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TO BREAK THE RULES, YOU MUST FIRST MASTER THEM.
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Politics

In a rare televised address to the nation from the White House, Barack Obama assured Americans that the fight against **terrorism** would be won. He spoke after it emerged that the atrocity in San Bernardino, California, on December 2nd, in which 14 people were killed, had been carried out by a Muslim married couple who had been radicalised. The pair were inspired by Islamic State, but not directed by the group. It was the worst terrorist assault on American soil since September 11th 2001.

A few days after the attack **Donald Trump** called for a ban on all Muslims entering the United States. The front-runner in the Republicans' presidential nomination race was roundly condemned on all sides. Jeb Bush said he was "unhinged". In Britain hundreds of thousands signed a petition calling for a ban on Mr Trump entering the United Kingdom.

Fighting back

Ashton Carter, the American defence secretary, said that America was ready to send advisers and combat helicopters (but not combat troops) to help the Iraqi army in its attempt to retake the city of Ramadi, which fell to **Islamic State** in May. Ramadi is now encircled, and the attempt to retake it is said to be imminent.

Members of the mainstream resistance to Bashar al-Assad in **Syria** met in Riyadh, hoping to forge a united front ahead of a new round of diplomatic negotiations aimed at ending the war. The talks are expected to start in Vienna in January. Meanwhile, rebels left areas of Homs under a truce agreement that will put Syria's third-biggest city back under government control.

Yemen's president asked the Saudi coalition that is fighting to restore him to power to observe a ceasefire, during a new round of peace talks aimed at ending months of conflict that has killed some 6,000 people.

In **South Africa** Jacob Zuma, the president, abruptly sacked his finance minister, Nhlanhla Nene. This came after Fitch, a ratings agency, cut its assessment of South Africa's creditworthiness to one notch above "junk". Markets reacted badly to the news of Mr Nene's departure and the rand plunged to new lows, nudging the country closer to an economic crisis.

At least seven people were killed in **Burundi** as strife continued over the decision in April by Pierre Nkurunziza to stand for a third term as president. As many as 240 people have been killed since then.

They've had enough

The opposition to **Venezuela's** authoritarian left-wing government won a resounding victory in parliamentary elections. Voters turned against a regime that has presided over shortages of basic goods, high inflation and a sharp economic contraction. The Democratic Unity alliance will have two-thirds of the seats in the National Assembly. That puts it in a strong position to launch a referendum to recall the president, Nicolás Maduro. This is the first election the government has lost since Hugo Chávez, Mr Maduro's predecessor, took power in 1999.

Colombia's government discovered the wreck of a Spanish galleon near Cartagena. The *San José* was sunk by the British navy in 1708 during the war of the Spanish succession. Its cargo of gold, silver and jewels is thought to be worth anywhere from $1 billion to $17 billion. The Spanish government believes the ship and its contents belong to Spain.

Douglas Tompkins, an entrepreneur who co-founded the North Face and Esprit clothing companies, died in a kayaking accident in **Chile**. After he sold his firms, Mr Tompkins bought large tracts of land in Chilean and Argentine Patagonia to protect them from development. Conservative Chileans accused him of appropriating land that belonged to the country.

On the march

The far right National Front achieved a spectacular result in the first round of regional elections in **France**, securing around 30% of the nationwide vote and eating into the Socialists' heartland in the north of the country. It leads in six out of 13 contests ahead of the second round on December 13th. The election played out against the backdrop of the terror attacks in Paris and the refugee crisis in Europe.

Laimdota Straujuma resigned as prime minister of **Latvia** amid public spats in her centre-right Unity party over refugees and transport policy. Parliament will now go about forming a new government, which is expected to exclude the pro-Russian Harmony party.

A right royal rumble

Authorities in **Thailand** are investigating the American ambassador, Glyn Davies, for possible defamation of the monarchy. In a speech to the foreign press he expressed concern at the long jail sentences given to Thais deemed to have insulted the king or his family. Apparently such concern may be construed as an insult and therefore a violation of the lèse-majesté law. Mr Davies has diplomatic immunity, but his expulsion would put a serious strain on relations between Thailand and America.

At least 37 people, including children, were killed when the Taliban attacked the heavily fortified civilian and military airport at Kandahar, the biggest city in southern **Afghanistan**. It took more than a day for security forces to regain full control. Meanwhile the country's president, Ashraf Ghani, called for regional co-operation in confronting the country's terrorist violence.

Authorities in Australia raided the home of the man who may be the founder of Bitcoin, the world's largest **digital currency**. They said Craig Steven Wright was the subject of a tax investigation. Mr Wright is thought to own several hundred million dollars-worth of the currency.

At a meeting in Johannesburg with African leaders, **China's** President Xi Jinping announced $60 billion in aid and loans to African countries. China's slowing growth has depressed its demand for Africa's natural resources, putting pressure on some of the continent's economies.

The authorities in **Beijing** issued the city's first ever "red alert" for smog. This involved closing schools, shutting down building sites and banning the use of half of the city's cars. The government's failure to act previously when pollution had reached worse levels had caused public anger.

Business

In a surprising turnaround, **Yahoo** decided not to spin off its $32 billion stake in Alibaba, abandoning a plan it had announced in January. At the time Yahoo assured investors that such a move would be tax-free, but America's tax authorities look reluctant to bless the spin-off and have challenged similar actions taken by other companies. Instead, Yahoo may hive off its main businesses, such as Yahoo News and Yahoo Mail, into a separate public company, which could make them more attractive to potential buyers.

Things fall apart

Fourteen months after first announcing that it had a deal, **General Electric** decided not to sell its appliances business to **Electrolux**, a Swedish company, because of opposition from antitrust regulators in America. GE's appliances are commonplace in American households. As well as gaining a bigger share of the American market, Electrolux had hoped the extra scale would help it compete with rivals in Asia that benefit from lower costs.

Volkswagen reduced the estimate of the number of its cars it thinks have faulty fuel-efficiency systems that misread carbon-dioxide emissions, from 800,000 to 36,000. It was a rare piece of good news for the German carmaker, which faces a much bigger problem fixing around 11m diesel cars that misstate nitrogen-oxide emissions, a problem that came to light after it admitted to cheating on emissions tests.

CMA CGM, the world's third-biggest shipping company, agreed to buy **Neptune Orient Lines** from Singapore's state holding company in a deal valued at $2.4 billion. It is the biggest merger in the shipping industry since 2005.

Dow Chemical and **DuPont**, America's two biggest chemical companies, were reportedly in advanced talks about merging in a potential $130 billion deal. If a merger is successful, the combined company may split into three pieces, focusing on agriculture, specialty chemicals and commodity chemicals.

Keurig Green Mountain, a coffee company based in Vermont which is best known for its single-shot coffee-makers, received a $13.9 billion offer to take it private from JAB Holding, the investment vehicle of the Reimann family of Germany. Keurig's share price soared by 70% on the news.

Source: Thomson Reuters

Brazil's annual rate of inflation rose to 10.5% in November, the highest it has been in 12 years. In a further blow to the embattled government Moody's downgraded all its ratings for Petrobras, the country's state-owned oil company, which is at the centre of a corruption scandal, and warned Brazil's sovereign rating was at risk because of the country's "worsening governability".

Quite a gap in the data

Official figures released just three weeks ago indicating that **Japan** had dipped into recession were revised to show that the economy had grown. An initial estimate recorded GDP contracting at an annualised rate of 0.8% in the third quarter, but updated numbers on business investment suggest that the economy instead grew by 1%.

Accor, Europe's biggest hotel operator and owner of the Sofitel chain, bought FRHI, which runs the luxury Raffles and Fairmont brands, for $3 billion. Fairmont counts the Plaza hotel in New York and the Savoy in London among its assets. Hotel acquisitions are on the increase: recently Marriott said it would buy the Starwood Group.

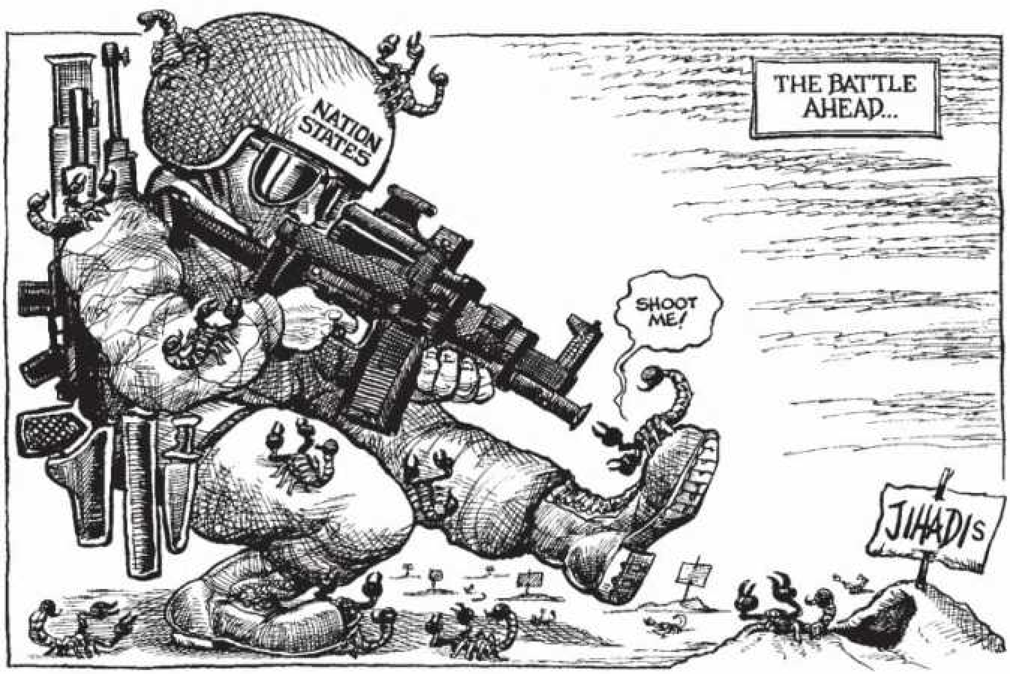
The price of iron ore tumbled, to below $40 a tonne. Like other mining companies that are retrenching after the end of the commodity boom, **Anglo American** laid out a savage restructuring plan. Its strategy would shed 85,000 jobs, or two-thirds of its workforce, sell off more than half its assets and suspend paying a dividend.

Mario Draghi, the president of the **European Central Bank**, gave assurances that there is no limit to "how far we are willing to deploy our instruments" after markets were left disappointed by the ECB's latest policy announcement. Rather than increase the scale of its quantitative-easing programme, as many had expected, the central bank instead extended its purchases until March 2017, keeping the amount of assets it buys unchanged at €60 billion ($65 billion) a month.

Calm before the storm

The Bank for International Settlements, a forum for central banks, sought to stiffen the spine of the Federal Reserve ahead of its decision on whether to raise **interest rates**. It noted the potential for volatility once central banks start to tighten monetary policy but advised them to go ahead in order to resolve the "clear tension" between markets' behaviour and underlying economic conditions.

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



Playing with fear

In America and Europe, right-wing populist politicians are on the march. The threat is real

POPULISTS have a new grievance. For many years, on both sides of the Atlantic, they have thrived on the belief that a selfish elite cannot—or will not—deal with the problems of ordinary working people. Now populists are also feeding on the fear that governments cannot—or will not—keep their citizens safe.

In America this week, after a couple who had pledged allegiance to Islamic State (IS) murdered 14 people in San Bernardino, California (see page 29), Donald Trump called for a "total and complete shutdown" of America's borders to Muslims. Earlier, the front-runner in the race for the Republican presidential nomination had proposed closing mosques and registering American Muslims. "We have no choice," he said.

In France, the counterpart to Mr Trump is the far-right National Front (FN). In the first round of regional elections on December 6th, after the IS terrorist assault on Paris last month, the FN narrowly gained the largest share of the national vote (see page 51). It was ahead in six of the 13 regions. The FN's leader, Marine Le Pen, and her niece each polled over 40%.

Mr Trump and Ms Le Pen are not alone. Support for the populist right in America and parts of Europe is unparalleled since the second world war. Against the backdrop of terrorism, these fearmongers pose a serious threat to the openness and tolerance that Western societies take for granted.

Angry old men

Even before recent attacks, right-wing populists were making their mark. Since October Mr Trump, and Ted Cruz and Ben Carson—less offensive, but only marginally less extreme—have together consistently won the support of over 50% of Republican voters in polls. In Europe populists are in power in Poland and Hungary, and in the governing coalition in Switzerland and Finland (and that is not counting the left-wing sort like Syriza in Greece). They top the polls in France and the Netherlands, and their support is at record levels in Sweden. Ms Le Pen is likely to reach the second round of France's presidential election in 2017. Just possibly, she might win.

Populists differ, but the bedrock for them all is economic and cultural insecurity. Unemployment in Europe and stagnant wages in America hurt a cohort of older working-class white men, whose jobs are threatened by globalisation and technology. Beneath them, they complain, are immigrants and scroungers who grab benefits, commit crimes and flout local customs. Above them, overseeing the financial crisis and Europe's stagnation, are the impotent self-serving elites in Washington and Brussels who never seem to pay for their mistakes.

Jihadist terrorism pours petrol on this resentment—and may even extend populism's appeal. Whenever IS inspires or organises murderous attacks, the fear of immigrants and foreigners grows. When the terrorists get through, as they sometimes inevitably will, it highlights the ruling elite's inadequacy. When leaders, in response, warn against slandering Islam and focus on gun control, as Barack Obama did in a speech from the Oval Office on December 6th, populists dismiss it as yet more political correctness.

Populist ideas need defeating. Mr Trump compares his plan to the treatment of Japanese-Americans during the second world war. Just so: as Ronald Reagan's government later acknowledged, FDR's policy was "race prejudice". A xenophobic revival would do America immense harm—and IS immense service. Ms Le Pen would erect ruinous economic barriers and cause mayhem by proposing to leave the euro. Hungary's prime minister, Viktor Orban, has vowed to build an "illiberal state" and looks to Vladimir Putin's Russia as a model. Even when they are not in power, populists warp the agenda.

Nobody should underestimate how hard it is to take the populists on. Some mainstream politicians dismiss their arguments by labelling them fascist or extremist. Yet such disdain risks suggesting that the elite is uninterested in the real grievances that populists play on. Others try to borrow the populists' less-offensive clothes by promising, say, to deny benefits to migrants rather than build border fences. Yet such xenophobia-lite often just validates populist prejudices.

The long struggle

Is there a better way? This newspaper stands for pretty much everything the populists despise: open markets, open borders, globalisation and the free movement of people. We do not expect to convince populist leaders of our arguments. But voters are reasonable—and most of them would sooner hear something more optimistic than rage against a dangerous world.

Part of the answer is to draw on the power of liberal ideals. New technology, prosperity and commerce will do more than xenophobia to banish people's insecurities. The way to overcome resentment is economic growth—not to put up walls. The way to defeat Islamist terrorism is to enlist the help of Muslims—not to treat them as hostile. The main parties need to make that case loudly and convincingly.

Politicians also need to deal with the populists' complaint that government often fails its citizens. Take the threat to security. Mr Obama's reluctance to deploy more troops against IS's "caliphate" in Syria and Iraq does not convince most Americans, including many present and former military commanders. Europe's spooks and law-enforcement agencies fail to share information. The EU needs to manage the flow of people at the border, allowing those who qualify as refugees to work and thus help them to absorb Western values (see next leader).

To imagine better government across all of economic and security policy is a counsel of perfection. But even small improvements will count if they are allied to a robust defence of the West's Enlightenment values.

The choice ultimately falls to voters, most of whom do not subscribe to right-wing populism. Mr Trump has the backing of just 30% of the 25% or so Americans who say they are Republican. But the turnout for primaries and caucuses in America is less than 20%. The turnout in France was just under 50%. The way to beat the populists is at the ballot box. The moderate majority has a responsibility to show up and put a cross next to candidates who stand for openness and tolerance. ■

Integrating refugees in Europe

More toil, less trouble

Getting refugees into work quickly would benefit everyone. How to make it happen

THE median age for Germans and Italians is now 46. Contrast that with youthful America (38), energetic India (27) or baby-faced Ethiopia (just 19; see pages 23-26). As western Europe ages, employers of all stripes are fretting about labour shortages.

Germany alone has an estimated 173,000 unfilled jobs for people with maths and computer skills, a shortfall that will nearly quadruple by 2020. Sweden's government lists dozens of professions, from midwives to physicists, where the lack of skilled workers is acute. Automation can fill some gaps; migrants from the eastern or southern fringes of the European Union can help. But Europe's labour markets are rigid: workers do not flow to where they are needed (see page 61).

