a single moment.

The ECMWF also deserves credit for deploying its computational force wisely. The centre was a pioneer in using satellites to fill gaps in the data over the oceans, and in developing "ensemble forecasts" that generate a range of outcomes by employing slightly different starting conditions to produce multiple predictions. Its current model runs 52 such forecasts in parallel, each with a probability assigned to it.

Weather forecasters in America have full access to the ECMWF's model. However, the United States still has good reason not to free-ride on the Europeans' work. Private American firms have to pay for it, and the ECMWF is unlikely to develop regional or local models focused specifically on America. Moreover, giving the ECMWF a worthy competitor would probably lead to better forecasts overall.

The new GFS has certainly narrowed the gap. Its resolution is now 13km, though it still has only 64 layers. By November it is expected to run on a faster computer than the ECMWF's. It could be in line for further upgrades if the new, Republican Congress reintroduces the Weather Forecasting Improvement Act proposed last year—though the party's global-warming sceptics are likely to demand that much of the additional \$120m a year the bill offered be taken away from research on climate change.

According to Cliff Mass, a professor of meteorology at the University of Washington, more money will not be enough to catch up with the Europeans. America, he says, must integrate its separate research and forecasting divisions, and include more contributions from non-government experts. Compared with pushing through cultural change in large public bureaucracies, predicting the weather is easy. ■



Weather forecasting

Continental divide

NEW YORK

Europeans do not just talk about the weather more than Americans do. They are better at forecasting it as well

IT WAS far too small a victory to count as an equaliser. But cheers were still heard in American meteorological circles after the storm that hit the country's east coast last month left the city of New York mostly unscathed. For more than two decades the Global Forecast System (GFS), the leading weather-prediction model produced in the United States, has been notably less accurate than its chief competitor, published by the European Centre for Medium-Range Weather Forecasts (ECMWF). Although this deficit went largely unnoticed for years, it was laid bare by Hurricane Sandy. A week before that storm's landfall in 2012, the ECMWF predicted it would veer towards the coast while the GFS showed it remaining at sea.

In response to this failure, America's Congress authorised \$34m of extra money to spend on forecasting. A new version of

the GFS went into operation on January 14th, and two weeks later it passed with flying colours. On January 25th the ECMWF predicted that New York would, on the 27th, labour under 64cm (25 inches) of snow brought by the storm pictured above. The GFS suggested 18cm. That turned out to be far closer to the truth.

It is, however, too early for the Americans to celebrate. The GFS projection for the blizzard's western edge differed from the ECMWF's by 200km (120 miles)—a weather-forecasting hairs'-breadth. The only reason anyone noticed this discrepancy was that the gap happened to encompass the country's most populous city.

This episode, moreover, may have been a fluke. During its three weeks of operation, the new GFS remained outclassed. On a standard measure—predicting the altitude at which the atmospheric pressure is

Cosmology

BICEP unflexed

One of last year's most talked-about scientific results proves to be a mirage

HOW many astronomers does it take to nail a coffin shut? On January 30th two teams of them—one the masters of *Planck*, an orbiting telescope belonging to the European Space Agency; the other that behind *BICEP2*, an Earth-bound instrument at the South Pole—released, after a leak, a paper they had submitted jointly to *Physical Review Letters*. Its 274 authors came to bury one of the biggest scientific stories of 2014.

This was the supposed discovery, reported by the *BICEP2* team last March, of primordial gravitational waves—ancient ripples in space-time, produced in the first few moments after the Big Bang. Such waves would have left their imprint on the cosmic microwave background radiation, a faint afterglow of the Big Bang itself, in the form of subtle changes in the way the microwaves are polarised.

Cosmologists would dearly love to spot such waves, because they would confirm the theory of inflation, which holds that the universe underwent an extremely rapid expansion in the first instants of its existence—growing in size far faster than the speed of light. This theory solves several knotty problems in cosmology, and so most astrophysicists work on the assumption that it is true. But there is no direct evidence. Detecting primordial gravitational waves, which the theory predicts, would have provided such evidence. Measuring them would have let cosmologists rule out some varieties of inflation theory, of which there are many.

Not long after the results were announced, though, doubts began to surface. Thin clouds of dust that drift in interstellar space can produce a signal which looks a lot like primordial gravitational waves. A

Materials science

Wings of steel

An alloy of iron and aluminium is as good as titanium, at a tenth of the cost

ALOT of tosh is talked about “nanotechnology”, much of it designed to separate unwary investors from their hard-earned cash. This does not mean, though, that controlling the structure of things at the level of nanometres (billions of a metre) is unimportant. In materials science it is vital, as a paper just published in *Nature*, by Hansoo Kim and his colleagues at the Pohang University of Science and Technology, in South Korea, demonstrates. By manipulating the structure of steel on a nanometre scale, Dr Kim has produced a material which has the strength and the lightness of titanium alloys but will, when produced at scale, cost a tenth as much.

Steel is useful because it is strong and cheap. But it is also heavy. It has, therefore, always been useless for applications such as aircraft. In a world that demands the ever-more efficient use of fuel in motor cars and lorries, it is now falling out of favour there, too. According to Dr Kim, the share by weight of steel in an average light vehicle fell from 68.1% in 1995 to 60.1% in 2011.

The obvious way out of this is to alloy steel with a lighter metal. And the obvious one to choose is aluminium, which is, like iron (steel’s principal component), cheap and abundant. An alloy of iron, aluminium and carbon (steel’s other essential ingredient) is too brittle to be useful. Adding manganese helps a bit,

secure detection, then, relies on researchers being able to scrub that signal from their data. It was not clear the *BICEP2* team had managed to do this successfully, and doubts about the veracity of their result began to mount.

The *BICEP2* team used the best available maps of interstellar dust. But *Planck*,

but not enough for aluminium-steel to be used in vehicles.

Dr Kim and his colleagues have, however, found that a fifth ingredient, nickel, overcomes this problem. To a chemist, an alloy is a mixture of materials rather than a true chemical compound. But metals do sometimes react to form real compounds, and one class of these, known as B_2 intermetallic compounds (which have equal numbers of atoms of two different metals within them), lies at the heart of Dr Kim’s invention. The nickel reacts with some of the aluminium to create B_2 crystals a few nanometres across. These crystals form both between and within the steel’s grains when it is annealed (a form of heat treatment).

B_2 crystals are resistant to shearing, so when a force is applied to the new material they do not break. This stops tiny cracks propagating through the stuff, which gives it strength. That strength, allied with the lightness brought by the aluminium, is what Dr Kim was after.

There is, of course, many a slip ‘twixt laboratory bench and production line, but POSCO, one of the world’s largest steel companies, is sufficiently interested in Dr Kim’s discovery to be planning, later this year, a trial that will produce it at industrial scale. If that goes well, not only may steel’s retreat from cars be reversed, but a steel aircraft may one day take to the skies.

which operated between 2009 and 2013, generated better data still, which were unavailable to the *BICEP2* team at the time they published. The latest paper uses these data to reanalyse *BICEP2*’s results. When the newly refined dust signal is subtracted, the purported gravitational waves disappear. The *BICEP2* team had seen only a cosmological will-o’-the-wisp.