That is why the arrival of more than 1.2m asylum-seekers in northern Europe this year has the potential to be a demographer's dream. (As many again may follow next year.) Most of these newcomers are young, able-bodied and clamouring to work. Among Syrians, perhaps one-fifth have some sort of higher education. The sooner refugees start working, the sooner they will boost the economy, pay taxes and learn the language and customs of their host societies.

Some European firms and industry groups have already seized the opportunity. Since young Swedes have mostly abandoned catering as a career, Scandic Hotels will next month begin trying out refugees as chefs. Sweden's government is about to start training 1,700 teachers—Syrian refugees, all—for its school system. L'Oréal is recruiting refugees as trainee hairdressers in Germany. A Dutch college is teaming up with AFAS, a software company, to offer refugees with an IT background a six-month course to prepare them for work.

But these are isolated examples. To get asylum-seekers working quickly in their tens and hundreds of thousands, action is needed to smooth each stage of their entry into the labour force. The first stage is screening the newcomers when they arrive. Their skills and work experience should be assessed immediately to help employers find suitable recruits and to help decide where to house them. SAP, a German software company, wants to build a system to register the refugees' skills and experience and share that information with firms.

The second stage is speeding up the paperwork. Officials need to decide as early as possible whether people will be granted refugee status, and not leave applicants waiting—in some egregious cases, for over a decade. Asylum-seekers are usually barred from working, sometimes even from language lessons, while they await a decision on their status. A life in limbo suits no one. Any asylum-seekers who get signed up as apprentices should be granted an automatic right to stay at least to the end of their apprenticeships. Official recognition of newcomers' qualifications should be quicker, too: in Sweden it takes the best part of a year to check foreign paperwork.

Tongue-tied

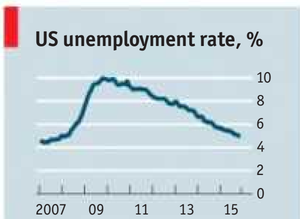
The third stage is to lower the barriers to entry to professions. Germany, for example, forces workers who care for the elderly to complete three years' special training and pass a tricky written exam. More flexibility is needed. Sweden is trying to loosen the rules for jobs where unions and employers agree that labour shortages exist. It is also being pragmatic about language skills: trainee teachers can begin preparing for classes with the help of Arabic interpreters, while learning Swedish at the same time. Doctors with suitable skills could begin working before they are entirely fluent.

Such measures will not be popular. But Europe needs both to find more workers and to integrate the refugees who are arriving in droves. It is an opportunity to grab. ■

Monetary policy

After lift-off

The Federal Reserve is set to raise interest rates for the first time since 2006. Its next step matters more



THERE was a time when a nudge up or down in interest rates was seen not just as normal, but testament to central bankers' ability to fine-tune the economy. Not now. The Federal Reserve is widely expected to raise its benchmark interest rate, currently close to zero, by a quarter of a percentage-point on December 16th. That would be its first increase since June 2006 (see page 67). Unfortunately, the Fed's reasons for moving this month reflect its fear of losing credibility with the markets as much as its mastery of the economy.

Having talked endlessly about an imminent move, the central bankers now feel bound to keep their word. That is a poor rationale for making monetary policy. One small, widely heralded rate rise is unlikely to fell America's economy. The important question is when the next ones will follow. That is where the Fed must signal now that it will be cautious.

Data-dependent, not date-dependent

This newspaper would not raise interest rates yet. America's jobless rate, at 5%, is close to what economists consider to be full employment. And there are tentative signs that wage growth is finally picking up. Since monetary policy operates with a lag, central bankers must be forward-looking. But infla- ▶▶

tion on the price index for personal-consumption expenditure, the Fed's preferred measure, is just 0.2%. The core measure, which excludes food and energy prices, is 1.3%. Although the headline rate will jump in the coming months, as the sharp fall in energy prices at the turn of 2014 drops out of the annual rate, there is little sign that underlying inflation is about to accelerate sharply, or exceed the 2% target.

The risks of tightening too much too soon still seem greater. Despite a combined stimulus from zero interest rates and $3.8 trillion of asset purchases by the Fed, GDP in America has risen at an annual average rate of around 2% since 2010. The strong dollar and weakness in emerging markets will weigh on America's economy—and the divergence between the Fed's tightening and looser monetary policy elsewhere, especially in the euro area, Japan and China, means that the dollar is likely to strengthen further. Because its starting-point is near-zero interest rates, the Fed has more scope to deal with an unexpected surge in inflation by shoving rates upward, than it has to address any threat of recession by bringing them down again.

Even if the risks that the Fed faces are stubbornly lopsided, the consequences of one premature quarter-point rate rise are unlikely to be disastrous. A series of premature increases would be another matter. And that is where the Fed's apparent plans are worrying. The central bank's forecasts suggest that interest rates will rise by a quarter-point roughly every three months in 2016. Such a schedule of increases would unsettle the bond markets (which have priced in a slower pace of tightening) and drive up the dollar yet further.

A rapid tightening cycle would also ratchet up pressure abroad. There is a sense that many emerging markets are in so deep a funk that the Fed cannot make things much worse. Capital has flowed out of emerging-market shares and bonds in four of the past five months, according to the Institute of International Finance. The currencies of commodity exporters, hurt by China's waning appetite for raw materials, have already fallen. But sharply higher American interest rates would put more pressure on countries that rely on foreign capital to plug their trade gaps. Central banks in Chile, Colombia, Peru and South Africa have recently raised interest rates in anticipation of the Fed, at some cost to economic growth. The Fed's concern is the American economy, of course, but sluggish demand abroad and a strong dollar have effects on exporters.

The recent experience of other central banks offers salutary lessons in the dangers of moving too fast to get off the interest-rate floor. In 2011 the European Central Bank twice raised its main interest rate, but was swiftly forced to reverse course and has since cut even more deeply. On December 3rd it cut the rate it pays on commercial-bank deposits to minus 0.3%. Interest rates in Sweden were increased from 0.25% to 2% before the Riksbank had to march them back down again (its main lending rate is now negative). Central banks in Canada and Israel have suffered similar reversals.

The Fed's apparent determination to get going on monetary tightening is a worrying signal of how fast it plans to move thereafter. Before attempting a second rise, America's central bank should give itself time to assess the impact of the first. ■

Venezuela's election

A democratic counter-revolution

Voters have rebuked a repressive regime. Now they must have a chance to recall the president

THE parliamentary election that took place in Venezuela on December 6th had been seen by the president, Nicholás Maduro, as a referendum on its "Bolivarian revolution". The results are in, and the revolution has been resoundingly rejected (see page 35). The Democratic Unity alliance (MUD), an opposition coalition united by its desire to end the incompetent and authoritarian regime of Mr Maduro and his fellow Bolivarians, won a "supermajority" of two-thirds of the seats in the National Assembly. This is a catastrophe for the movement founded by Hugo Chávez, a charismatic populist who took power in 1999 and died in 2013, leaving the hapless Mr Maduro in charge.

For everyone else, it is a result to be celebrated. The Bolivarians fought dirty: they jailed opposition leaders and banned others from running, nobbled the independent press and put up a sham party to siphon votes away from the MUD. They lost anyway. That is because the government's delusional policies, conceived to help the poor, are making all Venezuelans suffer bar a corrupt few. Its "21st-century socialism" is a farrago of controls—of prices, foreign exchange and production. When oil prices were high, the country squandered its earnings on subsidies; now earnings from oil have plunged, leading to shortages of basic goods and an inflation rate that is one of the world's highest. The economy is expected to shrink by 10% this year. Nearly three-quarters of voters turned out; they rejected the government by a whopping 15 percentage points.

But the opposition's victory is incomplete, and the system it confronts is entrenched. Mr Maduro is not due to face an election until 2018. He has accepted the voters' verdict but misunderstood its message. He blamed his party's loss on an imaginary "economic war" against the government. Some leaders of the MUD hope that pragmatic *chavistas* will push Mr Maduro aside, roll back the barmiest Bolivarian policies and work with the opposition to rebuild democracy. It is more likely that the regime will subvert the new National Assembly.

What comes next

The opposition should therefore move to push Mr Maduro out of office through a recall referendum. That is a democratic procedure, allowed by Venezuela's constitution. A successful recall would be followed by a presidential election, which the opposition would stand a good chance of winning, so long as it unites around a single candidate. Some may object that a recall vote would distract politicians from the more urgent task of relieving Venezuelans' economic misery. *The Economist* has made a similar argument about the unjustified impeachment of Brazil's president, Dilma Rousseff. But Brazil is not Venezuela. Ms Rousseff, for all her failings, leads a vigorous democracy and is at least trying to deal with her country's economic prob ▸▸

lems. The same cannot be said of Mr Maduro.

Ordinary Venezuelans care less about who is in charge than about shortages, prices and jobs. Even under a new government, things will get worse before they get better. Reformers will have to devalue the bolívar, whose official level is nearly 150 times its black-market rate, raise the price of petrol, which now costs practically nothing, and reduce the budget deficit, which is roughly 20-30% of GDP. Devaluing the currency and freeing prices will push up inflation, which hits the poor hardest. A reforming government will need help from the IMF to cushion the pain of adjustment.

The opposition won the election with vague promises of change. To replace the bumbling Bolivarians, it must offer a plan to rescue the economy and be honest with voters about the sacrifices that will require. In the meantime, it should use its dominance of the legislature to repair Venezuela's democracy. Freeing political prisoners, including Leopoldo López, an opposition leader, is just a start. The MUD's two-thirds majority offers a chance to replace Supreme Court judges and election commissioners, who now answer slavishly to the regime. It must resist the temptation to replace one set of hacks with another. Chávez came to power because an earlier generation of leaders governed in the interests of a corrupt elite. Today's victorious opposition must not make the same mistake. ■

Randomised controlled trials

In praise of human guinea pigs

Doctors use evidence when prescribing treatments. Policymakers should, too

BEFORE the 20th century, the sick were wise to stay away from doctors. Medical treatments were often worthless and sometimes dangerous: "heroic measures" such as blood-letting and purging often killed. It was the discovery of micro-organisms, vaccines and antibiotics, that eventually equipped doctors with weapons that whacked diseases, not patients. But as many lives may have been saved by a more recent innovation, the randomised controlled trial (RCT). The idea is simple, yet brilliant. A new treatment is tested by giving it only to some randomly chosen patients, with the rest (the "controls") receiving standard care. Before RCTs became common in the 1950s it was easy for a doctor to believe that patients who died did so despite his best efforts, while those who survived owed him their lives. He might harm patient after patient and never spot the pattern. Now almost all medicines are tested with RCTs before being widely prescribed.

What works in the fight against disease can also work in the fight against poverty. In the past decade aid organisations and governments in the developing world have rushed to make use of RCTs, encouraged by donors and philanthropists who like evidence that their cash will be spent well. This week two leading researchers released the results of RCTs for two schemes that gave destitute people assets (usually goats or a cow) and trained them to manage them (see page 60). The results were impressive: in India recipients were much better off five years after the programme ended. More important, the trials showed that it really was the aid programmes that made the difference, and not some other factor.

RCTs have their limitations. They are impossible when an intervention affects everyone (for example, a change in interest rates) and unethical when it is known to be harmful (doctors who want to know just how unhealthy smoking is cannot ask human guinea pigs to light up). But the biggest problem with RCTs is that they are not used nearly often enough.

Even as policymakers in developing countries harness the power of randomisation, those in rich countries resist—especially for their most cherished schemes. About 100 education-related RCTs are under way in Britain, mostly co-ordinated by the Education Endowment Foundation, a charity set up by the government. But they deal with small-bore questions, such as whether teenagers learn more if the school day starts later. Meanwhile the government is radically reshaping the management and funding of schools nationwide—without testing the changes first, let alone running trials. That is reckless.

Other countries have done a bit better. An RCT run decades ago informed the design of America's main safety-net housing programme. More recently, experiments have tested the impact of smaller classes, charter schools, sex education and pre-school for poor children. But just as in Britain, RCTs are rarely used to evaluate big policy shifts. The Affordable Care Act (Obamacare) could have been an opportunity for a series of trials to optimise its rules. That opportunity was missed.

The electoral cycle is one reason politicians shun RCTs. Rigorous evaluation of a new policy often takes years; reformers want results before the next election. Most politicians are already convinced of the wisdom of their plans and see little point in spending time and money to be proved right. Sometimes they may not care whether a policy works, as long as they are seen to be doing something. Stiff prison sentences make a government look tough even if they do not cut crime; very high taxes on top earners may be popular even if they raise no extra cash.

Doctors, at least, generally want to do some good. Even so, they were slow to embrace RCTs. Many bristled at what they saw as an aspersion cast on their professional judgment, or worried about the ethics of denying randomly selected patients a promising new treatment. They were won round only by seeing many established treatments proved to be harmful, and supposedly promising new drugs proved to be useless. Now doctors regard RCTs as the gold standard of evidence.

Heroic policymaking

To live in a modern democracy is to be experimented on by policymakers from cradle to grave. Education is intended to mould an upstanding future citizen; a prison sentence, to reshape someone who has gone astray. But without evidence, those setting policy for schools and prisons are little better than a doctor relying on leeches and bloodletting. Citizens, as much as patients, deserve to know that the treatments they endure do actually work. ■

Letters

What happened in Iraq

You criticised the sacking of "nearly every Baath party member" in Iraq after Saddam Hussein's overthrow, alleging that this left the country "without a functioning state" ("The road less travelled", November 28th). Both statements are inaccurate. The deBaathification decree of May 2003 affected only the top 1% of party members. I made the mistake of delegating the implementation of this narrowly drawn decree to Iraqi politicians. When they sought to broaden it in early 2004, I immediately reversed their steps.

Far from collapsing, Iraq's government functioned. I know because unlike many armchair critics, I regularly visited and worked with officials at all 25 Iraqi ministries. They were capably run by Iraqi ministers appointed by the interim Iraqi government until we ceded sovereignty to Iraq in June 2004. People who criticise their work overlook the fact that, severely hampered by decades of neglect, Iraqi ministries lacked such essentials as computers, telephones, modern accounting systems and internet service. But through the heroic efforts of Iraqis, that Iraqi government produced balanced budgets for 2003 and 2004 to support the economic priorities it had established. According to the IMF in 2004 Iraq's economy grew by 43%.

PAUL BREMER
Presidential envoy to Iraq, 2003-04
Washington, DC

The internet of things

"Smart products, smart makers" (November 21st) predicted that the installation of internet-connected sensors into products will benefit manufacturers by enabling them to vie for customers' attention in direct competition with retailers. This doesn't take account of the role and weight of data intermediaries. Companies such as Amazon, Google, IBM and Baidu collect and analyse information about millions of products from thousands of global brands in order to steer customers towards more suitable purchases at the expense of manufacturers, niche retailers and consumers.

The artificial-intelligence capabilities being developed by these tech giants interpret consumers' life patterns better than the consumers themselves. In this Third Industrial Revolution of "datafacturing", the one who owns and makes sense of the data may control the design and pricing of smart and dumb products alike.

TED LADD
OLAF GROTH
Hult International Business School
San Francisco

I was bemused by the nugget of Tesla having to issue a software update to its cars to fix a problem with uphill starts. My Volkswagen Beetle was able to achieve this technical feat long before software was even invented.

CHRISTIAN KOBER
Shanghai

Murky alliances in Syria

"In Russia's defeat he trusts" (November 28th) lumped the foes of the Assad regime in Syria together as "jihadists". Syria and Russia have successfully framed the conflict that way, when in reality it is a three-way (at least) war between largely Sunni groups, Islamic State and radical Shia groups supported by the Russian air force and the remnants of the Syrian army.

One of these groups is Hizbullah. The leader of the Lebanese Hizbullah declared in October that "we are the people of *jihad* and resistance". In addition Iran is backing several radical Shia groups that are fighting for the Assad government.

ANDREW FINK
Kiev

France is not America's "oldest friend". Muslim Morocco is. In 1777 Sultan Mohammed ben Abdallah, who wanted good relations with the Christian world and to foster trade, recognised the independence of the United States by giving American ships access to Moroccan ports. The American-Moroccan Treaty of Peace and Friendship, ratified in 1787, is America's longest unbroken treaty relationship.

BRYAN LEWIS
Beechgrove, Tennessee

Extradition in Colombia

Your article on extradition in Latin America ("How to handle a drug gang", November 21st) stated that when he was president of Colombia in 2008, Álvaro Uribe "outsourced" law enforcement to the United States by sending 14 members of right-wing paramilitary groups there on drug charges, "just as Colombian investigators were examining their alleged human-rights violations and potential ties to the government". You also said that "many of their records were sealed, causing the president's opponents to accuse him of using extradition as part of a cover-up."

There was no cover-up. Suspects were extradited to the United States to face charges regarding crimes against American citizens. Records were not "sealed". The extraditions were approved under special conditions pertaining to investigations and trials in Colombia. America allowed the extradited criminals to participate in these proceedings by technological means and testimony was given to Colombian delegations that were sent to the United States. These cases are still open in Colombia and when their convictions end in the United States those criminals will return here to face justice.

The legal framework concerning the demobilisation of paramilitaries was available to every member of an illegal armed group who complied with the transition's obligations. If a member of a paramilitary outfit returned to crime, such as drug-trafficking, that legal framework was suspended, making them subject to extradition under the rules of international law.

Moreover, criminal ties to the government or public officials have not been forgotten about in Colombia. Several people have been tried and convicted regarding this matter.

SENATOR IVÁN DUQUE MÁRQUEZ
SENATOR ÁLVARO URIBE VÉLEZ
and 18 other senators from the Centro Democratico Party
Bogotá

An insect industry

I enjoyed your analysis of the distorted valuations of "unicorn" startups in the tech industry ("The rise and fall of the unicorns", November 28th). However, "unicorn" is a term that is falling out of favour in the lexicon of Silicon Valley. "Cockroach" is increasingly the preferred term instead, because it implies that the business model of startups is lean, scrappy and nearly impossible to kill.

At a time when funding in the Bay Area has begun to wane, it is the cockroaches who will survive.

ANDREW MEEHAN
Claremont, California

Honestly

When considering the degree to which "authenticity" is marketed as a substitute for value, Schumpeter (November 14th) echoes the words of George Burns. When asked his secret to success the sage and screen deity replied: "You've got to be honest. If you can fake that you've got it made".

RICHARD POETON
Bennington, Vermont ■

Letters are welcome and should be addressed to the Editor at
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More letters are available at:
Economist.com/letters

Executive Focus

European Commission

DEPUTY DIRECTOR-GENERAL
(Grade AD15)

Directorate-General for Mobility and Transport, Brussels
COM/2015/10362

The Directorate-General for Mobility and Transport (DG MOVE) is in charge of developing transport policies for the European Union. It is responsible for ensuring efficient and sustainable mobility within a single European transport area, serving Europe's citizens and economy while promoting environmental policy and competitiveness.
The European Commission is seeking to appoint a Deputy Director-General, whose main responsibilities will reside in coordinating the activities of the Directorate 'European Mobility Network' (MOVE.B) and the 'Innovation and Networks Executive Agency' (INEA).

Your responsibilities:
- Supporting the Director-General in defining strategies, concepts, procedures and/or policies;
- Assisting the Director-General in leading and managing the DG as well as supervising and providing guidance to its Directions and Heads of Units;
- Liaising with other services of the Commission on transport issues as well as representing the Commissioner/Director-General in meetings and events.

Your skills:
- Very good understanding of complex political environments and of the European Transport policy, being able to develop a clear strategic vision for DG MOVE;
- Strong track record in managing large teams and budgets, as well as in change management processes;
- Strong analytical skills, proven negotiation skills at senior level and excellent communication skills.

The European Commission promotes equality of opportunity. Given the low representation of women in management functions, the Commission particularly welcomes applications from women.

Please consult the Official Journal C402A of 04/12/2015 for the detailed vacancy notice as well as the eligibility and selection criteria.

Applicants should register online at: https://ec.europa.eu/dgs/human-resources/seniormanagementvacancies/

The closing date for registration is **15/01/2016, 12.00 noon Brussels time.**

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Danmarks Nationalbank (DN), the central bank of Denmark, has decided to establish a new, independent research unit with an aim to produce applied macroeconomic, microeconomic, monetary and financial research at an international level.

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- Organize conferences and seminars on topics of relevance for DN

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- A comprehensive professional network and ability to expand it on the basis of new tasks
- Strong interpersonal and organizational skills
- Excellent communication skills
- Demonstrated leadership skills, a proven track record of managing a team of highly qualified researchers in an international setting
- Previous experience with research and policy formulation in central banks, government committees or international organizations would be an advantage
- Fluency in spoken and written English. The command of Danish is not required

FURTHER INFORMATION
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For further information on the Director of Business Resources role: richard.fisher@plan-international.org

For further information on the Director of Global Influence role: gareth.griffiths@plan-international.org

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Basel

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For further information about the fellowship, see www.bis.org/lamfalussyfellows.

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Massachusetts Institute of Technology

DIRECTOR

LUXEMBOURG CENTRE FOR LOGISTICS
Luxembourg City, Luxembourg

The Government of the Grand Duchy of Luxembourg and the University of Luxembourg, through a long-term partnership with the Massachusetts Institute of Technology's Center for Transportation & Logistics (MIT CTL), has just established the Luxembourg Centre for Logistics (LCL). The LCL will help establish Luxembourg as the European standard for training, research and innovation in the logistics sector.

We are currently seeking a talented and energetic Director to take the leading role in establishing the newly formed LCL. The Director will build up the centre to become a world leader in education and research in supply chain management, freight transportation, global trade, and logistics. Co-located within the University of Luxembourg, the LCL will offer both Masters and Doctoral degrees. Additionally, the centre will conduct applied research, provide executive education programs, and work with corporations within Europe and across the globe.

The LCL is the fifth and newest member of MIT's Global Supply Chain and Logistics Excellence (SCALE) Network of research centres in the area of transportation, logistics and supply chain management. To learn more about this position and how to apply, please visit **http://scale.mit.edu/careers/director** or contact us at either **lcl-director-search@mit.edu** or **lcl@uni.lu**

The young continent

MERTULE MARIAM, ETHIOPIA

With fertility rates falling more slowly than anywhere else, Africa faces a population explosion

ON A trolley in a government clinic in rural Ethiopia lies Debalke Jemberu. As a medic and a nurse winkle the sperm-carrying tubes out of his testicles, he explains why he decided to have a vasectomy. He is a farmer, growing wheat, sorghum and a local staple grain called teff. But his plot is barely a quarter of a hectare. He already has four children, and has often struggled to provide for them. "I couldn't feed more children," he says.

The medic, who has six more vasectomies to perform that day, interrupts to say he is finished. Mr Jemberu pulls up his trousers, pops on his woolly hat and continues. His parents had seven children, but they had eight hectares to farm. That plot has been shared among his siblings, and diminished by sales and land reforms. At the same time, he complains, the cost of living has gone up. Seven children would be far too big a family these days.

Mr Jemberu's daughter, who is 25, is still single (he married at 19). He is happy for her to concentrate on her studies for a few more years before starting a family. And when she does, he thinks two children would be plenty. In the meantime, he says, he will tell his fellow villagers how quick and painless the vasectomy has been.

In the minds of many Westerners, Ethiopia is a teeming place with an ever-increasing number of mouths to feed. That is indeed the case in some parts of the country: in the arid south and east, for instance, communities of pastoralists, some of them nomadic, still tend to have big families. Six or seven children remains the norm. But in Addis Ababa, the capital, the average is slightly less than two children per woman, just as it is in most rich countries.

In other words, Ethiopia spans the world's demographic spectrum. Some parts have populations growing as fast as anywhere on the planet; others have already been through a "demographic transition", in which the population stabilises or even shrinks as people grow richer and have fewer children. Most of the country, however, is like the highland region where Mr Jemberu lives, in which the typical woman has more than two children, but the downward trend is clear.

The shift has been rapid and dramatic. In the early 1990s the average Ethiopian woman had seven children and the country's population was growing by 3.5% a year. Women now have 4.1 children on average and population growth has slowed to 2.5%. By 2050, the UN reckons, growth will have slowed further, to 1.3%; by 2100 the population will actually be contracting slightly. By then, however, there will be 243m Ethiopians, up from 100m now and 18m in 1950.

Most other countries' demographic transitions have gone much further. Globally, the average woman now has 2.5 children, half as many as in 1960-65 and not much above the 2.1 at which the world population will stabilise. (This "replacement rate" is a little higher than two because some girls die before their childbearing years and fewer girls are born than boys.) The fertility rate is below replacement in most rich countries, and in plenty of developing ones. In Colombia it is 1.9, just as it is in America and Britain. In Iran it is 1.8 and in China 1.6. The UN calculates that 46% of the world's population lives in countries where the fertility rate is below the replacement rate.

How quickly Ethiopia and other African countries follow this example has implications not just for those countries but for the whole world. It is the most pressing question for demographers, since it will determine how fast the global population grows in the coming decades and how soon it might stabilise. That, in turn, has repercussions for efforts to eliminate poverty, curb global warming and manage international migration.

Alarmingly, population growth in Africa is not slowing as quickly as demographers had expected. In 2004 the UN predicted that the continent's population would grow from a little over 900m at the time, to about 2.3 billion in 2100. At the same time it put the world's total population in 2100 at 9.1 billion, up from 7.3 billion today. But the UN's latest estimates, published earlier this year, have global population in 2100 at 11.2 billion—and Africa is where almost all the newly added people will be. The UN now thinks that by 2100 the continent will be home to 4.4 billion people, an increase of more than 2 billion compared with its previous estimate.

If the new projections are right, geopolitics will be turned upside-down. By the end of this century, Africa will be home to 39% of the world's population, almost as much as Asia, and four times the share of North America and Europe put together. At present only one of the world's ten most populous countries is in Africa: Nigeria. In 2100, the UN believes, five will be: Nigeria, Congo, Tanzania, Ethiopia and Niger.

Although much could change in the next 85 years, none of those countries is a byword for stability or prosperity. A quadrupling of their population is unlikely to improve matters. If nothing else, the number of Africans seeking a better life in Europe and other richer places is likely to increase several times over.

What is more, Africa's unexpected fecundity will change the shape of the world's population. The declining birth rate elsewhere has brought the world to the verge of what Hans Rosling, a Swedish demographer, calls "peak child". In 1950 the world had some 850m people aged 14 or under. By 1975 that number had almost doubled, to 1.5 billion. This year it was a little over 1.9 billion—but it has almost stopped growing. It is expected to continue to climb only very slightly in the coming years, reaching 2 billion in 2024, but never exceeding 2.1 billion.

Thanks to the continued growth of Africa's population, however, the peak will be more of a plateau. High birth rates in Africa and low ones elsewhere will more or less balance out. Africans will make up a bigger and bigger share of the world's young people: by 2100, they will account for 48% of those aged 14 and under.

Moreover, the world's population will continue to grow despite the levelling off in the number of children. Up until now population has resembled a pyramid in structure, with children outnumbering young adults, young adults outnumbering the middle-aged and the middle-aged outnumbering the elderly. People now in their 60s, for instance, come from a generation that was less than half as big as the current cohort of children. As today's children age, they will make the upper echelons of the pyramid wider. But the lower ones will remain the same size, thanks to peak child, so the pyramid will come to look more like a dome (see chart). Were it not for continued growth in Africa, the pyramid might even have inverted, leaving more old people in the world than young ones.

African exceptionalism

The revision of population predictions for Africa partly reflects the fact that HIV/AIDS has not proved quite as catastrophic for the continent as seemed likely ten years ago. Mainly, however, it stems from the startling persistence in Africa of very big families. Women in the region still have more babies, on average, than those in Asia and Latin America did in the 1980s.

The human population only began to grow quickly and steadily in the 19th century. Before then women had lots of children—perhaps about seven each on average—but most died before adulthood. As health care improved over the past 200 years or so, far more of these children survived and went on to have children of their own; hence the explosion in the world's population. As people have become richer, however, they have also begun to have fewer children; hence the recent decline in the growth rate.

The tendency for societies to have fewer children as they become richer appears to be universal. It holds good across races, religions and ethnicities. Thus the fertility rate is the same (2.3) in Azerbaijan (which is largely Muslim), Mexico (largely Christian), Myanmar (largely Buddhist) and Nepal (largely Hindu). By the same token, many countries that remain relatively rural—Bangladesh, India and Vietnam, for example—have nonetheless seen sharp falls in fertility, albeit not quite to the levels of heavily urbanised ones, such as Brazil.

There seems to be just a handful of prerequisites for a falling fertility rate: a modicum of stability and physical security, some education (especially for women) and wide access to contraception. The faster these conditions are met, the faster birth rates come down.

The only places where women continue to churn out babies are dirt-poor and unstable countries such as Afghanistan, Congo, East Timor and Niger (see map on next page). Counter-intuitively, war, famine and other disasters tend to boost population in the long run, by keeping fertility rates high. It is only when parents are confident that their children will survive that they risk having fewer of them.

Sub-Saharan Africa, sadly, is very poor and unstable, which helps explain why its demographic transition seems to be proceeding more slowly than that of other parts of the world and to have stalled or not yet started in several countries. But even relative to their levels of income, health and education, the countries of sub-Saharan Africa have high fertility rates. That has prompted some scholars to posit cultural explanations.

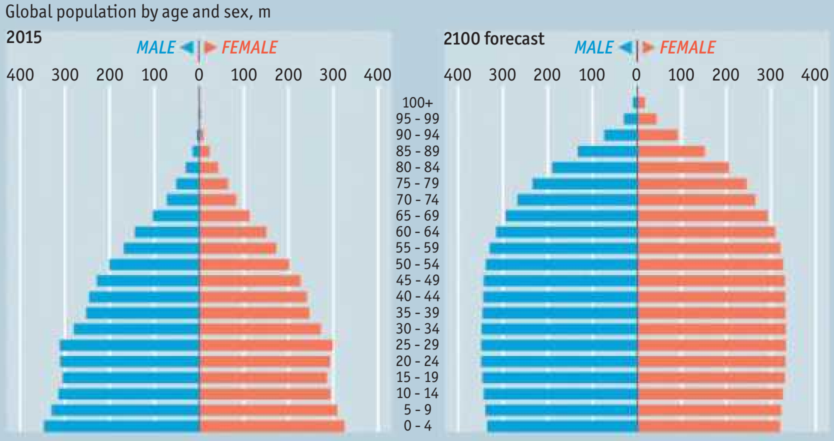
One theory is that African men want big families to enhance their status; another that communal land-holding makes them economically beneficial, since resources are shared according to family size. Without dismissing these arguments, John Bongaarts of the Population Council, an international non-profit group, suggests a third: relatively low use of modern contraception. In many places, after all, vigorous campaigns to disseminate contraceptives and discourage big families have contributed to sudden and deep falls in fertility. Such a drive in the 1970s in Matlab, a district in Bangladesh, saw the share of women using contraceptives increase six-fold in 18 months.

The African countries that have seen big falls in fertility are those, such as Burundi, Ethiopia and Senegal, with similar campaigns. In Ethiopia the fertility rate has fallen by about 0.15 a year for the past decade—blisteringly fast by demographic standards. That is probably thanks in large part to the nationwide network of 38,000 "health-extension workers"—one for every 2,500 people. Their job is to pay regular visits to each household within their locality and provide coaching on public health, from immunisations to hygiene. One of the 16 subjects in which they drill every Ethiopian is family planning.

It is through a health-extension worker that Mr Jemberu learned that he could re-

Middle-age spread

Global population by age and sex, m



Source: UN Population Division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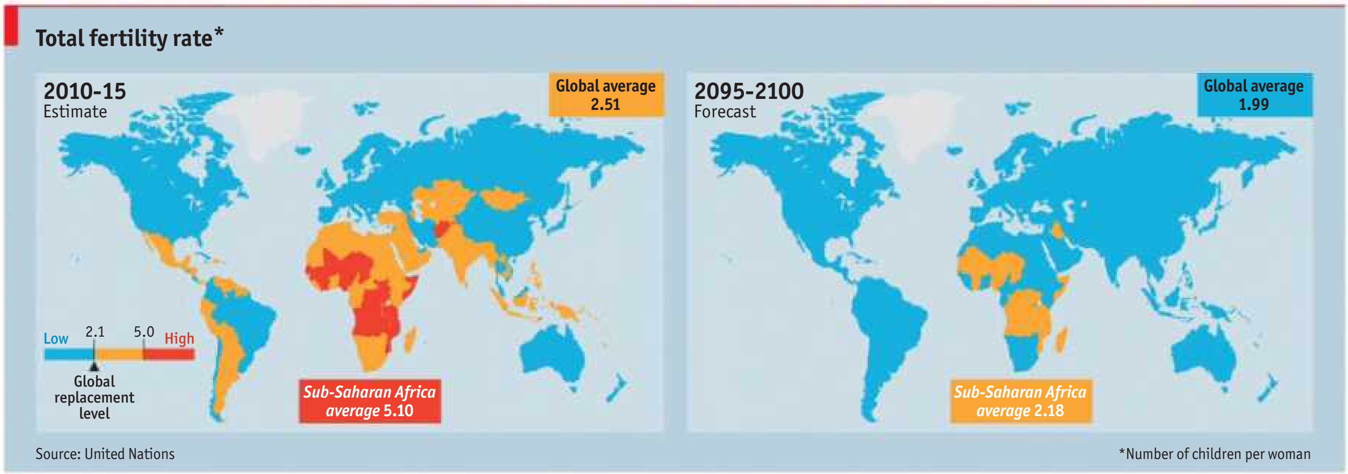

ceive a vasectomy free of charge, courtesy of Marie Stopes International, a British charity. Around 100 metres from where he is having the snip, five health-extension workers have gathered 50 women for a traditional coffee morning. As one of the workers grinds coffee beans using an improvised pestle and mortar, two doctors explain the different methods of contraception that the government can provide to local women.