Making such a big announcement only to retract it a year later may seem embarrassing. *BICEP2*’s researchers were criticised in some quarters for rushing to promulgate their discovery prematurely. But, as this latest paper proves, one of science’s advantages is its ability to correct itself.

Nor is the quest for primordial gravitational waves over. Just because *BICEP2* did not see them does not mean they are not there. Several other telescopes have been hunting for the waves, and *Planck*’s high-quality maps of the interstellar dust will help them with their quest. Since *BICEP2*’s detection has proved a false alarm, there is once again everything to play for. ■



BICEP scours the heavens



Tel Aviv

From Bauhaus to doghouse

An Israeli book deconstructs the mythology surrounding the building of Tel Aviv

IN 1984 a small exhibition from the Tel Aviv Museum of Art travelled to New York. “White City: International Style Architecture in Israel, A Portrait of an Era” depicted Tel Aviv as perhaps the world’s finest example of a Bauhaus city. No display better encapsulated the image of Israel and its modern metropolis as the realisation of “a land without a people for a people without a land”. A flurry of exhibitions and books followed, including one called “Houses from the Sand”, which reprinted on the title page a striking photograph of besuited and behatted European Jews on the beach bidding for plots on empty dunes. Roused by and rousing international acclaim, UNESCO proclaimed Tel Aviv a World Heritage Site in 2004.

For Sharon Rotbard, an architect who was born there, this is whitewash. Three architects active in Tel Aviv in the 1930s had graduated from the Staatliches Bauhaus in Germany, he writes in “White City, Black City”. The rest had studied in other countries. More important, he explains, the myth ignores Tel Aviv’s ties to its parent city, Jaffa, an ancient port which at the time of Tel Aviv’s birth was Palestine’s modern hub, complete with cinemas and printing houses, and whose density on aerial photographs literally coloured the city black.

Mr Rotbard chips away at the façade of his birthplace. He describes how Tel Aviv supplanted Jaffa’s Arab-owned orange groves, and goes on to explain how, in the

White City, Black City: Architecture and War in Tel Aviv and Jaffa. By Sharon Rotbard. Translated by Orit Gat. *Pluto Press*; 244 pages; \$24.95

violent birth of Israel in 1947-48, Jewish paramilitary fighters overpowered and subsequently largely levelled the city from which it had sprung. His tale of Tel Aviv’s growth from a Jaffa suburb founded in 1909 to a metropolis whose population grew 20-fold in the 1920s is gripping.

Its inhabitants, he writes, were for the most part adolescent Jewish men who were no less ideological than today’s settlers. Even their methods were often the same. Their fortified outposts interrupted Arab contiguity. Their first bypass, Allenby Street, today a spine through the city, ran around Jaffa’s perimeter. It gave Tel Aviv access to the sea, but also reduced Jaffa to an enclave that was in effect cut off from its Palestinian hinterland.

In November 1947 the UN published its plan for dividing Palestine into an Arab and a Jewish state. Jaffa was made a Palestinian island within Jewish boundaries. In the fighting that followed, paramilitaries commanded by Menachem Begin, a Tel Avivan who later became Israel’s prime minister, rolled barrel bombs down the alleyways into Jaffa’s cafés and fired mortars into residential districts. By the time Israel declared independence on May 14th 1948,

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prompting Arab armies to move in, Jews had chased Jaffa’s Arabs out of the city, leaving less than a 20th of the population behind. Many were forced to escape by sea. For the first time in 5,000 years, Mr Rotbard goes on, Jaffa “ceased to exist as an urban and cultural entity”. Much of the Arab medina was bulldozed and grassed over. Some monuments, including mosques and Crusader-era buildings, were preserved, but walking through Jaffa today you would never know that it had once been Palestine’s Arab economic and cultural centre.

Municipal officials treated Jaffa as a repository for institutions like the police headquarters, jails and rubbish dumps, as well as unpopular people such as migrant workers. Later, whole districts were paved and turned into car parks. “Cities like Hiroshima, Dresden and Berlin all suffered exorbitant damage during World War II but each emerged from the dust-clouds of conflict intact, even vibrant urban entities,” the author writes, whereas Jaffa, he claims, was eradicated like Troy.

The army kept some remnants for itself. Others were turned into an artists’ colony. The bohemian young who lived there called Jaffa’s ruins “the Big Zone”, and made them hip. In a process which has accelerated in the decade since Mr Rotbard’s book first came out in Hebrew (it has only now been translated into English), developers filled the vacant spaces with luxury housing projects, repopulating Jaffa with a gentrified Ashkenazi middle class in Greek-sounding gated communities such as Andromeda’s Rock, or in estates reserved for religious Jews. “Architects, in their actions and their works,” concludes Mr Rotbard, “are the ones who finalise the occupation, making it irreversible.”

For readers unfamiliar with Israelis’ acerbic tongues or their continued capaci-

ty for self-criticism, this is heady stuff. Anti-Zionist activists will latch on to it. So will sympathisers of Israel's ascendant religious right, only too keen to accuse Tel Aviv's liberal elite of hypocrisy. The post-1967 settlement of Palestine's occupied highlands by religious Jews, they argue, has been far less brutal than the devastation of Jaffa.

A publisher as well as an architect, Mr Rotbard is deliberate with his words. "Cities and histories", he writes, "are constructed in a similar manner—always by the victor, always for the victor, and always according to the victor's record." For him, the nickname "White City" conjures up other colonial cities like Algiers (where the adjoining kasbah was left intact). But it is also white as in "the white of the eraser, the Tipp-Ex", as well as "white lies". ■

Depilation

Hair-erasing

Plucked: A History of Hair Removal. By Rebecca Herzig. NYU Press; 287 pages; \$29.95

CLAMSHELL razors, lasers, lye depilatories, tweezers, waxes, threading and electrolysis. Humanity has used an impressive array of tools to remove hair. This is, biologically speaking, pretty strange. Most of Earth's mammals possess luxuriant fur. Only one seeks to remove it. Rebecca Herzig's delightful history of hair removal in America helps explain why: smooth skin is a cultural imperative.

There is no finer example of this than the reaction of the bearded Europeans to the smooth skin of the male and female native Americans they saw when they arrived on their shores. George Catlin's portrait of the eldest son of Black Hawk in 1832 (right) reveals the preoccupation that many colonists had with hairlessness. Hair was political, too, and formed part of a debate about Indian racial characteristics and whether natives were capable of being civilised. William Robertson, a Scottish historian, said hairlessness provided evidence of a "feebleness of constitution".

Attitudes shifted after Charles Darwin published "The Descent of Man" in 1871 and perspectives on the relationship between humans and other animals changed. Although American theologians ignored or rejected Darwin's ideas, the notion of a connection between man and ape had a great cultural impact on how hairiness was viewed. Freak shows and circuses displayed "dog-faced men" and "bearded ladies", and unusual hair growth was even tied to various pathologies. By the start of the 20th century, plentiful hair had

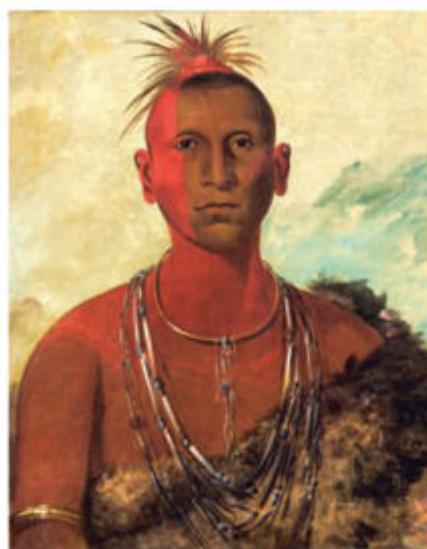
been linked to signs of sexual, mental and criminal deviance.