One holds up a display board with a condom, an intrauterine device, a dose of an injectable contraceptive, a packet of pills and a contraceptive implant. The other removes these displays one by one and passes them around, along with big chunks of bread and small cups of strong black coffee. Embarrassed women in the audience mutter questions into their shawls, while shushing fussy babies. The discussion is not limited to technicalities: there is much talk about the desirability of small families and how expensive big ones can be. The same message is echoed in public-service announcements on Ethiopian radio and television.

Though the government is the main force behind this family-planning drive, it welcomes help from Western donors and charities. Marie Stopes, for instance, pays for ten mobile teams that travel between rural clinics performing vasectomies and tubal ligations, the female equivalent. It also runs 31 facilities in cities, where in addition to contraceptives and obstetric care, women can obtain abortions. Then there is its Blue Star scheme, whereby it has accredited 207 private clinics, to signal that they provide reliable and affordable maternal health-care.

Yohannes Abate, who runs one such clinic in Bahir Dar, a lakeside city in the centre of the country, says that when he first set up shop in 2003, people hardly knew what contraception was and almost never asked for it. Now providing it accounts for 10% of his business. The patients in the waiting area speak freely of the expense of raising children; most say two or three is plenty. "I want to be able to afford to look after them," says Zewdo Yetimwork, a university lecturer who has come for a postnatal check-up for his month-old daughter. Behind him a cardboard cut-out of a sleek and smiling urban couple advertises Sensations, a local brand of condom ("Make your life Sensational").

The UN reckons that the share of Ethiopian women aged 15-49 who use some form of contraception has risen from 6% in 2000 to 40% last year. The government hopes to get the "prevalence rate" to 66%. It is pushing longer-lasting and permanent forms of contraception in particular. Since 2007 it has allowed health-extension workers to administer injectable contraceptives, which typically last for three months. Since 2009 it has allowed them to insert contraceptive implants, which last for several years. Women prefer these methods, say the health-extension workers in Mertule Mariam, not only because they involve less hassle, but also because they are more discreet. There are no pills or condoms for nosey relatives or neighbours to discover.

For the prevalence rate to keep rising, however, contraceptives must be omnipresent and cheap. Western donors have offered support here, too. At a conference in London in 2012, a group of them agreed to devote $2.6 billion to it. The Gates Foundation, the world's biggest philanthropic organisation, promised to spend $140m a year. Since then, it claims, 24m women have gained access to contraceptives in the countries the group is targeting. It has also helped several African governments to build strong supply chains so that clinics in remote areas never run out and brought together a consortium of aid agencies that has promised to buy contraceptives in large quantities if their manufacturers lower the price. That has helped reduce the cost of contraceptive implants from about $24 a dose to about $8, says Lester Coutinho, who runs the charity's family-planning efforts.

Alas, there is lots more to do. The UN estimates that there are still 216m married women in the world who would like access to modern methods of contraception, but do not have it. The Copenhagen Consensus, a group of academics which rates development policies, reckons it would cost $3.6 billion a year to provide what they need. The benefits, in terms of the diminished need for infrastructure and social spending, reduced pollution and so on, would be $432 billion a year—120 times more. That is the second-most productive investment the project has identified, after liberalising trade, out of a welter of different development goals. Better yet, it helps with all the others. ■

Building the next generation

ADVERTISEMENT

How UPS is fighting the war on cancer

Q&A with John Menna, vice president, global strategy, healthcare logistics

Everything in healthcare ultimately comes back to the patient. The supply chain is no exception. With the convergence of advancements in oncology—from treatment to diagnostics to technology—healthcare organizations are discovering entirely new ways to help patients live longer. And through logistics, they're doing it faster, more efficiently and with better outcomes.

In a recent interview, John Menna, vice president, global strategy, healthcare logistics at UPS, discussed the role of logistics in the war on cancer and shared his outlook for the future.

Q: What does logistics have to do with oncology?

John Menna: People don't immediately think of UPS when they think of healthcare, but logistics supports everything from diagnosis to treatment, by providing visibility, reliability, transparency and product protection for moving high-value, time-sensitive specimens.

With smarter logistics, we can help patients by making sure (a) the process and the treatment are as patient-friendly and patient-convenient as possible, and (b) the treatment is as effective as possible, meaning that the product has been handled properly throughout the supply chain.

Also, the more efficiently a supply chain is built, the more you can drive down the costs associated with these very expensive treatments. We help enable better outcomes and better value for both healthcare businesses and patients.

Q: Could you give an example of how logistics could enable new opportunities in healthcare?

Menna: I'm especially excited about the opportunity to provide cancer screening to more of the population, by making diagnostic tests more convenient and less expensive for the patient. With something like colon cancer, one of the most preventable types of cancer, many people choose not to get the colonoscopy recommended for early detection. At UPS, we've worked with companies that have come up with some noninvasive types of cancer screening diagnostics, some of which are done within the patient's home. A collection kit is sent to the patient, a specimen collected, and the kit given back to UPS to be sent quickly to a laboratory for diagnostic testing and analysis. The lab results can be provided to the physician or directly to the patient. By facilitating these types of patient-friendly solutions, we hope more people will get preventative testing.

Q: What trends are you seeing in oncology in which you feel logistics will play a vital role?

Menna: Within the industry, we're seeing more "companion diagnostics." This type of diagnostic test determines if a specific treatment will be effective for a patient based on their genomic makeup. The logistics of specimen transport come into play here. Where a bio specimen is collected and where it is analyzed are often two separate locations. Careful handling of biological materials, active monitoring and tracking, and quick delivery to the lab can help ensure the integrity of the sample and expedite test results.

Another emerging trend is "customized medicine," which sometimes involves a patient's specimen being reengineered with an oncology drug and injected back into the patient. The medicines moving in this direction are especially temperature sensitive, so the cold chain logistics moving those drugs must be consistent and reliable. The same medications are also time sensitive, so shorter time in transit and earlier deliveries can impact effectiveness.

Q: How does technology further logistics in the healthcare segment?

Menna: When we focus on healthcare logistics, our priorities include visibility into tracking individual medications and specimens, and ensuring product stability and integrity. Technological tools like radio frequency identification (RFID) and data loggers, as well as new software platforms, help us improve accuracy at every step of the supply chain. Now you can track not only boxes, but also individual vials, and specially engineered packaging and shipping containers keep products safe.

You may be getting a sense of how many handoffs happen in a supply chain between manufacturers, warehouses, hospitals, clinics, labs, doctors and patients. By applying technology in a way that provides consistent tracking and data from end to end, we increase transparency throughout the supply chain and proactively identify risks to product integrity.

Q: How is UPS prepared to fight the war on cancer?

Menna: In working with various entities—from clinical labs, hospitals and in-vitro diagnostics to specialty pharmaceutical manufacturers and even insurers—I've seen how each player is disrupting the healthcare ecosystem with innovations for improving patient health. With over 3,000 healthcare logistics experts at UPS, we know getting the logistics right makes these new innovations much more viable.

An efficient supply chain can enable lower costs, earlier detection and therefore better outcomes. We use our logistics expertise, dedicated healthcare facilities and integrated global network to help customers create flexible supply chains that focus on the patient—where, when and how that care is needed.

The companies we work with can leverage our capabilities in product protection, supply chain security and regulatory compliance, so that they can focus on creating better tests and treatments and better patient access to each. Healthcare providers are rightfully focused on care first, and not so much on supply chain. That's where we see an opportunity to step up and push what's possible.

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American jihadists

The home-grown threat

WASHINGTON, DC

Despite the attack in San Bernardino, America's defences against jihadism are high

YOU do not need to be Donald Trump to be confused by the massacre Syed Rizwan Farook and his Pakistani wife, Tashfeen Malik, carried out in San Bernardino, California, on December 2nd. The couple responsible for the deadliest act of terrorism in America since 2001 were well-educated, affluent and unknown to the police. Mr Farook earned $70,000 a year as a government inspector; his brother served in the navy. Unlike ne'er-do-well European jihadists, with their uncouth accents and mugged-up theology, the killers were quiet, unremarkable middle-class Muslims.

Their target, a get-together of Mr Farook's colleagues at a suburban health centre, was so banal investigators at first suspected the massacre of 14 people was a case of workplace rage. Even the fact that the couple turned out to have kept an arsenal at home and practised on gun ranges was only alarming in retrospect. Millions of Americans do the same. A few minutes before going postal, they dropped off their six-month-old daughter with Mr Farook's mother, claiming to have a doctor's appointment: Mr Farook and Ms Malik were the jihadists next door.

There are two starkly opposed ways of understanding this banality. The first, exemplified by President Barack Obama, is to find it almost reassuring. In an address from the Oval Office on December 6th he said the attack reflected America's success in preventing more spectacular terrorist violence. While promising one or two security measures—including checks on the fiancé visa on which Ms Malik entered America—he also urged Americans to see the killing in the context of an already violent society: "As we've become better at preventing complex, multifaceted attacks like 9/11, terrorists turned to less complicated acts of violence like the mass-shootings that are all too common." The best way to foil them, Mr Obama added, was to keep calm and carry on. "Our success won't depend on tough talk, or abandoning our values, or giving into fear. That's what groups like [Islamic State] are hoping for."

The alternative, demonstrated by Mr Trump, is to conclude that, since such Muslim maniacs are hard to detect, all Muslims must be considered suspect. "We have to look at mosques. We have no choice. We have to see what is happening because something is happening in there. Man, is there anger!" mused the front-runner for the Republican presidential nomination. His solution was a perfect rebuke to Mr Obama: Mr Trump called "for a total and complete shutdown of Muslims entering the United States until our country's representatives can figure out what is going on".

The facts are with the president. Since 9/11, over 400,000 people have been killed by gunfire in America and 45 by jihadist violence, of whom half died in two shootings: one carried out by a Muslim army doctor in Texas in 2009, the other in San Bernardino. France has so far suffered seven fatal jihadist attacks this year, costing 150 lives; America has suffered nine at home in 14 years. And though the government has raised its threat levels, fearing San Bernardino could augur an uptick, that is partly a matter of due diligence. "I see the threat as being relatively consistent since 9/11," says Raymond Kelly, who served as New York's police commissioner between 2002 and 2013, and now works for a corporate snooper, K2 Intelligence.

Three things account for America's relative security. The first is its distance from the Middle East; the second is decent law enforcement, especially by the FBI, which since 2001 has partly turned itself into the internal spy agency America lacked. Its counter-terrorism staff, whose number has grown by 2,000, are investigating links to IS in 50 states. By far the most important reason, however, is that American Muslims are less interested in being radicalised than their European counterparts.

They are richer, better educated and altogether better integrated into the mainstream. Though less than 1% of America's population, they account for 10% of its doctors; in 2011, less than half said that most of their closest friends were Muslims. Plainly, IS, which has flooded the internet with jihadist propaganda, represents a new test to that moderation. Yet, as a rule, American Muslims are probably less tempted by a genocidal medieval revival act than any others in the West. While more than 5,000 Europeans have joined IS, fewer than 250 Americans are thought to have tried to—of whom, estimates Peter Bergen, author of a forthcoming book on American jihadists, only two dozen succeeded.

This also makes American Muslims ▸▸

unusually likely to report suspected jihadists to the police. According to Mohamed Magid, a Virginia-based imam who has advised the administration on radicalisation, 42% of the jihadist plots rumbled since 2001 were reported by suspicious Muslims. That includes a recent case within his own congregation, in which the parents of a 16-year-old youth, Ali Amin, reported his interest in IS. He was sentenced in August to 11 years in prison after pleading guilty to fund-raising for IS and helping another American teenager, Reza Niknejad, join it. Mr Amin was radicalised online by IS agents in Canada and Britain. "It doesn't matter where the recruiter is so long as there is internet," said Mr Magid. "But thank God his parents came forward."

That is why Mr Trump's demagoguery, occasioned as much by a bad poll for the blow-hard in Iowa as the massacre in California, is so dangerous, as well as wrong. Americans are lucky. Their defences against jihadism are high. But that is provided Muslims are manning them, which Mr Trump has already made less likely.

At an Islamic Centre in Jersey City, whose large Muslim population Mr Trump had previously accused, mendaciously, of celebrating 9/11, people are rattled. "When we heard about the Paris and California attacks, first thing that comes to our mind is, 'Oh God, please don't let it be a Muslim'," says Ahmed Shedeed, the centre's president. "The good thing is we look like Latinos," he adds. Given how Mr Trump once denigrated Mexicans as rapists, that shows how his campaign has moved on. ■

Voting and the Supreme Court

What people?

WASHINGTON, DC

A case that turns on the definition of people could boost Republicans

TWO hundred and twenty-six years after America's Constitution was ratified, it might come as a surprise to learn that a fundamental question about the nature of the American republic has never been resolved—or even posed. It is well known that the country is a representative democracy where the people elect officials who serve in local, state and national institutions to make laws and carry them out in their name. It is a bit less well understood that, for the past half-century, the principle of "one person, one vote" has meant that the states' electoral districts must be roughly equal in population. If 100 people are served by one state senator, for example, while another represents a district of 1,000 people, the former group has ten times the clout of the latter. The Supreme Court ruled in 1964 that these types of inequalities violate the 14th Amendment's equal protection clause.

That 1964 ruling in *Reynolds v Sims*, which announced the principle of "one person, one vote", also said that states must count "people" (rather than "trees or acres") and distribute them relatively evenly (with a margin of error of 5% either way) when drawing district maps. But the Supreme Court has not been very clear about whether "people" means everybody, or just eligible voters. The plaintiffs in a case argued before the court on December 8th say that *Reynolds* and other cases refer to the "people" as the body of individuals who are eligible to vote.

Densely populated districts typically have more people who are not eligible to

Or perhaps in another district

vote than those that are more spread out. Since Democrats are the party of cities and Republicans the party of wide open spaces, a ruling for the challengers would strengthen the hand of Republicans.

With the encouragement of conservative activist Edward Blum and his organisation, the Project on Fair Representation, two Texas residents brought the suit in the hope that the Supreme Court will force states to draw up districts using this definition. Currently, in every state, maps distribute the total population in the state roughly evenly into a number of districts. Sue Evenwel and Edward Pfenninger, the plaintiffs, say their votes are being unconstitutionally weakened by this regime. The challengers point out that there are many more eligible voters in their district than in other Texas districts, where the population is goosed by large numbers of illegal aliens, felons and children—souls who do not enjoy the franchise. The state should be drawing districts to equalise the number of people eligible to vote, they say, not the total number of residents.

In his determined argument before the justices, William Consovoy, the lawyer for Ms Evenwel and Mr Pfenninger, encountered heavy resistance from the four more liberal justices. "You're forgetting," Justice Sonia Sotomayor told Mr Consovoy, "the dual interest". States indeed have a "voting interest, but there is also a representation interest" at stake as well. Justice Elena Kagan drew attention to the wider theory underlying Article I of the constitution, which assigns states a number of seats in the House of Representatives according to the "whole number" of "persons". "Why", she asked, "would [it] be the case that the constitution requires something with respect to one apportionment that it prohibits with respect to another"?

Another line of attack came from Justice Ruth Bader Ginsburg. "I mean, in your interpretation of the 14th Amendment, from 1869 till 1920"—the year women won the franchise—"the state should not have been counting women for purposes of determining representation in the state legislature". Justice Stephen Breyer chimed in that the challengers' view—whereby children and aliens would still be represented even though they would have diminished access to representatives—smacked of the claim England once made to its rebellious colonies. "That sounds an awful lot [like] what they had in 1750 or something, where the British Parliament said, well, don't worry, America, you're represented by the people in England because after all, they represent everybody in the British empire".

Evenwel, as is so often the case, will probably turn on the thinking of Justice Anthony Kennedy, the court's habitual swing voter. Perhaps ominously for state Democrats, Justice Kennedy asked no questions of the plaintiff's lawyer and reserved his queries for the lawyers defending total population as the correct measure. "There is an ethical, a good government, a liberty interest in protecting these voters", said Justice Kennedy, and the plaintiffs' interest is "being very substantially disregarded with this huge deviation". It would be ideal, he suggested, if state districts could bring both total population and voting population numbers into balance. Why, he asked, "is one option exclusive of the other? Why can't you have both?" The decision should arrive in the spring. ■

Education

No Child Left Behind gets left behind

NEW YORK

A new education law will reduce the federal government's role in schools

WHEN George W. Bush signed the No Child Left Behind Act in 2002, he was flanked by Ted Kennedy, who had shepherded the legislation through the Senate, and John Boehner, then the head of the House education committee. On December 9th the Senate voted overwhelmingly to replace that law. The House has already passed something similar, and the president is likely to sign a modified version. This new bill, too, has support from both parties. But this time it stems from a shared hatred of Mr Bush's law.

The federal government's role in running America's public schools has grown from that of a glorified think-tank, charged with scouring for information to help states build better school systems in the 19th century. When the second world war put military installations, and the children that came with them, in states with thin tax receipts, the federal government stepped in to make up the shortfall. When the federal government moved to end racial segregation in schools in the 1960s, Washington's role in education increased again. The traffic has been one-way ever since, even though the federal government provides only 10% of overall school funding. The new law, though, goes in the opposite direction.

No Child Left Behind obliged states to set standards for proficiency in reading and maths, and held states and school districts accountable for meeting them. Pupils were tested annually, with the goal of raising standards and closing gaps in achievement between those from rich and those from poor families. For a while pupils, especially those from ethnic minorities, performed significantly better. The gap between black and white children narrowed. The law required all to be proficient for their age in reading and maths by 2014. The deadline was not met, and it was clear several years ago that pupils would not make the annual gains needed to achieve that goal.

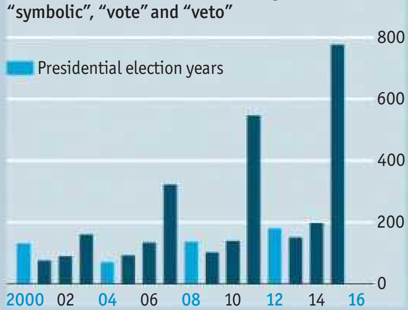
Because the regime relied on regular testing of pupils to monitor the schools' progress, it came to be loathed by teachers, who complained that too much classroom time was taken up preparing pupils for tests. At the other end of the political spectrum, conservatives who wanted more local control of education bristled at what they saw as federal overreach. "It was an interesting coalescing," says Michael McShane of the Show-Me Institute, a Missouri think-tank. "The left and the right did not like the centralised dictates coming out of the Department of Education."

They especially did not like the power wielded by Arne Duncan, the outgoing secretary of education. Mr Duncan began releasing states from the need to comply with parts of No Child Left Behind. His waivers came with conditions. In exchange states had to evaluate teachers and implement standards, such as the Common Core, a controversial set of standards that many states are opting out of or are rebranding. More than 40 states agreed. All this expanded the footprint of both the federal department and the secretary.

The new bills from the Senate and House aim to reduce the role of the education secretary and to roll back federal involvement. States will determine how schools should be held accountable, and for what. But not everything has been thrown out with the bathwater. States will still have to test pupils in reading and maths. They also will have to be more transparent about the results. States will have to submit plans to the Department of ▸▸

Show and tell

American media stories mentioning "symbolic", "vote" and "veto"



Source: Factiva

After five years of failed attempts, congressional Republicans at last forced a bill through the Senate on December 3rd to repeal most of the Affordable Care Act, Barack Obama's health-care law. The vote will have no practical impact: a day earlier, the president released a statement vowing to reject the legislation if it reached his desk. The Republicans are far short of the two-thirds majority needed to override his veto. Such symbolic votes are becoming increasingly common. According to data from Factiva, a database service, the number of news stories in American media including all three of the words "symbolic", "vote" and "veto" has risen sevenfold in the past decade (see chart). Such exercises in grandstanding invariably spike in the year before presidential elections, as lawmakers seek to restock their résumés with votes on bills that have no chance of becoming law but demonstrate their ideological bona fides to their respective bases. Federal legislators are often criticised for spending too much time campaigning and not enough time in Washington doing their job. It appears they have now found a way of doing both.

Education. What is not clear is what happens if these are deemed inadequate. Any time the House bill states a requirement, points out Martin West of Harvard, it uses strong language prohibiting the secretary from using his authority to go beyond what is laid out specifically in the bill.

If America's technocrats had their way, schools across the country would teach a common curriculum and pupils would take the same tests. States would be left to figure out how best to set up their schools. Comparisons between states would be easy and innovation would flourish. The past decade suggests that is, for now at least, an unattainable aim. No one can say for sure whether the new law contains the right ingredients to improve schools. What is certain is that it will make it considerably harder to work out what they are. ■

Chicago in film

Athens on the lake

CHICAGO

Chicagoans have mixed feelings about Spike Lee's new film

THE release on December 4th of Spike Lee's "Chi-Raq", a musical about gang violence on Chicago's South Side, comes at a poignant moment for the city. Chicagoans are outraged by a pattern of police misconduct that seems to get worse every day. City officials led by Rahm Emanuel, the mayor, are doing their utmost to contain a scandal whose scale they have underestimated. The Department of Justice has announced it will investigate the city's cops.

The protagonists of the film are feuding members of rival black gangs on the South Side, idiotic policemen, racist military men and a moronic mayor with a short temper. All this will make uncomfortable viewing for Chicago's leaders as they grapple with the fallout from the release of a non-fiction video showing the execution-style shooting of a black teenager by a white police officer. Mr Lee waded into the upheaval by predicting that "some more heads are gonna roll" after Mr Emanuel fired his chief of police on December 1st. He was right: on December 6th Mr Emanuel sacked the head of the Independent Police Review Authority, which had declared fatal police shootings "justified" in all but one of the 400 cases it had investigated since 2007. The next day the head of Chicago's police detectives retired.

Some folks in Englewood and other parts of the city suffering gang-violence are refusing to see the film. They think Mr Lee is making money from their misery and don't recognise their grief, they say, in bawdy musical comedy. Others worry that the film—called "Chi-Raq" because, according to the film, more Americans died in Chicago from 2001 to 2015 (7,356) than in the Iraq war (4,424)—shows their city in too violent a light. It will deter tourists from visiting and business from investing, they say, though neither tourists nor investors spend much time on the South Side, where most of the killing occurs.

In fact "Chi-Raq" is a contemporary take on "Lysistrata", a comedy by Aristophanes first performed in 411BC, in which Lysistrata leads the women of Greece to withhold sex from their men to bring an end to the Peloponnesian war. Mr Lee takes the story into Chicago gangland, where Spartans, clad in purple and led by a rapper called Chi-Raq (Nick Cannon), are at war with Trojans, wearing orange and led by Wesley Snipes, with a diamond-encrusted patch over one eye. The war escalates with a shoot-out in a nightclub where Chi-Raq performs and an arson attack on the house where he sleeps with his girl, Lysistrata.

The turning point of the film is the murder in broad daylight of Patti, an 11-year-old girl. Her mother Irene—played by Jennifer Hudson, who has lost her mother, brother and nephew to gun violence in Chicago—is inconsolable. Moved by her pain, Lysistrata rallies the women of the Spartan and Trojan gang members and persuades them to go on a sex strike.

The plot then becomes farcical and confusing. At one point, Lysistrata seduces a Confederate-flag loving general called King Kong so that her army of sex strikers can take over his armoury. The humour is clunky—the sexually aroused general, clad in Confederate-flag underpants, mounts a civil war cannon and is blindfolded and handcuffed by Lysistrata. But the film is saved by its creative use of iambic pentameter and urban slang, rap and the introduction of Dolmedes, a one-man Greek chorus not in the original play, who pops up at regular intervals in brightly coloured suits to fill in the audience with context. "Police siren every day/People die every day/Mommas cry every day/Fathers tryin' every day" goes Chi-Raq's prologue.

Lysistrata, only smarter

However bonkers his storyline, Mr Lee's film offers some hope. Lysistrata and her women persuade the Spartans and Trojans to surrender their weapons, which inspires others around the world to do the same. *Fortune* 500 companies promise jobs for everyone and the South Side gets a trauma centre named after Emmett Till, a black teenager from Chicago lynched in Mississippi in 1955. Even the wayward Chi-Raq eventually redeems himself. Perhaps the mayor would enjoy it after all. ■

Foreigners

Not so fast

WASHINGTON, DC

Congress considers changes to the rules for travel to America

MORE than 20m travellers reach America each year without having to apply for a visa, most of them from Europe. Perhaps 5,000 European citizens are estimated to have travelled to Syria and Iraq to fight with such terrorist groups as Islamic State (IS)—among them several of the attackers behind last month's blood-soaked attacks in Paris. So it was little surprise that the House of Representatives voted overwhelmingly on December 8th to tighten the rules governing America's visa waiver programme, under which citizens of 38 countries may enter the country for up to 90 days by applying for an Electronic System for Travel Authorisation (ESTA).

The House measure, which had White House backing and is similar to a bipartisan bill proposed in the Senate, would—once it becomes law—oblige anyone who has travelled since March 2011 to Syria, Iraq or any country deemed high-risk to apply for a visa, a hurdle that involves an interview at an American embassy or consulate (soldiers or government officials from allied nations are exempted). In parallel, the Department of Homeland Security (DHS) has moved to tweak the ESTA system to ask about previous travel to high-risk countries. The Senate bill would require ESTA applicants to submit fingerprints and photographs.

Because not every foreign fighter will obligingly display a visa stamp for Syria in their passports, the various proposals from Congress and the government put pressure on visa waiver countries to do more to col- ▸▸

lect and share intelligence with America, or face suspension from the scheme. Potential rows lurk: European countries have been wrangling with America for years about what sort of passenger data may legitimately be collected and shared.

Some proposed changes are uncontroversial. American authorities want to bring forward a deadline for all visa waiver passengers to travel on passports with embedded electronic chips, carrying such biometric data as fingerprints and facial images. The DHS wants to expand the number of foreign airports which host American passport and customs officers, so that passengers and their luggage are screened before their flights even take off. A first wave of expansion is expected to involve airports in Belgium, Japan, Norway, the Netherlands, Spain, Sweden and Britain. Airlines which fail to check a passenger's passport data could face much stiffer fines. The Senate wants all visa waiver countries to sign legal agreements protecting federal air marshals who "take action" on flights. That may prove trickier.

If tightening visa waiver rules has inspired cross-party unity, the same cannot be said for refugee admissions. Following reports that at least one Paris attacker arrived in Europe claiming to be a Syrian refugee, Republican presidential candidates, members of Congress and the governors of 30 states (most of them Republicans) have demanded that the federal government halt or severely restrict refugee arrivals from Syria and a range of war-torn countries, including Iraq, Libya, and Yemen. A bill that would, in effect, suspend refugee arrivals from Syria and Iraq recently passed the House with 242 Republican and 47 Democratic votes, though President Barack Obama is expected to veto it.

In the Senate, proposals to restrict refugee arrivals are entangled with the presidential race. Senator Ted Cruz of Texas, a Republican seeking the presidency, has written a bill to suspend refugee arrivals from countries in which IS or other foreign terrorists control substantial territory, and a second which would let governors bar refugees from their states. Federal officials retort that the refugee visa system is the single most arduous route to America, involving multiple screenings and interviews by intelligence agencies lasting as long as two years, so that terror groups have little incentive to use it when far easier routes exist. Another presidential hopeful, Senator Rand Paul of Kentucky, wants to stop citizens of dozens of terror-stricken countries from entering America, and would impose a 30-day waiting period on visa waiver applicants—unless they apply through a Global Entry scheme involving an in-person interview. The most draconian schemes will not pass the Senate. But one way or another, entering America is about to get harder. ■

Esoteric research

Sneaking with the fishes

AUSTIN

Invisibility cloaks are all right, but why stop there?

A SILVER sliver appears, then winks away beneath the waves. For years, scientists have known that many fish have an uncanny ability to camouflage themselves even when swimming in the open ocean. Now they know how. Research published last month in *Science* solved the mystery. It also raised the question of why so much effort and expense was expended studying invisible fish in the first place. Both explanations are intriguing. Begin with the fish.

"The prevailing wisdom was that fish act like mirrors," says Molly Cummings, a biologist at the University of Texas who runs a laboratory focused on sensory ecology, evolution and behaviour and was a co-author of the study. And when the sun is directly overhead, they do. But for most of the day, Ms Cummings continued, this is not enough. Light is polarised and scattered through the water. A fish living in the open ocean is often faced with light coming from every direction.

The paper explains the solution that some fish have devised. Their skin cells include structures called guanine platelets that work like an array of microscopic mirrors, moving in relation to the fish's body and in response to polarised light. These enable the animal to minimise the contrast between itself and the environment, creating a sort of omni-directional camouflage. According to the authors, this "context-dependent reflectance strategy" is actually more effective than, say, invisibility cloaks, which "camouflage well for specific tasks but suffer limitations in more complex natural environments." Their experiments also showed that fish which live in the open ocean are even better at hiding themselves like this than those that live close to reefs, and that open-ocean fish are adept at minimising contrasts along "detection" and "chase" angles—the parts of their body which a predator is most likely to notice, and which the prey is least able to defend.

Puzzling all this out took years. The paper has 17 co-authors from five universities. It involved extensive laboratory and field tests, which drew on their practical skills as well as their combined academic expertise. Physicists built the polarimeter. Engineers built the underwater platforms used in the field tests. Biologists, including Ms Cummings, caught the fish.

Collaborations can be expensive, though, and cash for ambitious investigations into open-ended questions about intriguing bits of animal-kingdom trivia can be hard to come by. Which raises the second question. This research was supported National Science Foundation (NSF), a federal agency designed "to promote the progress of science". The NSF allocates most of its modest annual budget to the kind of basic research that is often denounced in Congress as irredeemably frivolous. But Ms Cummings's work was also supported by the Office of Naval Research, which actually instigated the effort in the first place with a call for proposals about dynamic camouflage. The Department of Defence allocates most of its research budget to applied science and development. Its budget is vastly larger than most, though, and it saves several billion dollars a year for more general topics like this one. The subjects at hand often sound esoteric, if not silly, but the questions may prove more than merely academic. The invisible fish make that, at least, easier to see.

Now you see it

Lexington | The politics of panic

Two front-runners for the Republican nomination seem ready to harm America to win

A DAY after Donald Trump called for a "total and complete shutdown" on Muslims entering America, until the government can "figure out" the threat of terrorism, the property tycoon and presidential candidate was invited on television to say how his scheme might work. For instance, how might border guards spot Muslim travellers, given that most passports do not record a holder's religion, an interviewer asked? Mr Trump was ready for that one. "They would say: 'Are you Muslim?'" he explained.

There was no sniggering from Republican rivals. They have spent too many months watching Mr Trump lead in opinion polls of conservative voters, even as he tramples facts, insults opponents and makes fantastical promises that would get any other candidate hooted off the stage. His Muslim travel ban may be unworkable, probably illegal, shameful and a propaganda coup for Islamic State (IS). But this is the candidate who Republican supporters have named, repeatedly, as the most trustworthy on national security—though his only direct experience in that field was as a pupil at a military boarding school. Recent terror attacks have left Mr Trump almost giddy. "Every time things get worse, I do better," he bragged to a crowd in Iowa, days after a mass-shooting in San Bernardino, California. "We're going to be so vigilant," he added. "We're going to be so tough and so mean and so nasty."

Mr Trump's proposed ban on Muslim visitors did prove a step too far for many Republican rivals and grandees. Several called it an affront to the country's founding values, even after Mr Trump said it would not apply to American citizens, Muslim soldiers in America's armed forces, athletes and other worthies. Still, Republican leaders feel trapped. They know that as the months pass Mr Trump's policies may offend enough moderate, young and non-white voters to lose them the general election. They also know they cannot win without lots of his supporters, notably the working-class whites who are his most loyal backers. They are terrified that he may run as an independent, splitting the right.

Now terrorism has fallen like a lightning strike onto a political landscape that was already primed to burn. Recent attacks have panicked those Americans who long ago lost confidence in the country's ruling elites and institutions. Republican presidential candidates are united in calling President Barack Obama weak and passive in the face of danger: a view shared by a growing number of voters. They accuse him of appeasement when he declines to say that America is at war with "radical Islamic terrorism"—scorning his argument that using such language helps IS to portray their thuggery as a religious conflict with unbelievers.

Republicans are a bit less united when it comes to their plans for defanging IS. Presidential hopefuls disagree about how many special forces might help on the ground, and how much government surveillance Americans should tolerate. They argue over whether to confront such blood-soaked autocrats as Bashar al-Assad in Syria, or let him kill Islamists unobstructed. In the end, though, their differences are relatively minor. After 14 years of combat, there is no war party in Washington urging full-scale invasions to build new democracies. Americans want to feel safe and to see terrorists crushed. Few want to fix the Muslim world.

The really perilous Republican divide involves not foreign policy, but the social contract between government and the American people. For one group of candidates, public panic is a cue to chide Mr Obama for incompetence and misguided priorities. These Republicans include Senator Marco Rubio of Florida, Governor Chris Christie of New Jersey and the former governor of Florida, Jeb Bush. They complain that Mr Obama called for gun control after the San Bernardino shootings—arguing that strict gun curbs only disarm the law-abiding. They grumbled when he attended a climate-change summit in Paris, calling global warming a less urgent threat than terrorism. Not every voter would agree. But this is the stuff of normal opposition politics.