Women's body hair attracted particular attention. Doctors reported mounting distress among women afflicted with "excessive" hairiness—particularly on the face and neck. Women who pushed for voting rights and equality were depicted as sexually inverted and hairy, and critics of the changing sexual roles of females deemed hairiness as evidence of an excess of manliness.

Aversion to body hair spread rapidly, fuelled by the racially tinged hygiene movement and less restrictive dress codes. Advertisements for hair-removal products sprouted everywhere, and by the start of the second world war body hair had become disgusting to middle-class American women. The Food, Drug and Cosmetic Act in 1938 was partly provoked by a rash of injuries from depilatory creams. One of the most popular creams contained thallium. Women were maimed by muscular atrophy, blindness or limb damage after using it; some even died.

The modern daily self-shave became common much earlier, when America entered the first world war. Military leaders liked the idea of shaving, as it helped keep lice away and assured a close fit for gas masks. Eventually army regulations required every soldier to possess a shaving device—a market anticipated by Gillette. As the nation demobilised, the company launched a campaign to create the idea that a daily shave was a cultural norm.

The current taste for pubic, perineal and anal waxing owes much to changes in the media, particularly pornography. The prevalence of bare genitals in porn has promoted the idea that hairlessness is erotic and attractive. Yet in the 1980s a porn actress would have expected to pose with a "full bush". Indeed, when censorship laws were liberalised and genitalia were first un-



Hair and there

veiled in film, pubic hair was such a critical component of eroticism that it spawned an entire genre of so-called "beaver" films. Today porn stars are all either highly cropped, like topiary, or bald. Ms Hertzog reports that by the late 2000s American clinicians were saying it was unusual to treat any woman under the age of 30 who still had her pubic hair. "Within a single generation", she writes, "female pubic hair has been rendered superfluous."

What remains is the question of whether hair removal is a form of self-enhancement or oppression. Most men feel obliged to be clean-shaven for work or polite company, and the hairy woman is roundly scorned. Of a young woman with hairy armpits and legs, one writer for the *Daily Mail*, the world's most popular newspaper website, recently wrote: "Watching her I nearly parted company with my breakfast." For human beings to make themselves different from other animals, what is normal has been rendered monstrous. ■

Geoffrey Chaucer

The racket of genius

The Poet's Tale: Chaucer and the Year that Made the Canterbury Tales. By Paul Strohm. Profile Books; 284 pages; £15.99

THIS is an extremely good book. Oddly so, it might seem. It contains no new facts about Geoffrey Chaucer, author of "The Canterbury Tales", whose barely documented 14th-century life has long frustrated scholars: no more evidence about his strangely distant marriage to Philippa or his dealings with "lytel Lowys my sone", or what books he read, or the cabal of venal, overweening London merchants he did business with. The works are cited sparingly. Paul Strohm does not even much indulge that useful biographer's trick, trawling through the oeuvre for little gleams of Chaucer's personality: a love, perhaps, of walking through dew-damp dawn meadows ("The Legend of Good Women"), or his delight in the sunshine through his new stained-glass window as he snuggled down in bed ("Troilus and Criseide").

What he does instead is create a soundscape. Earlier books have described what Chaucer's London looked like; Mr Strohm makes it a place where people are shouting, hustling, grabbing you by the coat, asking "What's new?", while almost continually behind them carts thunder, horses clatter, and bells ring, peal, carillon, clang and toll. You can hardly hear yourself think; but given the ceaseless round of church offices, tavern-bawling, new mechanical timekeeping and life lived out in ►

► the street, that was what it was like. This was what Chaucer had to contend with when, after a hard day of "reckonings" as controller of the wool custom, he came home to his room of books above Aldgate and attempted to write. It is a wonder that he produced anything.

Somehow he managed, and he presented his offerings at small literary gatherings that were fairly rowdy in themselves: the author reading aloud, with digs and asides, while listeners applauded, interrupted ("Namoore of this!") or objected ("Thy drasty riming is nat worth a toord!"), as host Harry Bailly exclaims in the "Tales"). Nothing could pass without comment.

Similarly, the Parliament of 1386—in

which Chaucer, as a supporter of Richard II, found himself on the wrong side, and after which, at 42 or 43, he lost both his job and his Aldgate rooms—is presented in this book as a welter of noise. The whole Commons rises in a tumult over the king's demands for tax, the king sulkily stalks out, the nobles shout their defiance (as shocking as throwing their gauntlets to the floor), and it is all much as Chaucer depicts it in the "Parliament of Fowls" ("Kek kek! kok-kow! quek quek"), or in the "House of Fame", when the volume of disputing contenders for honour becomes as deafening as a rookery. What a contrast after that to retreat into the wilds of Kent, where "In th'end of [the] strem I am dul as ded."

Yet out of that very quietness, Mr Strohm argues, came the flowering of Chaucer's genius. Forced into unemployed rural solitude, longing for bustle and an audience, he created one himself in the glorious procession of pilgrims towards Thomas à Becket's shrine. He rubbed elbows again with Franklin, Miller, Monk, Cook, Prioress, Shipman, all noisily interacting, and made himself a storyteller, too.

Typically for one who was a vintner's son, and who had never quite hauled himself up socially from his first appointment as a *meindre*, or lesser, esquire, he made no great impression on his fictional company. In his heart, the real man knew better. He was not only ready to follow, if reverently, in the footsteps of Ovid, Petrarch and Dante; he was also ready to lead the way into the new world, just opening, of books being published for potential rather than actual readers, and of readers who were as likely to consume his wonderful writings in, of all things, silence. ■

American short fiction

First among equals

Honeydew. By Edith Pearlman. *Little, Brown;* 275 pages; \$25. John Murray: £16.99

THESE are short-story writers, and then there are Alice Munro, Flannery O'Connor, John Updike and John Cheever. When "Binocular Vision" won the National Book Critics Circle award in 2011, Edith Pearlman was compared with them. Her new collection, "Honeydew", may be more muted in tone, but it retains the 78-year-old author's ferociously individual style, characterised by prose that is bolshie yet nuanced, elegant but not fussy, stylish without being vain.

Instead of ranging across the globe, half of the 20 stories in "Honeydew" are set in the fictional American town of Godolphin, described by Ms Pearlman in an interview as "tolerant and inefficient and modest". This is a writer chronicling ineffectual, loving humanity, who, in dealing with dirt, sees the world in a grain of sand. It comes as little surprise, then, to learn that Ms Pearlman rereads that master of characterisation, Charles Dickens, three times a year.

She is good at navigating the sensual terrain of relationships. In "Hat Trick" she brazenly stretches time as she describes Helen's infidelity to her husband. "Even when she briefly left him, haring after a woman who had no long-term use for her but who liked to be tied up, liked to be taken from behind—he gravely withstood the desertion, gravely welcomed her back."