Mr Trump and Mr Cruz cross a line

Alas, other candidates, most notably Mr Trump and Senator Ted Cruz of Texas, seem bent on something different. Rather than condemning Mr Obama as incompetent, both men hint that he and his government are malevolent. Pondering Mr Obama's reluctance to talk about Islamic terrorism, Mr Trump waded into the fever-swamps of conspiracy, telling the Republican Jewish Coalition, a conservative group: "He refuses to say it. There's something going on with him that we don't know about."

Mr Cruz calls Mr Obama an "apologist" for radical Islam. On December 5th he told Iowans that the attorney-general, Loretta Lynch, had threatened to prosecute "anyone that has the temerity to stand up and speak against radical Islamic terrorism". Untrue: Ms Lynch promised to prosecute anyone inciting anti-Muslim violence. Still, Mr Cruz earned cheers for daring Ms Lynch to arrest him for calling Islamic terrorism "evil" and for pledging that "in the United States we will not enforce *sharia* law". He calls Mr Obama "obsessed with disarming" Americans, even though, he tells supporters: "You get rid of the bad guys by using our guns."

To date the Texan senator has declined to condemn Mr Trump's ban on Muslims. On December 8th Mr Cruz said he disagreed with that ban, instead promoting his own plans to bar refugees from such terror-wracked states as Syria and Iraq. In the next breath Mr Cruz commended Mr Trump for "standing up" and focusing attention on the need to secure America's borders.

In some polls of the Republican presidential field, Mr Trump and Mr Cruz share half of all supporters between them. At home they hint that the government is bent on harming Americans. Abroad, they seem happy to let their country be seen as xenophobic—though it is hard to see how IS will ever be beaten without Muslim allies. At a moment of public panic, both are behaving with a rare cynicism. Even if voters eventually rebuff their fear-mongering, this election will leave scars. ■

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Venezuela's election

Reasons to celebrate

CARACAS

The opposition's historic victory does not solve the country's problems. But it brings a solution closer

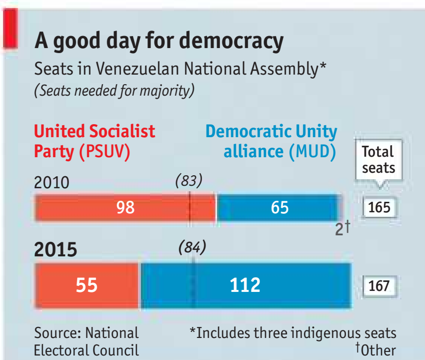
AS THE final results of the parliamentary election on December 6th came in—two days after the vote—Venezuela's president, Nicolás Maduro, was at an army barracks in Caracas preparing for his weekly television show, "In Contact with Maduro". Venezuela's presidents have been making hours-long broadcasts since the late Hugo Chávez, his charismatic predecessor, took power in 1999. Mr Maduro's appearance from the Montaña barracks, a fortified mock castle where Chávez's body now lies, was the first to follow an election defeat.

It was a crushing one. Venezuelans voted furiously against the left-wing regime and for an opposition coalition, the Democratic Unity alliance (MUD), that is determined to bring its increasingly authoritarian and incompetent rule to an end. Nearly three-quarters of the electorate turned out, some despite fears that their ballots would not be secret. The MUD won the popular vote by a margin of 15 percentage points. It captured just over two-thirds of the seats in the National Assembly, which gives it broad powers to challenge the government. Even the district of 23 de Enero, the bastion of *chavismo* where Mr Maduro made his broadcast, fell to the opposition.

The result is a clear rejection of the "Bolivarian revolution" and its economically illiterate ideology, "21st-century socialism". Chávez won support from poor Venezuelans for more than a decade with price controls and lavish social spending. Mr Maduro has neither his charisma nor his luck with oil prices. Basic goods are now in short supply, inflation is in triple digits and the economy is expected to contract by about 10% this year.

Yet the swing to the opposition does not give Venezuela an easy way out of its troubles. The MUD is firmly in control of parliament, but the government remains in the hands of Mr Maduro, who is not scheduled to face an election until 2018. Venezuela's direction over the next several months will depend primarily on how these two forces, each of them internally divided, deal with each other.

There is little sign of incipient co-operation. Broadcasting from the Montaña barracks, Mr Maduro declared that he would "not accept" one of the MUD's top priorities: an amnesty law that would free 70-odd political prisoners, including Leopoldo López, a former mayor jailed for 14 years on trumped-up charges of inciting violence during protests in 2014. Mr Maduro thundered that the "murderers have to be prosecuted, and have to pay".



The outgoing president of the assembly, Diosdado Cabello, thought to be Venezuela's second-most powerful leader, announced on the same show that the government will appoint a dozen new Supreme Court judges before the legislature dissolves later in December. The MUD wonders what other measures the regime will take to fortify its position before the new assembly convenes on January 5th. There is speculation that it will extend an "enabling law" that allows the president to pass laws by decree.

The constitution, rewritten and amended under Chávez, gives the opposition means to fight back. After its election win it can reject the government's budgets and veto the president's longer foreign trips. With a two-thirds majority of the assembly, the MUD can dismiss and appoint Supreme Court judges and members of the electoral commission. This is not a straightforward process. To unseat a judge, the assembly must charge him with a "grave offence", which must be seconded by one of a trio of government-appointed officials. The assembly can impeach ministers more easily, but the government can then appoint his or her successor.

The constitution allows for more drastic measures. With its "supermajority" the MUD could summon a convention to rewrite the constitution. More likely is a move to initiate a referendum to recall Mr Maduro from office, which would be followed by a new presidential election. This would require the signatures of a fifth of the electorate, and could happen starting ▸▸

in early 2016 (when Mr Maduro will have served half of his six-year term). If he is recalled after the early part of 2017, the vice-president would serve out the rest of Mr Maduro's term. Success is not guaranteed. If *chavistas* remain in control of the electoral authority, it is likely to reject pro-referendum signatures.

Some hope that the regime will begin to splinter, allowing for a more pragmatic relationship with the opposition. The election defeat puts Mr Maduro in an extremely vulnerable position, argues David Smilde of the Washington Office on Latin America, a think-tank. It is possible that *chavistas* who regard him as a liability might not resist his recall in a referendum. But there are darker possibilities. Hardliners like the mercurial Mr Cabello may argue that someone tougher is needed to preserve the revolution.

Confrontation between the government and the legislature will not ease the plight of ordinary Venezuelans. The slump in oil prices and the government's reckless spending have greatly diminished the country's stock of foreign currency. There are fears that it will default on its foreign debt in 2016. The government has given no indication that it is prepared to undertake the reforms necessary to stabilise the economy. In the short run those measures, including a devaluation of the bolívar, realistic prices for petrol and other goods and a smaller budget deficit, are likely to deepen the economic distress.

The MUD, an ideologically diverse group of small parties united only in their opposition to *chavismo*, is not much readier to cope. It promised voters change, but offered no coherent economic plan. Yet its victory was a precondition for progress. However the drama plays out, the election has brought Venezuela closer to economic sanity and democratic renewal. ■

Bello | Lots of diplomacy, not many dollars

The fruits of a historic year for the United States and Cuba

ON DECEMBER 17th 2014 Barack Obama and Raúl Castro surprised the world by announcing that the United States and Cuba had agreed to restore diplomatic relations, frozen since 1961. In Havana the news was greeted with euphoria—some residents unfurled the Stars and Stripes alongside the Cuban flag, and church bells rang out. Across the Florida Strait, the excitement was almost as great: businesses of many descriptions announced breathless plans to penetrate a long-forbidden market.

A year on, the excitement is tempered by realism. On the diplomatic front, progress has been significant. After the reopening of embassies, talks have begun on substantive issues, ranging from law-enforcement co-operation to human rights, organised under the aegis of a new Cuba-United States steering committee.

On December 8th officials from both countries met to open discussions about the vexed issue of compensation claims. After the revolution Fidel Castro grabbed homes, mines and mills from American citizens and companies. The Justice Department's Foreign Claims Settlement Commission has accepted nearly 6,000 claims worth a total of $1.9 billion (excluding interest). For its part, Cuba claims that it has suffered damage of no less than $833.75 billion from the American embargo and past CIA attacks.

Negotiations will be "lengthy", warns Alex Lee, the State Department official who handles them. They are also urgent if normalisation is to proceed. For example, officials hope that scheduled flights between the two countries will start in 2016. But Cubana, the state airline, will have to find a code-share partner—if its own planes fly to American airports they face seizure until claims are settled.

A string of American business delegations has visited Havana, but merely to explore (and eat lobster, as one manager recounts). Two things prevent business deals. The first is the embargo, which only Congress can lift. The administration has tinkered at the edges, especially on travel. Provided they belong to one of 12 categories, Americans no longer have to seek permission from the Treasury Department before travelling. They should soon be able to use American debit and credit cards on the island. But ordinary tourists are still not free to travel; nor may businesses invest in, or trade freely with, the island.

The second brake is the Cuban government. The Obama administration issued an order allowing exports of building materials, car parts and farm machinery to Cuba's incipient private sector. Only around 100 import trades have been made. They have to go through Cuba's state import body. "I hoped that within a year there'd be a dozen export agents in Miami, but we haven't really seen that," says an American official. Instead, Cuban entrepreneurs continue to rely on what one calls "the Samsonite market"—carrying supplies home in their luggage. While in theory Mr Castro's government wants both foreign investment and a private sector, in practice it is often wary of both.

Making the most of the diplomatic opening will take political will on both sides. Nobody expects the United States to lift the embargo before its election in 2016. But few expect a Republican president to roll back the new policy. Polls show bipartisan support for it; many Cuban-Americans approve. However, lifting the embargo will require lobbying by business—and encouragement from Havana. "Facts on the ground in Cuba will do more to change [American] policy than anything else," says Jeff Flake, a Republican senator who favours lifting it.

Several things are conspiring for change on the island. One is the weakening grip on power of Venezuela's hard-left government: the withdrawal of its subsidised oil could cut 8% from Cuba's GDP over four years, reckons Pavel Vidal, an economist. Then there is Cuba's continued brain drain. Fears that the United States will abolish a provision that allows legal entry to any Cuban who reaches its soil has prompted a mini-stampede. In the year to September almost 45,000 Cubans arrived, nearly double the previous year's figure. Several thousand have been stuck on Costa Rica's border with Nicaragua for weeks, in a faint echo of Europe's migrant crisis. Last month scores staged a rare public demonstration in Havana against the decision by Ecuador—the favoured transit point—to require a visa.

In 2018 Raúl Castro plans to step down. His likely successor, Miguel Díaz-Canel, lacking the revolutionary aura of the Castros, will face pressure to improve living standards. The obvious way of doing that is by accelerating the pace of economic reform. The diplomatic thaw is almost certainly a prologue to bigger changes.

Argentina's new president

A rocky road to the Casa Rosada

BUENOS AIRES

Cristina Fernández de Kirchner is making things difficult for her successor

PRESIDENTIAL transitions in Argentina are rarely smooth. But the handoff from Cristina Fernández de Kirchner, the outgoing president, to Mauricio Macri, the incoming one, has been awkward even by Argentine standards. Up to the eve of Mr Macri's inauguration on December 10th they squabbled about where it would take place. Mr Macri wanted the Casa Rosada (the presidential palace), once the traditional venue. Ms Fernández insisted on the national Congress building, where her allies would be present. The departing president is creating "as many roadblocks and new problems as she can", complained Mr Macri. "It's not your birthday party," retorted Ms Fernández via Twitter.

The argument is about more serious matters than swearing-in ceremonies. Ms Fernández's last-minute decisions will make it harder for Mr Macri to resuscitate Argentina's ailing economy. Some will be easier to reverse than others. On November 30th Ms Fernández signed a decree boosting government spending by 133 billion pesos ($13.7 billion). On the same day she also named new ambassadors to several countries, including Cuba and Australia. That followed her nomination in October of two Supreme Court judges. Mr Macri should have little trouble halting the new appointments. Dealing with the new spending promises will be trickier.

Ms Fernández is bequeathing to her successor a fiscal deficit that is expected to reach 7% of GDP this year, the biggest since 1982. Reducing that shortfall was never going to be easy; her parting shots will make it harder. They also threaten to distract the new government from its own agenda. With inflation close to 25% and foreign exchange reserves at alarmingly low levels, there is little time to lose. Mr Macri "needs to take decisions in the first days in office to anchor expectations and restore investor confidence", says Dante Sica of Abeceb, an economic consultancy.

Mr Macri has scored one victory in his tussle with Ms Fernández. Alejandro Vanoli, the Central Bank governor, who had obediently printed money to finance deficit spending, resigned on December 9th after threatening to stay in office until the end of his term in 2019.

That clears the way for Mr Macri to appoint Federico Sturzenegger, an economist who has worked at Harvard, to the job. And it allows his administration to move ahead with lifting foreign-exchange controls. Alfonso Prat-Gay, the new finance minister, talks of ending the controls when the government replenishes the depleted dollar reserves, perhaps as soon as December 14th. As for Ms Fernandez's spending promises, a confident member of the transition team told *La Nación*, a newspaper, that those "that aren't financially viable in the short term will be re-examined, renegotiated, lifted, delayed or appealed".

Mr Macri's first weeks in office will be a test of his political skill: he must shift the blame for the harsh measures he will have to take to his predecessor, where it belongs. It may be a hopeful sign that on the inauguration Mr Macri finally got his way. He was to receive the presidential sash and baton in the Casa Rosada from the provisional president of the Senate. Ms Fernández did not plan to show up. ■

Sunken treasure

Who wants to be a galleonaire?

Almost everyone

"GREAT news!" tweeted Colombia's president, Juan Manuel Santos on December 4th. "We have found the *San José* galleon." Colombian authorities discovered the vessel, sunk by the British navy in 1708, in Caribbean waters off Cartagena. It had been carrying treasure from the Spanish colonies to Spain, which was fighting alongside France in the war of the Spanish succession, a struggle for mastery in Europe which put Philip V on the Spanish throne. The ship's cargo of gold, jewels and silver coin may be worth from $1 billion to $17 billion.

As far as Mr Santos is concerned, it belongs to Colombia, which plans to build a museum to display some of it. But other claimants are lining up, and the law governing the rights to such finds is as murky as the depths where they lie. Maritime treasure-hunters base their businesses on the "law of finds", a long-established common-law doctrine that gives ownership to the finder. But in recent years governments have passed laws that contradict such conventions, and threaten to strip the profit out of prospecting for sunken gold.

Britain's gift to future treasure-hunters

Sea Search Armada (SSA), a company based in the United States, says that it divulged the site of the wreck to the Colombian government in 1982. Colombian law at the time already contradicted the finders-keepers principle by reserving half of such finds for the state. But a new law in 1984 gave the state all the rights to the treasure, leaving SSA with a finder's fee of 5%.

After tussles in Colombian and American courts the company has now filed a complaint with the Inter-American Commission on Human Rights, saying that its property rights have been violated. According to its boss, Jack Harbeston, its plan to get access to the wreck in Colombian waters has been met with the threat of military action. It has spent $12m on the search. Colombia insists that the ship is nowhere near where SSA said it was.

A claimant with a better chance of getting the treasure may be Philip V's descendant, Philip VI, or rather the country over which he reigns. Upon hearing that the trove had been found, a Spanish official reminded Colombia of his country's "clear position" on its "sunken wealth". He was alluding to the case of *Nuestra Señora de las Mercedes*, a Spanish frigate sunk in 1804 off the coast of Portugal (again by the British) and found by another American treasure-hunter in 2007. A United States court ruled that wrecked warships belong to the state whose flag they flew and ordered the finder to deliver its cargo of a half-million coins to Spain. Spain also points to a UNESCO convention on underwater cultural heritage, which gives the country that made the artefacts a voice in what is done with them. Colombia, however, has not signed it. Spain hopes to resolve the issue "in a friendly way".

With so much at stake, that may not be possible. Up to 1,000 ships could be submerged off Colombia's coast. If governments want the loot, they will have to give treasure-hunters an incentive to look for them.

Corruption in Brazil

Weird justice

CURITIBA

The courts treat suspects too harshly, and convicts too leniently

TO MANY Brazilians, Sérgio Moro is a hero. The young judge oversees *Lava Jato* ("Car Wash"), the investigation of a vast bribery scheme centred on Petrobras, a state-controlled oil giant. The scandal shows how deeply corruption has penetrated the political and business establishment, especially the Workers' Party (PT) of the president, Dilma Rousseff (who risks impeachment on grounds unrelated to the Petrobras scandal). Mr Moro's unsparing pursuit of the suspects, many of them rich and powerful, is rightly celebrated as proof that Brazil can also uphold the rule of law. "We support *Lava Jato*," reads a banner planted outside his federal courtroom in the southern city of Curitiba.