Her characters show wry optimism as they ingeniously stumble their way to happiness. In "What the Axe Forgets, the Tree Remembers" lonely, white Gabrielle joins the Society Against Female Mutilation and finds solace with a Somali refu-

gee called Selene. She recalls the thrill of Selene's fingers probing inside her, "spreading like wings".

Occasionally, ambition outstrips presentation. "Wait and See", about a boy's ability to see more colours than average, seems to be missing Ms Pearlman's skittish, subtle touch. Generally, however, the dialogue is clear as water yet punches like gin, with characters memorably frothed with metaphor. One has a "pouf of a buttock", another "wonder steaming his face", a third "teeth like cubes of cheddar". In "Blessed Harry" a plant in a family home produces "tiny flowers in hues of lingerie".

These are meaty stories of loss, hope, joy, decay, blindness and sight, difference and commonality. "Binocular Vision" left reviewers asking why they hadn't heard of Ms Pearlman before. "Honeydew" may be quieter than its award-heaped predecessor, but it is still operating near the summit of writing.



Bruno Pontecorvo

Splitting atoms, sharing secrets

Half-Life: The Divided Life of Bruno Pontecorvo, Physicist or Spy. By Frank Close. *Basic Books;* 400 pages; \$29.99. To be published in Britain by Oneworld in March.

AFTER nearly a decade of helping Western governments harness the power of nuclear energy—as a member of the Manhattan Project and Britain's nuclear-reactor programme—Bruno Pontecorvo was due for a holiday. So in the summer of 1950 he took his wife and three children to Italy, his birthplace, where they camped, fished and swam in the Mediterranean. Then they vanished behind the Iron Curtain, raising fears that all along the brilliant physicist was helping the Soviets, too.

Pontecorvo was a committed communist, but was he "the second-deadliest spy in history", as the American government once claimed? If so, he was quite good. There is no hard evidence of his espionage, nor is there any official suggestion of what secrets he may have stolen. When the Soviets allowed him to speak, he claimed to have fled Western persecution. But in an engrossing new book, "Half-Life", Frank Close makes the case against Pontecorvo.

Like any good spy story, this one involves Kim Philby, who stole secrets for the Soviets while working for British intelligence. The author has uncovered a letter raising concerns about Pontecorvo from the British embassy in Washington to the security services in London. This would have gone through Philby, who tipped off ►

► Moscow when its moles were in trouble. Weeks later Pontecorvo disappeared. "It is hard to sustain a case that he would have acted so precipitously if he were totally innocent," writes Mr Close.

The letter does not prove that Pontecorvo was a spy, but it adds to the pile of circumstantial evidence. The physicist was well placed to share the uranium and reactor blueprints that mysteriously ended up in Soviet hands. A defector who had worked for the KGB claimed to know of Pontecorvo, whose travels seemed to coincide with those of a Soviet courier. Given their appetite for atomic secrets, it is unlikely that the Soviets overlooked Pontecorvo, writes Mr Close—and just as unlikely that Pontecorvo would have spurned them.

But his alleged deceit is only half of the story. Mr Close, a physicist himself, also explains the science that made him so valuable. Some readers will be captivated by the labyrinthine structure of the nucleus, others may find this hard to understand. Pontecorvo's seminal work on the subatomic particles called neutrinos is particularly abstruse. Perhaps it is enough to know that some consider him one of the great physicists of the 20th century.

Pontecorvo's expertise was probably a boon to Soviet bombmakers, even though he claimed to be a peacenik. Some believe that his betrayal was more damaging than that of other atomic spies, like Klaus Fuchs. His punishment may also have been worse. Fuchs spent nine years in jail for revealing atomic secrets, then returned to science. "By contrast, Bruno Pontecorvo spent 43 years in Russia, where his scientific career was frustrated, his family was traumatised, and his ideals were slowly crushed in the face of Soviet repression," writes Mr Close. If he was a spy, he paid the price. ■

Contemporary art

Brushing with the world

Marlene Dumas is proof that painting is no dying art

FOR well over a century critics have dismissed painting as dead. Picasso's late flourishing in the 1960s proved them wrong. Then came Gerhard Richter and David Hockney. A generation later, Marlene Dumas is keeping painting alive and confounding the naysayers.

Now 61, Ms Dumas was brought up in apartheid South Africa on a wine farm near Cape Town. She was the child of an Afrikaner family that belonged to the Dutch Reformed Church. Although she left South Africa nearly four decades ago (she now lives in the Netherlands), Ms Dumas's



Mirror image

work goes back to the tensions of those years, exploring themes of colonialism, occupation, terrorism and conflict.

Ms Dumas makes her political subjects personal by lending them humanity and pathos; she makes her personal subjects political by giving them historically charged titles. Her ability to merge the public and the private, and to link modern history and popular culture with the human condition, is a strong part of her appeal.

Her raw canvases—sometimes fuzzy, often with large blank areas—project a powerful presence. Works like the self-portrait of 1984 (above) have led to museum shows in New York and elsewhere. Ms Dumas's work fetches seven-figure sums at auction. Now, Tate Modern in London is staging its first retrospective of her work, taking an exhibition that was first shown at the Stedelijk Museum in Amsterdam.

The 14-room exhibition offers a loosely chronological overview of Ms Dumas's career. From the start she plundered media imagery, assembling press clippings of dead figures such as Steve Biko, a South African activist, and painting over magazine photos. Her earliest canvases are larger-than-life-size portraits of her family and friends, which are also based on photos. Then come depictions of her young daughter, grumpy and mercurial.

After her mother's death in 2007 she turned to weeping film stars for inspiration: Anna Magnani wailing over her son's death in "Mamma Roma" and Ingrid Bergman becoming tearful in "For Whom the Bell Tolls". Ms Dumas's human subjects are painted in a messy style, suggestive of expressionism. Like the paintings of Edvard Munch, they often have a deathly pallor about them.

Ms Dumas likes to infuse her art with religious themes. In "The Image as Burden" Greta Garbo lies in her lover's arms in the

manner of Michelangelo's "Pieta"; Ulrike Meinhof, who co-founded the militant Red Army Faction and died in 1976, is shown in the pose of a Christian martyr. Ms Dumas produces poignant crucifixion scenes.

Another important subject is pornography. Ms Dumas was struck by the sex industry when she first arrived in the Netherlands, and she has used it to revisit the nude and to explore hidden aspects of human existence. These works range from the erotic to the voyeuristic, and Tate has given them their own room.

As she has grown older Ms Dumas's paintings have become increasingly political. The show includes work from a series done in 2009-10, drawing attention to new areas of conflict. In "The Wall" she shows a group of Orthodox Jews from the back, preparing for prayer. They stand before what looks like the Wailing Wall in Jerusalem, but is actually the security wall separating Israel and the West Bank.

Violence related to the Middle East is a continuing leitmotif. "Osama" (2010) is a portrait of the al-Qaeda founder, inspired by a magazine cover in which, to Ms Dumas, he looked Christ-like. She gives him a benevolent air that is unsettling to viewers who are accustomed to thinking of Osama bin Laden solely as evil.

The artist continues to revisit Africa for inspiration. "The Widow" (2013) shows the wife of Congo's prime minister, Patrice Lumumba, shortly after he was assassinated in 1961. She is in the street, her arm covering her naked breasts. Although two men (both clothed) support her on either side and she is surrounded by followers, she looks quite lost—Ms Dumas's vision of an African martyr.

She first gained global attention in 1995 when she and two other artists represented the Netherlands at the Venice Biennale. Since 2008 she has been represented in America by the David Zwirner Gallery, where she showed the series on the West Bank security wall. Her work has been bought by François Pinault, a French billionaire, and by American collectors, including Howard Rachofsky from Dallas, and Don and Mera Rubell, who have built a private museum in Miami.

In 2005 Ms Dumas briefly became the world's most expensive living female artist when a painting called "The Teacher (Sub A)", dating from 1987, sold for £1.8m (then \$3.3m) at Christie's in London. Ms Dumas is not unhappy about her auction results, but she resents being defined by them: "You want to be recognised for something that you've done," she says. She need not worry about failing on that score. Many artists grow stale as they grow older. Like Francis Bacon and Lucian Freud before her, Ms Dumas is one of the exceptions. ■

.....
"Marlene Dumas: The Image as Burden" is at Tate Modern until May 10th



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REQUEST FOR PROPOSALS (RFP)**

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TENDER NUMBER: PRQ20140561

TradeMark East Africa (TMEA) wishes to invite **consultancy firms** to conduct time and traffic surveys at various TMEA funded One Stop Border Posts (OSBPs) on a call-down basis for the next 2 years.

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Interested **consultancy firms** must register and apply online ONLY on the TMEA procurement portal at the website: <http://procurement.trademarkea.com>. All attachments must be **10MB** or less.

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**ADVERTISEMENT
REQUEST FOR PROPOSALS (RFP)**

TITLE: PROPOSED CONSTRUCTION OF THE ONE STOP BORDER POST (OSBP)
FACILITIES AT ELEGU, UGANDA-SOUTH SUDAN BORDER
NUMBER: PRQ20141102

The Republic of Uganda represented by the Ministry of Works and Transport, with the support of TradeMark East Africa (TMEA) seeks bids from qualified contractors for the proposed construction of a One Stop Border Post (OSBP) at Elegu.

The Tender document for this Civil Works can be obtained from TMEA's website www.trademarkea.com and any query quoting the above Tender Title and Number should be directed to procurement@trademarkea.com **ONLY**. Any email query with attachments must be no more than 5MB. Submission deadline is **2 March 2015**.


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The Economist February 7th 2015


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HYDERABAD GROWTH CORRIDOR LIMITED

**Invitation for
Pre-Qualification
(International Competitive Bidding)**

Bid Notice No: CGM (T)/HGCL/JICA2/629/City ITS/PQD/2014-15
Date: 06/02/2015

The Hyderabad Growth Corridor Limited, a joint venture of Hyderabad Metropolitan Development Authority (HMDA) and Infrastructure Corporation of Andhra Pradesh (INCAP), invites proposals for pre-qualification from eligible firms/voluntarily formed JVs/Consortiums for the following work being taken up with the loan assistance of Japan International Cooperation Agency.

Design, Supply, Installation, Testing, Commissioning, Training, Warranty and Remediating Defects of Equipments and Related Facilities of Hyderabad City Intelligent Transport System (Hyderabad City ITS) in the state of Telangana, India being taken up with the loan assistance of Japan International Cooperation Agency under Phase-2 program, and Operation and Maintenance of Hyderabad City ITS and Related Facilities being taken up with a separate fund provided by Hyderabad Growth Corridor Limited for a period of Five years.

Period of Sale of Pre-Qualification Document: 06-02-2015 to 10.03.2015
 Last date and time for submission of PQD: 11.03.2015 up to 1500hrs IST

For further details & to download the Pre-Qualification Document log on to the website: <http://www.hmda.gov.in> or contact the address given below.

Address for communication:
 Chief General Manager (Tech),
 HYDERABAD GROWTH CORRIDOR LIMITED,
 2nd Floor, HMDA Complex, Tarnaka, Secunderabad - 500 007,
 Telangana, India, Telephone No. +91-40-27002913

Publications

**A EXPATRIATE
ADVENTURES
A MEMOIR**

by Fred Richardson

George Melloan, former editor at the Wall Street Journal wrote - "Fred Richardson has a remarkable talent for descriptive writing and his adventures as an American expatriate living in exotic and turbulent corners of the world have provided him with a lot to describe. He was an eye-witness to history as a lad when he lived with his parents in Shanghai during the Japanese occupation of that region of China in the early 1930s. With a enviable memory for detail, he recalls scenes from that long-ago prelude to World War II: the Chinese wounded being trucked to a hospital through the French quarter where he lived, the silver Japanese biplanes with their red rising-sun markings lined up at the airport after their aerial attacks, the sight of a burning Shanghai railway station. As a married adult, Fred resumed his expatriate life as an insurance executive in Latin America. Readers will enjoy Mr. Richardson's engaging and humorous account of work at the office and family life in countries where Marxist terrorists and revolutions fill life with problems of an unusual and exciting nature."