In all, 144 people have been charged with crimes including bribing Petrobras executives to secure billions of dollars' worth of contracts. The oil men passed much of the illicit money on to politicians. The dozens of people who have been jailed pending trial include some of the biggest names in Brazilian business (though few prominent politicians). Among them are Marcelo Odebrecht, boss of Odebrecht, Brazil's biggest construction firm, and André Esteves, who had been head of BTG Pactual, a big investment bank. Both deny wrongdoing.

Gratifying as it may be to see billionaires behind bars, some lawyers are troubled by Mr Moro's penchant for locking up suspects before they go on trial. Most are loth to challenge a charismatic judge. Those who publicly object tend to work for one of the innumerable defence teams. All 11 directors of the comically named but serious Institute for the Defence of the Right to Defence are thus employed. Heloisa Estellita, a professor of criminal law at the Fundação Getulio Vargas Law School in São Paulo, is one of the few public critics of Mr Moro's methods who is independent. She thinks he has wrongly "used pre-trial detention to extract plea bargains".

The problem is not confined to plutocrats caught up in *Lava Jato*. Roughly two-fifths of Brazil's 600,000 prison inmates are awaiting trial. This mass incarceration of people presumed innocent is a sign of something amiss with Brazil's criminal-justice system, which is based on an antiquated penal code (from 1940) and falls short in many respects of international norms. Although some of its quirks work against defendants, others act perversely in their favour.

Mr Odebrecht's counsel hired lawyers from Blackstone, a barristers' chambers in London, to assess whether the conduct of *Lava Jato* complies with international standards. Its report says that Mr Moro's use of pre-trial detention may raise "serious issues" and violate conventions to which Brazil has signed up. Acknowledging liberty as a basic right, most countries use pre-trial detention as a last resort, to prevent suspects from fleeing, meddling with an investigation or committing more crimes.

That is the justification for jailing Mr Esteves, who along with a prominent PT senator, Delcídio do Amaral, was charged with urging another Petrobras suspect to flee rather than co-operate with investigators. Because Mr do Amaral enjoys parliamentary privilege, the Supreme Court, not Mr Moro, ordered his confinement and that of Mr Esteves. Mr do Amaral also denies wrongdoing.

The grounds for locking up Mr Odebrecht and other Petrobras defendants are less obvious. Brazilian law allows judges to order pre-trial detention as a way to maintain "public and economic order", a justification often invoked by Mr Moro—as in Mr Odebrecht's case. He argues that the suspects have the money and the political clout to interfere with the investigation. The detention of Mr Odebrecht is "an exceptional measure", he admits, but "this is an exceptional case".

Perhaps not as exceptional as the judge contends. The Blackstone brief argues that most suspects can safely be released on bail; house arrest or electronic bracelets can stop them from fleeing. Pre-trial detention should not be used to browbeat them into co-operating with investigations or to signal the gravity of the charges they face. The *Lava Jato* inquisitors deny they are doing this, but readers of Blackstone's report will wonder. Timothy Otty, its lead author, has written human-rights opinions on behalf of Abdullah Ocalan, a Kurdish separatist leader, and detainees at the American prison in Guantánamo Bay. "Just as it was wrong to jettison the protection of liberty and right to fair trial as part of the war on terror, so it would be wrong in the fight against corruption," says Mr Otty.

Brazil's high courts have taken a similar view. In at least ten habeas corpus petitions arising from *Lava Jato* the Supreme Court has freed suspects, often on the grounds that Mr Moro had jailed them for "generic and abstract motives". A court could soon free Mr Odebrecht for the same reason. Last week a judge on Brazil's second-highest court said he should be released and monitored with less draconian measures.

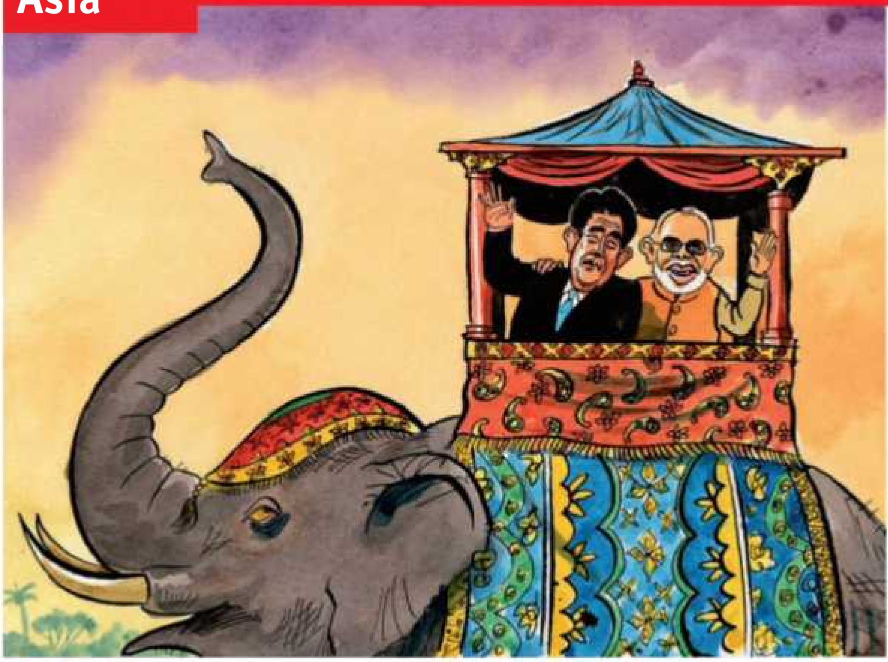
If Mr Moro is acting high-handedly, that is because Brazilian law confers unusual power on judges. In addition to overseeing the investigation of suspects such as Mr Odebrecht, he will single-handedly try the case, render a verdict and hand down a sentence, all without reference to a jury. These multiple roles can give rise to a conflict of interest: an investigating judge may be reluctant to acquit a suspect he has jailed. The answer to this "schizophrenic" situation is to split the roles of investigating a case and trying it, as is the practice in France and Italy, says Fernando Mendes of the Association of Federal Judges. He also favours a more demanding standard for locking suspects up than keeping order.

Tender traps

But the law can be as weirdly indulgent as it is harsh. Alongside mayors, priests, policemen and many others, university graduates are entitled to pre-trial imprisonment in "special" (ie, relatively comfy) conditions. Mr Odebrecht, a graduate of the Federal University of Bahia, spent his first month in custody in a windowless cell in a federal police station but was then moved to a prison hospital, where his hypoglycaemia can be monitored.

If convicted, he could be set free, at least for a while. That is because convicts are entitled to go home while they exhaust their appeals. In one notorious case Antonio Pimenta Neves, a journalist who killed his lover in 2000, confessed and was released on bail six months later. He was sentenced in 2006 and began doing time in 2011, after the Supreme Court upheld his conviction. Mr Odebrecht's high-powered lawyers could keep him out of jail for years.

Many critics of the system, including Mr Moro, think convicts should have to file appeals from their jail cells. That would make sense. So would an overhaul of the criminal code which left at liberty people presumed innocent and guaranteed them a fair trial. Mr Moro is right to uphold the law, but the law itself needs to change. ■



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India and Japan: ever closer friends

Come together on the Abe road

DELHI AND TOKYO

The leaders of India and Japan admire each other and fear China. Their friendship will affect Asia

WHEN Japan's prime minister, Shinzo Abe, belatedly took to Twitter, the first world leader he followed—and still one of the very few people he tracks—was his Indian counterpart, Narendra Modi. Periodically the two men engage in effusive courtship over the Twittersphere.

Much draws them together. Both are nationalist leaders of big Asian democracies, with a dark side that often rankles: Mr Abe has a tin ear when it comes to imperial Japan's wartime atrocities, while Mr Modi averts his gaze from the Hindu bigotry of some of his devotees. Both want to assert the greatness of their countries by promoting growth-spurring reforms and closer military ties with the West. Both covet permanent seats on the UN Security Council. And though China remains their biggest trading partner, both want to counterbalance its military rise.

So when Mr Abe comes to India for a three-day official visit beginning on December 11th, the question will be whether the two leaders can move from flirtation to commitment. The likeliest concrete outcome of the visit will be an agreement for Japan to build a bullet-train line linking two of India's most dynamic cities, Mumbai and Ahmedabad, the commercial capital of Mr Modi's home state of Gujarat.

Two other possible deals would be more significant, and therefore contentious. One is an accord on civil-nuclear co-operation that would allow Japanese firms to bid to build nuclear-power stations in India. Japan regards itself as a champion of nuclear non-proliferation, yet an accord would give a Japanese seal of approval to India's status as a nuclear-armed state. The second deal is a plan for India to buy and build Japanese seaplanes. It would amount to Japan's first foreign sale of a military platform; the ShinMaywa US-2 planes are used for surveillance as well as search-and-rescue.

Mr Abe claims that the Indo-Japanese partnership is the world's "most important bilateral relationship". That sounds like flattery. The most important relationship for both Japan and India is obviously with America—not least for countering China. Yet the Indo-Japanese romance is certainly blossoming. This year Japan joined the annual Malabar naval exercises with India and America. Australia wants to join in, too. An earlier attempt at such multilateral war-games in the Indian Ocean was abandoned in 2008 after protests from China.

The resumption of such exercises betrays regional nervousness about China, particularly over its building of bases on contested reefs in the South China Sea. Under Mr Modi, India has for the first time declared an interest in freedom of navigation in the South China Sea. Last year the prime minister complained that "Everywhere around us, we see an 18th-century expansionist mindset: encroaching in other countries, intruding in others' waters, invading other countries and capturing territory." Few doubted that he meant China (and perhaps Russia, too).

"The geopolitical rapprochement between India and Japan has been nothing short of spectacular," says Ashley Tellis, a former American diplomat now at the Carnegie Endowment for International Peace, a think-tank in Washington. That said, India's tradition of non-alignment and Japan's tradition of pacifism are still felt. Officials in Delhi are adamant that India will not join any formal alliance. "We can play with everybody. We are nobody's camp-follower," says one. Neither India nor Japan expects to come to the aid of the other should the shadowboxing with China ever turn into a real fight. Still, Mr Tellis argues that closer co-operation creates uncertainty for China. Its future operations could be greatly hampered if, say, India and Japan were to share intelligence on the movements of Chinese ships in or around the Strait of Malacca.

A love that knows some bounds

The Indo-Japanese love-in is unmarred by territorial disputes or historical resentment. During the second world war Japan was stopped before it could invade the British-run Indian subcontinent. Meanwhile, many Indians still admire Japan for offering shelter to fighters for Indian independence, notably Subhas Chandra Bose. Later, it is true, Japan and India drifted apart during the cold war. And after India detonated a nuclear bomb in 1998, Japan suspended much of its aid. But that is now all but forgotten.

If India's non-alignment once meant a tilt towards the Soviet Union, its "all-alignment" of today is built on an ever-stronger ▸▸

partnership with America. In 2005 America signed with India a civil-nuclear co-operation agreement which, in effect, admitted India to the club of nuclear powers even though it has not signed the 1968 Nuclear Non-Proliferation Treaty. Warmer Indo-Japanese ties followed.

Economic links between India and Japan, by contrast, are still strikingly thin. Though India is the world's seventh-largest economy, it accounts for no more than about 1% of Japan's imports, exports and direct investments abroad. India missed out on the decades of Asia's factory boom to its east. It remains outside the Asia-Pacific Economic Co-operation forum and the Trans-Pacific Partnership, a free-trade deal that America, Japan and ten other countries have just agreed upon.

Still, India sees a lot of synergy: Japan has skills and capital, while India has a vast untapped market and much scope to boost manufacturing. Japanese firms, though, remain frustrated with Indian bureaucracy and barriers to trade. Despite its political risks, many Japanese firms still find China more attractive, says Tsuneo Watanabe of the Tokyo Foundation, a think-tank. The bullet train, for instance, could yet come a cropper over India's arcane land-acquisition laws.

The nuclear co-operation deal, meanwhile, is held up because some Japanese are wary of it. India says it will not give Japan more assurances about its nuclear programme beyond those given to America and the Nuclear Suppliers Group (of which Japan is a member). To Japanese demands that India must sign the Comprehensive Test Ban Treaty, India replies that it stands by its voluntary moratorium on nuclear-weapons testing. Japan's nuclear industry, under pressure after the disaster at the Fukushima Dai-ichi plant, in 2011, is keen on the agreement. It would also help American nuclear-power firms, which work closely with Japanese partners, to finalise contracts in India. As for the seaplanes, they are a questionable military priority, but represent a step towards co-operation between the two countries' defence industries. Some suspect that the seaplane deal hangs on a resolution of the nuclear question. In future Japan also hopes to sell conventional submarines to India.

During Mr Abe's visit the two prime ministers will travel to Varanasi (once Benares), Mr Modi's parliamentary constituency. There they might ponder the roots of their romance and the obstacles to its fulfilment. A centre of Hinduism, Varanasi is also near the legendary birthplace of Buddhism, which spread across Asia to Japan (the city is twinned with Kyoto, rich in Buddhist heritage). But Mr Modi's ambitious plan to clean up the filthy Ganges, with the help of Japan and others, has so far made little progress. Like the sacred river, India moves slowly. ■

Floods and India's Coromandel coast

Next time by water

AMARAVATI

Floods should be a warning to those building a state capital from scratch

THE city of Chennai is slogging through a season of misery. Once called Madras, the coastal capital of Tamil Nadu, with a population of 8.7m, has been largely under water for over a month. On a single day, December 1st, it had nearly half a metre (20 inches) of rain—about as much as San Francisco gets in a year. Some 450 people have died, including 18 who perished in a hospital that lost its power supply. Perhaps 1.8m, mostly the poorest, have been displaced. The cost has yet to be tallied. Chennai's proud new high-tech quarter was among the worst-flooded.

If the disaster was an act of God, it was abetted by human folly. The role that global warming plays in storms is disputed, but bad city planning surely compounded the damage. One question is whether the rest of India's storm-swept Coromandel coast will learn from Chennai.

The city has grown willy-nilly. For decades if not centuries it has absorbed the countryside by growing around and over wetlands and, in the early days, incorporating the traditional tanks, or wells, of South Indian agriculture into its temples. In the era of concrete, the number of wetlands, acting as natural drainage systems, has fallen from 650 to just 27. A master plan for Chennai makes much of such areas. Yet the local authorities, weak and divided as in most Indian metropolises, have lacked the will to prevent overbuilding.

In its proneness to flooding, Chennai is hardly alone on the Coromandel, which

reaches down the eastern length of south India (see map). The recent waters have virtually cut off some provincial bits of Tamil Nadu and Andhra Pradesh to the north. The Bay of Bengal rages unpredictably in winter, sending storm surges to break riverbanks in low-lying and densely populated farmland. (Madras itself got its break in 1864 when a surge wrecked the British naval fleet in its base 500 miles (800 kilometres) further north at the mouth of the Krishna river.) The coast felt the deadly tsunami of 2004, which killed about 10,000 people along India's shores. Annual rains appear to be getting worse as the primary south-western monsoon weakens and the north-eastern monsoon grows in strength. That might be because of climate change, via the El Niño effect.

There ought to be a silver lining. Since he became prime minister last year, Narendra Modi has been expounding the value of "smart cities" as nodes for development. The biggest smart city of them all is due in Andhra Pradesh. The state is in need of a new capital, having hived off its part of the Deccan plateau, and the capital city of Hyderabad, to the new state of Telangana. Andhra's technocratic chief minister, ▸▸

Oh, for a pedalo

Chandrababu Naidu, has moved briskly to build a grand capital from scratch. He and the prime minister see eye to eye on most things, and on December 8th a panel estimated that the new capital should cost $4 billion, with generous support from the national government.

A respected team from Singapore has drawn up designs, complete with an artistic rendering of a high-tech wonderland rising on the banks of the Krishna river. The site is enormous, covering 30 villages and 35,000 fertile acres (14,200 hectares) to the west of Vijayawada, a provincial hub. Most impressive in a country where acquiring land is a nightmare, nine-tenths of the farmers have already been coaxed into leaving. Freed from history, and with a single governing authority to guide its growth, in theory the new capital should avoid Chennai's errors.

Amaravati will be its name. The original Amaravati, farther up the Krishna, was the site of a great flourishing of Buddhist culture from the 4th century BC until around 1100AD. Some of India's most glorious ancient carvings hail from the stupa at the centre of this Amaravati, which once attracted pilgrims from as far away as China. On a recent visit it is a bare stump in a sleepy village, silent but for a busload of schoolchildren from Vijayawada. On their way home they pass the stone tablet in a cleared field where Mr Modi and Mr Naidu declared that a new Amaravati should rise. There is a tent with a dusty scale model of the city and some soldiers to guard it, but little else besides grazing goats and the distant berm of red earth supposed to protect this expanse from the river. But right now, neither the ancient nor the prefigured Amaravati exists.