Trafford Publishing; 366 pages;
\$28.04



FRED AGED 10

Economic data

% change on year ago

	Gross domestic product			Industrial production latest	Consumer prices latest	Unemployment rate, %	Current-account balance		Budget balance % of GDP 2014†	Interest rates, % 10-year gov't bonds, latest	Currency units, per \$ Feb 4th	Year ago		
	latest	qtr*	2014‡				latest	months, \$bn						
United States	+2.5	0.4	+2.6	+2.4	+4.9 Dec	+0.8 Dec	+1.5	5.6 Dec	-388.1 Q3	-2.3	-2.8	1.74	-	-
China	+7.3	0.4	+6.1	+7.3	+7.9 Dec	+1.5 Dec	+2.1	4.1 Q4§	+213.8 Q4	+2.4	-3.0	3.39§§	6.26	6.06
Japan	-1.3	0.3	-1.9	+0.3	+0.3 Dec	+2.4 Dec	+2.7	3.4 Dec	+16.1 Nov	+0.4	-8.2	0.36	118	101
Britain	+2.7	0.4	+2.0	+2.7	+1.1 Nov	+0.5 Dec	+1.4	5.8 Oct††	-163.0 Q3	-4.6	-5.5	1.44	0.66	0.61
Canada	+2.6	0.3	+2.8	+2.4	+2.1 Nov	+1.5 Dec	+1.9	6.7 Dec	-41.2 Q3	-2.3	-2.0	1.27	1.25	1.11
Euro area	+0.8	0.3	+0.6	+0.8	-0.4 Nov	-0.6 Jan	+0.4	11.4 Dec	+318.0 Nov	+2.4	-2.5	0.37	0.87	0.74
Austria	-0.1	0.4	+2.6	+0.7	-2.5 Nov	+1.0 Dec	+1.5	4.9 Dec	+2.4 Q3	+2.0	-2.5	0.43	0.87	0.74
Belgium	+0.9	0.4	+0.4	+1.0	-3.4 Nov	-0.6 Jan	+0.5	8.4 Dec	+8.0 Sep	-0.4	-3.0	0.59	0.87	0.74
France	+0.4	0.3	+1.0	+0.4	-2.6 Nov	+0.1 Dec	+0.6	10.3 Dec	-29.1 Nov‡	-1.4	-4.4	0.58	0.87	0.74
Germany	+1.2	0.3	+0.3	+1.4	-0.6 Nov	-0.3 Jan	+0.8	6.5 Jan	+283.5 Nov	+7.1	+0.8	0.37	0.87	0.74
Greece	+1.9	0.3	+3.0	+0.8	+2.3 Nov	-2.6 Dec	-1.3	25.8 Oct	+3.0 Nov	+1.4	-4.1	10.13	0.87	0.74
Italy	-0.5	0.3	-0.6	-0.4	-1.8 Nov	-0.6 Jan	+0.2	12.9 Dec	+36.7 Nov	+1.5	-3.0	1.60	0.87	0.74
Netherlands	+1.0	0.3	+0.5	+0.7	+0.6 Nov	+0.7 Dec	+0.6	8.1 Dec	+91.5 Q3	+9.6	-2.6	0.39	0.87	0.74
Spain	+2.0	0.4	+2.8	+1.3	-0.1 Nov	-1.4 Jan	-0.2	23.7 Dec	-1.5 Nov	+0.2	-5.6	1.51	0.87	0.74
Czech Republic	+2.7	0.3	+1.7	+2.2	-0.4 Nov	+0.1 Dec	+0.4	7.5 Dec§	+0.2 Q3	-1.1	-1.6	0.51	24.2	20.4
Denmark	+1.0	0.3	+1.6	+0.9	-1.4 Nov	+0.3 Dec	+0.5	5.0 Dec	+22.0 Nov	+6.6	+0.2	0.28	6.50	5.52
Hungary	+3.2	0.3	+1.9	+3.0	+5.8 Nov	-0.9 Dec	nil	7.1 Dec††	+5.7 Q3	+4.3	-2.9	2.82	270	231
Norway	+2.1	0.3	+2.0	+2.3	+2.1 Nov	+2.1 Dec	+2.0	3.7 Nov††	+49.2 Q3	+11.1	+12.0	1.31	7.56	6.27
Poland	+3.4	0.3	+3.6	+3.3	+8.4 Dec	-1.0 Dec	+0.1	11.5 Dec§	-7.2 Nov	-1.3	-3.5	2.09	3.64	3.14
Russia	+0.7	0.3	na	+0.6	+4.0 Dec	+11.4 Dec	+7.8	5.3 Dec§	+56.6 Q4	+2.7	-0.2	12.75	66.3	35.3
Sweden	+2.1	0.3	+1.3	+1.9	-5.0 Nov	-0.3 Dec	-0.2	7.0 Dec§	+36.5 Q3	+5.8	-2.2	0.63	8.24	6.53
Switzerland	+1.9	0.3	+2.6	+1.8	-0.4 Q3	-0.3 Dec	nil	3.2 Dec	+45.7 Q3	+10.6	+0.3	-0.11	0.92	0.90
Turkey	+1.7	0.3	na	+3.0	-1.2 Nov	+7.2 Jan	+8.9	10.4 Oct§	-47.1 Nov	-5.4	-1.4	7.50	2.40	2.27
Australia	+2.7	0.3	+1.4	+2.8	+3.8 Q3	+1.7 Q4	+2.5	6.1 Dec	-42.9 Q3	-3.0	-2.6	2.47	1.29	1.12
Hong Kong	+2.7	0.3	+6.8	+2.4	-1.7 Q3	+4.8 Dec	+4.4	3.3 Dec††	+7.7 Q3	+1.9	+0.8	1.40	7.75	7.76
India	+5.3	0.3	+8.1	+6.0	+3.8 Nov	+5.0 Dec	+7.2	8.8 2013	-23.4 Q3	-2.0	-4.3	7.72	61.7	62.7
Indonesia	+5.0	0.4	na	+5.0	+7.8 Nov	+7.0 Jan	+6.4	5.9 Q3§	-24.0 Q3	-2.8	-2.3	na	12,654	12,240
Malaysia	+5.6	0.3	na	+5.9	+4.7 Nov	+2.7 Dec	+3.1	2.7 Nov§	+18.0 Q3	+4.2	-3.6	3.77	3.63	3.35
Pakistan	+5.4	2014**	na	+5.4	+4.9 Nov	+3.9 Jan	+7.2	6.2 2013	-3.5 Q4	-2.6	-5.5	9.85††	101	106
Singapore	+1.5	0.4	+1.6	+2.8	-1.9 Dec	-0.2 Dec	+1.1	1.9 Q4	+58.9 Q3	+21.6	+0.5	1.96	1.35	1.27
South Korea	+2.8	0.4	+1.5	+3.6	+0.4 Dec	+0.8 Jan	+1.3	3.4 Dec§	+89.4 Dec	+5.8	+0.6	2.26	1,097	1,085
Taiwan	+3.2	0.4	+2.6	+3.6	+7.3 Dec	-0.9 Jan	+1.3	3.8 Dec	+65.0 Q3	+11.7	-1.4	1.55	31.5	30.3
Thailand	+0.6	0.3	+4.4	+0.7	-0.4 Dec	-0.4 Jan	+1.9	0.6 Dec§	+14.2 Q4	+2.6	-2.5	2.53	32.6	33.0
Argentina	-0.8	0.3	-2.1	-0.4	-2.4 Dec	-***	-	7.5 Q3§	-5.0 Q3	-1.0	-2.8	na	8.65	8.04
Brazil	-0.2	0.3	+0.3	+0.1	-2.8 Dec	+6.4 Dec	+6.3	4.3 Dec§	-90.9 Dec	-4.0	-5.5	12.21	2.70	2.42
Chile	+0.8	0.3	+1.5	+1.8	+0.8 Dec	+4.6 Dec	+4.4	6.0 Dec††	-5.0 Q3	-1.7	-2.2	4.15	628	559
Colombia	+4.2	0.3	+2.6	+4.8	-1.0 Nov	+3.7 Dec	+2.9	8.7 Dec§	-16.2 Q3	-4.3	-1.5	6.53	2,374	2,043
Mexico	+2.2	0.3	+2.0	+2.1	+1.8 Nov	+4.1 Dec	+3.9	4.4 Dec	-25.4 Q3	-2.0	-3.6	5.26	14.8	13.4
Venezuela	-2.3	0.3	+10.0	-3.1	+0.8 Sep	+63.6 Nov	+62.2	5.5 Dec§	+10.3 Q3	+0.7	-12.7	16.78	12.0	6.29
Egypt	+6.8	0.3	na	+2.2	+20.7 Nov	+10.1 Dec	+10.0	13.1 Q3§	-4.4 Q3	-3.0	-11.9	na	7.63	6.96
Israel	+2.6	0.3	+0.2	+2.5	-1.7 Nov	-0.2 Dec	+0.5	5.7 Dec	+11.2 Q3	+3.6	-2.9	1.78	3.89	3.53
Saudi Arabia	+3.6	2014	na	+3.9	na	+2.4 Dec	+2.8	6.0 2014	+120.1 Q3	+13.1	+1.5	na	3.75	3.75
South Africa	+1.4	0.3	+1.4	+1.6	-1.3 Nov	+5.3 Dec	+6.2	25.4 Q3§	-19.7 Q3	-5.4	-4.3	7.08	11.4	11.2

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. #3-month moving average. §§5-year yield. ***Official number not yet proven to be reliable; The State Street PriceStats Inflation Index, Nov 41.61%; year ago 19.95%. ††Dollar-denominated bonds.

The Economist

Events

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Markets

	% change on			
	Index Feb 4th	one week	Dec 31st 2013 in local currency terms	
United States (DJIA)	17,673.0	+2.8	+6.6	+6.6
China (SSEA)	3,325.7	-4.0	+50.2	+45.5
Japan (Nikkei 225)	17,678.7	-0.7	+8.5	-2.9
Britain (FTSE 100)	6,860.0	+0.5	+1.6	-6.6
Canada (S&P TSX)	14,995.7	+2.7	+10.1	-6.9
Euro area (FTSE Euro 100)	1,129.1	+1.5	+10.7	-8.2
Euro area (EURO STOXX 50)	3,415.5	+1.7	+9.9	-8.9
Austria (ATX)	2,252.7	+2.7	-11.5	-26.7
Belgium (Bel 20)	3,565.8	+0.7	+22.0	+1.1
France (CAC 40)	4,696.3	+1.9	+9.3	-9.4
Germany (DAX)*	10,911.3	+1.9	+14.2	-5.3
Greece (Athex Comp)	848.0	+19.3	-27.1	-39.5
Italy (FTSE/MIB)	20,941.7	+2.3	+10.4	-8.5
Netherlands (AEX)	454.9	+0.6	+13.2	-6.1
Spain (Madrid SE)	1,071.0	+1.4	+5.8	-12.3
Czech Republic (PX)	980.2	+2.5	-0.9	-18.9
Denmark (OMXCB)	726.3	-1.5	+28.3	+6.6
Hungary (BUX)	17,350.8	+2.6	-6.5	-25.1
Norway (OSEAX)	648.4	+1.4	+7.6	-13.6
Poland (WIG)	52,049.9	+0.7	+1.5	-15.9
Russia (RTS, \$ terms)	770.6	+0.7	+10.1	-46.6
Sweden (OMX30)	1,579.3	+1.1	+18.5	-7.8
Switzerland (SMI)	8,608.2	+3.6	+4.9	+0.9
Turkey (BIST)	85,910.1	-4.9	+26.7	+11.4
Australia (All Ord.)	5,733.7	+3.9	+7.1	-6.9
Hong Kong (Hang Seng)	24,679.8	-0.7	+5.9	+5.9
India (BSE)	28,883.1	-2.3	+36.4	+36.5
Indonesia (JSX)	5,315.3	+0.9	+24.4	+19.9
Malaysia (KLCSE)	1,803.0	+0.4	-3.4	-11.2
Pakistan (KSE)	34,672.3	+0.8	+37.3	+42.7
Singapore (STI)	3,417.6	nil	+7.9	+1.1
South Korea (KOSPI)	1,962.8	+0.1	-2.4	-5.0
Taiwan (TWI)	9,513.9	nil	+10.5	+5.0
Thailand (SET)	1,599.8	+0.4	+23.2	+24.1
Argentina (MERV)	8,957.7	+2.1	+66.2	+25.1
Brazil (BVSP)	49,301.1	+3.4	-4.3	-17.2
Chile (IGPA)	19,084.4	+1.4	+4.7	-12.3
Colombia (IGBC)	10,922.0	+2.1	-16.4	-32.1
Mexico (IPC)	41,710.8	-1.1	-2.4	-13.5
Venezuela (IBC)	3,597.6	-7.3	+31.5	na
Egypt (Case 30)	10,045.9	+1.8	+48.1	+35.0
Israel (TA-100)	1,279.6	+0.2	+6.0	-5.6
Saudi Arabia (Tadawul)	9,169.2	+3.3	+7.4	+7.3
South Africa (JSE AS)	51,630.8	+0.8	+11.6	+2.2

The Economist poll of forecasters, February averages (previous month's, if changed)

	Real GDP, % change		Consumer prices		Current account	
	Low/high range	average	% change	2014	2015	% of GDP
	2014	2015				
Australia	2.5/3.0	2.0/2.9	2.8	2.6 (2.8)	2.5	1.8 (2.3)
Belgium	0.9/1.0	0.9/1.6	1.0 (1.1)	1.3 (1.2)	0.5 (0.6)	0.4 (0.9)
Britain	2.6/3.2	2.3/3.0	2.7 (2.9)	2.6 (2.7)	1.4	0.6 (1.1)
Canada	2.0/2.4	1.7/2.9	2.4	2.2 (2.4)	1.9	1.0 (1.5)
France	0.3/0.4	0.7/1.2	0.4	0.9	0.6	0.1 (0.6)
Germany	1.3/1.5	0.9/1.6	1.4	1.4 (1.2)	0.8	0.2 (0.9)
Italy	-0.4/-0.2	0.1/0.8	-0.4 (-0.3)	0.4	0.2	nil (0.3)
Japan	0.1/0.5	0.4/1.8	0.3	1.1 (1.0)	2.7 (2.8)	1.1 (1.4)
Netherlands	0.6/0.8	0.8/1.7	0.7	1.3 (1.2)	0.6	0.4 (0.8)
Spain	1.2/1.4	1.4/2.4	1.3	2.0 (1.8)	-0.2	0.8 (nil)
Sweden	1.7/2.1	1.6/2.8	1.9	2.3	-0.2	0.3 (0.6)
Switzerland	1.5/1.9	0.5/2.0	1.8 (1.7)	1.5 (1.8)	nil	-0.4 (nil)
United States	2.2/2.5	2.7/3.7	2.4 (2.3)	3.3 (3.1)	1.5 (1.6)	0.4 (1.1)
Euro area	0.8/1.2	1.0/1.5	0.8	1.2 (1.1)	0.4	nil (0.5)

Sources: Bank of America, BNP Paribas, Citigroup, Commerzbank, Decision Economics, Deutsche Bank, Economist Intelligence Unit, Goldman Sachs, HSBC Securities, ING, JPMorgan Chase, KBC Bank, Morgan Stanley, RBC, RBS, Schroders, Scotia Capital, Société Générale, Standard Chartered, UBS

Other markets

	% change on			
	Index Feb 4th	one week	Dec 31st 2013 in local currency terms	
United States (S&P 500)	2,041.5	+2.0	+10.4	+10.4
United States (NAScomp)	4,716.7	+1.7	+12.9	+12.9
China (SSEB, \$ terms)	290.5	-0.6	+18.2	+14.5
Japan (Topix)	1,417.0	-0.9	+8.8	-2.7
Europe (FTSEurofirst 300)	1,487.2	+0.8	+13.0	-6.3
World, dev'd (MSCI)	1,715.1	+1.5	+3.3	+3.3
Emerging markets (MSCI)	980.8	-0.4	-2.2	-2.2
World, all (MSCI)	419.4	+1.3	+2.7	+2.7
World bonds (Citigroup)	899.8	nil	-0.7	-0.7
EMBI+ (JP Morgan)	698.3	+0.5	+7.2	+7.2
Hedge funds (HFRX)	1,218.4 [§]	+0.1	-0.6	-0.6
Volatility, US (VIX)	18.3	+20.4	+13.7 (levels)	
CDSs, Eur (iTRAXX) [†]	56.4	+1.5	-20.8	-34.4
CDSs, N Am (CDX) [†]	68.0	-1.3	+10.2	+10.2
Carbon trading (EU ETS) €	7.0	-0.1	+34.4	+11.4

Sources: Markit; Thomson Reuters. *Total return index.

[†]Credit-default-swap spreads, basis points. [§]Feb 3rd.

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

The Economist commodity-price index

	2005=100			
	Jan 27th*	Feb 3th*	one month	one year
Dollar Index				
All Items	144.9	146.9	-3.5	-10.2
Food	164.8	160.5	-7.6	-13.0
Industrials				
All	124.1	132.7	+2.2	-6.4
Nfa [†]	118.7	139.9	+12.7	-7.1
Metals	126.4	129.7	-2.0	-6.0
Sterling Index				
All items	173.3	176.8	-3.2	-3.1
Euro Index				
All items	158.0	159.5	+0.5	+6.0
Gold				
\$ per oz	1,293.3	1,258.1	+4.2	+0.6
West Texas Intermediate				
\$ per barrel	45.9	52.7	+9.5	-45.9

Sources: Bloomberg; CME Group; Cottlook; 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.

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Synthesising revolution

Carl Djerassi, the chemist behind the Pill, died on January 30th, aged 91

OF ALL the things that irritated him, and a good many did, Carl Djerassi most disliked being called “the father” of the contraceptive pill. True, he had been there at its conception, on October 15th 1951, in a laboratory in Mexico: a short, eager figure with a lame leg, aged 27. But, if anything, he had been the mother, producing—by nifty replacement of a carbon atom with a hydrogen one—the synthetic progesterone that, for the first time, made a pill that was easily taken orally. This was the basic substance, the “egg”, that was then adopted by Gregory Pincus and steered through human trials by John Rock. Both men were jubilant when the Pill was approved in 1960: at last, women could control their own fertility. Mr Djerassi, however, had misgivings, which grew as the years passed.

His chief objection was that his name was tied to just one thing. That was as bad as having to wear one label, “chemist”. At first, he had loved it: having gone for medicine, like his doctor-parents, he found that chemistry was science’s hard core, the beginning of everything. He made his mark on it in many ways, synthesising one of the first antihistamines, pyribenzamine, when he was only 19 (but then he had been at least two years ahead of his peers, academically, ever since arriving at 16 in America as a refugee from Anschluss Austria). He

developed synthetic juvenile hormone in insects, preventing them becoming adults, for non-toxic control of mosquitoes and fleas, developed corticosteroids for inflammation—steroids had been a passion since the 1940s—and devised a way of detecting opiates in urine, used by the army in Vietnam. But chemists, even more than other scientists, struck him as tribal, hidebound and inward-looking. “Chemist” was often flung at him as an insult, and only his formidable third wife, Diane Middlebrook, could make it sound affectionate.

If he had to have one label, “intellectual polygamist” was more like it, a run of syllables that suited both his gentle Viennese inflexions and his predilection for women, erotica and talking about sex (human beings were not naturally monogamous, after all). The Pill had definitely softened the “hard chemist” in him. Most of his later work involved roaming between chemistry, biology and even sociology, trying to keep the channels open. At Stanford, during his decades as professor of chemistry there, he taught a course on “biosocial aspects of birth control”. Research, his first love, was combined for a time with running two research companies, Syntex and Zoecor, as “industrial affairs on the side”: the sort of outfits he liked, small, and stuffed with scientists, not salesmen.

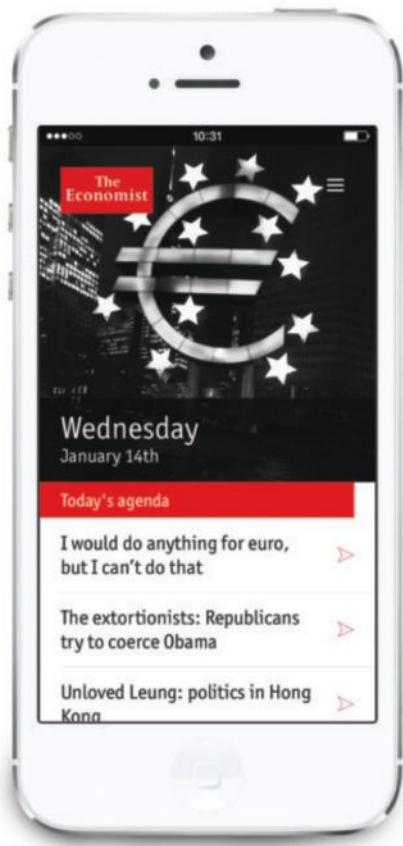
Beyond all that lay a world of related, but different, endeavours. Poetry obsessed him for a while, provoked by a two-year glitch in his relationship with Diane. From the 1990s he wrote novels and plays in which scientists debated—as most of his colleagues wouldn’t—the ethical and social implications of what they were doing in the lab. He called these “science-in-fiction” and “science-in-theatre”, whole new genres that provocatively smuggled science into literature (though, to his irritation, both lab-men and literati largely ignored them). Many of his white-coated heroes were mythologised aspects of himself, inevitably. Through them he surveyed the cultural, social and ethical fallout from the substance he had synthesised so innocently, back in 1951, using diosgenin from wild yams, in the hope it might produce a cure for menstrual trouble.

It was the Pill that had unlocked his literary side. It also made him a very rich man. Not because he got a royalty for each pill popped by the 100m women who, in 2013, were taking it; but because he had bought shares in Syntex. With the money he became a collector, now of art as well as women: especially the works of Paul Klee, another playful, curious intellectual polygamist. He also bought 1,200 acres in the forested Santa Cruz mountains near Stanford where, after the suicide of his artist daughter Pamela in 1978, he created a colony for other struggling artists. To pay for it, his collections of great works were sold—though not the Klees, which he left to public galleries in San Francisco and Vienna.

Freedom or burden?

Impatient as he felt over the Pill, he also enjoyed quizzing himself about it. If it had appeared in the years after the thalidomide scare, he thought, it would never have got through its human trials; as it was, its side-effects had curbed contraceptive research ever since. Had it unleashed the sexual revolution? Doubtful; given the wildness of the 1960s, that would probably have happened anyway. And in fact the Pill might have burdened women more, handing them total responsibility for birth control and allowing the men to skive. There would never be a male Pill, he said, because women—probably rightly—would not trust the men to take it.

Observing the future from his sofa, where he liked to lie and think, he saw humans decisively uncoupling sex from procreation. They would plan to have their children by in-vitro fertilisation from “bank accounts” of frozen eggs; then, having frozen them, they would be sterilised, and henceforth have sex just for fun. He still felt uneasy with this science-fiction world, but he had undoubtedly helped to create it; and that was a reason, in the main, for considerable parental pride. ■



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"THE MOON IS ESSENTIALLY GREY"

Jim Lovell, Apollo 8 Command Module Pilot

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