Until very recently, the new capital's planners preferred talk of fibre-optic connectivity to disaster-preparedness. Chennai's flooding has changed the conversation, yet Amaravati's boosters brush off the risks. They say that dams downriver can be opened to protect their field of dreams. Planning for a once-in-a-century disaster does not win votes. E.A.S. Sarma, a retired bureaucrat with a reputation for probity, says they treat risks "flippantly". He points to new research that has located underground "paleochannels" that route excess water in times of stress. Current plans to dig the foundations for Amaravati ignore them.

The failure of Chennai's master plan ought to teach Amaravati's planners that institutions are crucial. A city can be smart enough to know that natural drains should not be built over, and yet lack the political will to protect them. Civic bodies should be smaller and removed from the exigencies of electoral politics. If such institutions were accountable to Amaravati's future residents, the city would have a better chance of staying dry. ■

Deaths at sea

The ghost vessels of North Korea

FUKUI

The young dictator's grim hand may reach even out to sea

FOR millennia the Tsushima current running north-eastward up the west coast of Japan has brought abundance to fishermen. More recently it has brought less welcome rubbish, as well as giant jellyfish grown monstrous on the effluence from the industrial revolutions taking place in China and South Korea. Now the current is giving up perhaps its grimmest cargo yet: rickety boats filled with corpses. Since October over a dozen vessels have been found drifting in Japanese waters. The latest, recovered on December 6th off the coast of Aomori prefecture in Japan's north-east, contained four badly decomposed bodies. It brings the death toll from the ghost boats to 25.

Japan's coastguard will not speculate on the boats' origin, but everything—including their wooden build and primitive, flat-bottomed design, as well as cigarette packets found on board—points to reclusive North Korea. The bodies have been cremated, unclaimed and unnamed.

They were probably fishermen for squid, who were caught out in storms and who died of exposure or thirst. Fishermen in Fukui prefecture in north-central Japan say that a capsized vessel found about 100 kilometres (62.5 miles) off the coast last month had only primitive gear for catching squid and lacked even a VHF radio. "It's incredible that it got this far," says Mitsumasa Sakashita, one of the fishermen.

Little happens in North Korea without the say-so of the young dictator, Kim Jong Un, and the ghost vessels may attest to that. He has pushed the state-owned seafood industry to increase its haul. Seafood is North Korea's sixth-biggest export. Running the business has long been in the gift of the army. It ensures that troops are fed first, and that the army earns hard cash—seafood exports to China, especially of crab and clams, were $67m in 2012, according to the South Korean government. That is not much by the standards of any normal country, but a fortune in North Korea. A power struggle for control of the North's fisheries is thought by some to have led to the downfall and execution in late 2013 of Kim Jong Un's uncle, Jang Sung Taek.

Now, says Kim Yong-hyun from Dongguk University in Seoul, the South Korean capital, the North is pressing fishermen to go farther out to sea. Japan's coastguard says over 400 North Korean squid boats were spotted near its exclusive economic zone last year, up from 110 in 2013. A big convention of the ruling Workers' Party of Korea, the first since 1980, will take place in May. Kim Jong Un, says Mr Kim of Dongguk University, will want to show how well the regime is working under him.

North Korea has haunted this Japanese coast before. In the 1970s North Korean agents snatched schoolgirls and salarymen from villages to work as translators and to train North Koreans as spies. Very occasionally, defectors have been known to wash up too. The latest deaths are tragic, says Mr Sakashita. After all, he says, they were fellow fishermen who died alone with no one to mourn them. ■

Taxing South Korea's clergy

More money than God

SEOUL

Ministers at megachurches may soon have to render unto Caesar

"HOW can we face God if we collect taxes from religious men?" asked the deputy speaker of South Korea's national assembly. The Christian Council of Korea, the country's largest Protestant lobby, threatened to launch campaigns at election time against legislators who supported the bill. Clerical pressure has for decades stalled a vote on a tax. But on December 2nd MPs agreed to impose one on the income of religious leaders from 2018.

South Korea is the only advanced country that exempts its clergy from all taxation. Still, many Buddhist monks and Protestant pastors pay dues voluntarily on their personal incomes; all Catholic priests have done so since 1994. In September the Presbyterians said that they would join them. Priests who support the new tax say it is only fair: everyone is doing God's work, whether reverend or farmer. But others scorn the idea. They say taxes reduce the godly work of the clergy to mere labour.

The Church Finance Accountability Network, a voluntary group which advises churches on managing their budgets, says that pastors should set an example. There is a widespread belief that some churches are averse to tax because they do not want closer scrutiny of the huge sums that cross their collection plates. Last week the National Tax Service said it had discovered 63 organisations that had issued receipts for fictitious donations (and had received kickbacks from the tax-dodgers). Almost all of them were religious groups. In a recent poll of 1,000 South Koreans by the Christian Ethics Movement, a local reformist body, only two in ten thought Protestantism was trustworthy. Almost a quarter of those who did not think so said churches needed to make their accounts more open.

The capital, Seoul, is home to 17 megachurches with over 2,000 members each. Ministers manage them like businesses—and sometimes live like tycoons. Yoido Full Gospel Church, founded by Cho Yong-gi, has interests in a national daily and a university (with 830,000 worshippers, it is the world's largest Christian congregation). Last year Mr Cho was convicted of tax evasion and of embezzling 13 billion won ($12m) in church funds. In 2013 Sarang Community Church reopened in a gleaming glass structure that cost 300 billion won to build in the ritzy district of Gangnam. Retiring clerics often receive a car or a flat. Mr Cho left with a tidy 20 billion won.

Exuberance has long been a hallmark of South Korea's brand of Pentecostalism. It subscribes to a gospel of success, not one of sacrifice, says Kim Sung-gun of Seowon University. Many worshippers believe that their devotion helped South Korea prosper and that their riches are a sign of God's blessing. At a recent service, a preacher at Yoido prayed that the country might attain a GDP-per-person of $40,000, echoing a plan by President Park Geun-hye for 2017.

But Pentecostalism is losing some of its appeal. Koreans are increasingly drawn to Catholicism, which they regard as more humble and serious. According to the latest census, the number of Catholics grew by three-quarters in the decade to 2005, to make up 11% of the population. Protestants were 18%. Chong Chae-yong of Kangnam University says South Koreans "consume the image of a church rather than its doctrine". Paying tax may help fill pews. ■

Blessed are the rich

Asia's migrant domestic servants

Broken homes

BANGKOK AND COLOMBO

Maids are easily abused, but nannying them will make matters worse

SMALL stones litter a petitioners' table outside a government office in Colombo, Sri Lanka's capital. Each jagged shard symbolises the rocks that may soon be used to kill a Sri Lankan migrant maid convicted of adultery in Saudi Arabia, who has been sentenced to death by stoning in April. The fate hanging over the as-yet-unnamed woman—a 48-year-old, married mother of two—has provoked mounting rage in Sri Lanka, whose diplomats only learned of the case in August. Her alleged lover, an unmarried Sri Lankan man, is to be heavily flogged.

For years Sri Lankans have helped to meet foreign demand for cheap domestic workers. This has benefited the country, as it has Asian neighbours such as Indonesia and the Philippines. Sri Lankan migrants sent home $7 billion in 2014, equivalent to 9% of GDP; remittances to the Philippines now amount to around $27 billion, much of it from domestic workers. For many women, scrubbing foreign floors is a route out of poverty.

Yet dangers are rife, particularly in Saudi Arabia, which hired nearly 40,000 Sri Lankan maids in 2014. In 2013 a Sri Lankan worker in Saudi Arabia was convicted of killing a baby and beheaded; two Indonesian maids, also accused of murder, were put to death this spring. Far more common are abuses by employers, including physical assaults and withholding of wages.

The failure of maid-hiring countries to give better protection to their paid guests has been fuelling demands in the sending countries for curbs on such labour flows. Since August Sri Lankan authorities have required would-be migrant maids to secure a certified "family background report" proving that they have no children under the age of five. In April the Indonesian government said it would send no more female domestic workers to 21 Middle-Eastern countries. It talks of eventually recalling all its maids from employment around the world.

The motives behind such bans are sometimes suspect. Nationalists dislike the thought of compatriots skivvying for foreigners; conservatives would rather women did not work at all. Nor are bans likely to help migrant workers, who generally choose to become maids abroad because they have no better option at home. In 2012 Nepal briefly banned women under the age of 30 from accepting domestic work in Arab states. Research by the International Labour Organisation suggests that the law did not dissuade many from going, but did make them much more vulnerable to people-traffickers.

Meanwhile, hardly any government keeps a close eye on its citizens working as servants abroad. On December 8th Sri Lankan authorities said they had at last persuaded Saudi Arabia to postpone its planned execution pending a re-examination of the maid's case (she is said to have confessed under duress). With luck, it will not be too late.

Banyan | In transit

As Aung San Suu Kyi sits down with the generals, Myanmar's political future remains unclear

"ELECTED…Not winner…Not yet!!!" reads the caption to a photograph of Aung San Suu Kyi, Myanmar's opposition leader, posted this week on the Facebook page of a victorious candidate from her party, the National League for Democracy (NLD), in last month's general election. The NLD won an astonishing four-fifths of contested seats in the lower house of parliament—enough to allow it to choose the next president. But the party has been here before. In 1990 it also won an election in a landslide; but it was never allowed to take power from the ruling army, which still dominates the present, notionally civilian, government. A series of meetings this month between Miss Suu Kyi and the regime's leading lights has given confidence that, this time, the army will honour the election result. Many questions remain, however, about how much power Miss Suu Kyi and her triumphant party will have. It is still not entirely clear they have won.

After procrastinating for nearly a month after the vote, both the incumbent president, Thein Sein, a former general, and the serving army chief, Min Aung Hlaing, held short meetings with Miss Suu Kyi, to discuss the "transition". Then on December 4th she had a longer session with Than Shwe, the 82-year-old "senior general" in the former junta. This was remarkable for a number of reasons. First, Mr Than Shwe is supposedly in retirement, having handed power to Mr Thein Sein's administration in 2011. Long rumoured to play an important backstage role, he has in recent years never poked his head out from behind the curtain. Second, although little is known for certain about Mr Than Shwe, stories of his personal, almost superstitious, aversion to Miss Suu Kyi and of his determination to prevent her becoming Myanmar's leader are legion. Yet after the meeting his grandson, said to have helped arrange it, quoted him as supporting her as the country's "future leader". He even posted on Facebook a picture of a banknote signed by Miss Suu Kyi, Mr Thein Sein and Mr Than Shwe, apparently as evidence of agreement on the succession.

It is also remarkable that Miss Suu Kyi should sit down and scribble on banknotes with a man who misruled her country for so long. Some of her loyalists must have gulped. Mr Than Shwe's cronies enriched themselves as Myanmar remained one of Asia's poorest countries. His regime brutally crushed dissent, kept Miss Suu Kyi under house arrest and locked up and tortured many of her followers. In fighting ethnic insurgencies, its soldiers raped, torched villages and press-ganged children. But Miss Suu Kyi has never called for retribution. The daughter of Burma's independence hero, Aung San, she speaks respectfully of the army, and says she sees it as her father's creation.

Not seeking vengeance makes political sense. A peaceful transition relies on the generals' confidence that they will not find themselves in jail. A genuine transition, however, also requires them to give up some of the self-serving lines they wrote into the constitution they have bequeathed to the country, designed for a "discipline-flourishing democracy". The best-known, written with Miss Suu Kyi in mind, bars her from the presidency, as the mother of British citizens. Miss Suu Kyi blithely asserts she will rule anyway, "above the president", and such is her prestige that she surely could. Other constitutional roadblocks are harder to skirt. One guarantees the army 25% of the seats in parliament and sets the threshold for changing the constitution at more than 75%. Another reserves three cabinet posts for serving soldiers: the ministries of defence, border affairs and internal affairs. The interior ministry gives the army control over the bureaucracy, and hence over policy implementation.

Hence the army is not so much ceding power to the NLD as offering to share it. The optimistic view is that this will allow a steady, peaceful transition as civilian rulers find their feet and the generals gradually withdraw, to bask in retirement as the architects of Myanmar's democracy. Even if that is the destination, however, the journey will be fraught. The NLD will have to find a path between the hopes of its euphoric supporters for rapid change and the army's fears of instability and losing control, clout and wealth. On virtually every important issue, this will be tricky. Economic reform, for example, requires breaking up some of the army's vast, grubby interests. And for the NLD, retaining popular trust demands halting and reversing the land-grabs the army and its cronies have made across the country.

Power-sharing will also complicate the task of bringing peace to Myanmar's periphery, racked with insurgencies ever since independence in 1948. A "national ceasefire agreement", ratified by Myanmar's parliament this week, is far from national. Some of the biggest of the numerous armed ethnic groups did not sign, preferring to wait and see what the election brought. And the army has in recent months been engaged in intense campaigns in two states—Shan and Kachin—which have displaced thousands. The NLD is committed to a vaguely formulated "federalism" which the ethnic groups also want. But some of the ethnic political parties resent the NLD for having fielded candidates against them in the election. Moreover, a federal state would also need constitutional change; and the army sees itself as the guarantor of national integrity against such separatist forces.

Walking the pig

There are many rumours in Myanmar about Mr Than Shwe, his superstitious beliefs and his antipathy to Miss Suu Kyi. One, quoted in the book "Everything is Broken" by Emma Larkin, has his wife in 2007 going for a walk around Shwedagon, Myanmar's holiest pagoda, with a dog and a pig on leads. The story is widely believed: a dog signifies Monday, a pig Wednesday. Miss Suu Kyi was born on a Tuesday, so the circumambulation would render her powerless. Even now, after a peaceful and triumphant election, when things are going far better than anyone had dared hope, some worry that this is still the old soldier's aim. ■

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Luxury goods

Million dollar mastiffs

BEIJING

Xi Jinping's crackdown on corruption is hitting Chinese luxury-peddlers harder than foreign ones

CHEN BINQI grows and sells abalone, a delicious kind of mollusc, in Dongshan, a seaside resort in the southern province of Fujian. He says that from 2010 to 2012 the price never dropped below 50 yuan ($7.7) for 500 grams on tomb-sweeping day, a public holiday and one of the busiest days for tourists. In 2013 it fell to 40 yuan, which meant most breeders were selling below cost. "Now it's down to 30-something, which is unbearable."

In the neighbouring province of Guangdong, Lin Gongxi has been carving jade for 50 years in Jieyang, China's jade capital. When business was good, he told *Southern Metropolis Daily*, he used to go to bed at 2am and get up at 6am. Now he often has no work for eight days out of ten. Half the shops at Jieyang's jade-trading centre are empty. Rents have fallen by three-quarters.

In Beijing's Panjiayuan market, Wang Lin sells copies of Ming and Qing dynasty carved furniture. Same story. Businesspeople used to order ten-piece suites of office furniture; he sold them as fast as his carpenters could make them, sometimes faster (there was a waiting list). Now, prices have halved and he "can shift maybe a couple of chairs out of ten".

China is the world's biggest market for luxury goods, accounting (by some measures) for half of all luxury spending. The slowdown in the growth of China's economy and household incomes is usually seen as bad for rich-country purveyors of luxuries such as perfumes, golf clubs, art and the like. Which it is: LVMH, a producer of champagne and handbags, recently closed three shops in China, while Christie's annual auction of Asian 20th-century and contemporary art in Hong Kong earned only HK$508m ($66m) in November, down from HK$935m in 2013.

But the woes of Western vanitymongers are trifling compared with those of their Chinese counterparts. Prices of jade and Tibetan mastiffs, for example, have dropped by half or more. Hundreds of businesses have gone bust. This owes as much to politics as economics.

That doggy in the window

Take Tibetan mastiffs, a breed of enormous sheep-guarding dog (one is pictured above, on sale). These were the must-have status symbol for China's new billionaires in the late 2000s. Three years ago ordinary Tibetan mastiffs could fetch around $20,000. Now they sell for a tenth of that. Earlier this year an animal-welfare group rescued 20 abandoned mastiffs from the back of a lorry, which was taking them to a slaughterhouse to be sold for leather and meat—for a mere $5 each.

Reading the leaves

Tae's Golden tea price, yuan per 357-gram cake

Source: Company statistics

Tibetan mastiffs were a fad for plutocrats, usually bought as status-enhancing guard dogs. But demand for most other Chinese luxuries depends on a culture of gift-giving. Every transaction must be marked by a present: jade, tea, a meal. One billionaire, Hong Weihua, even paid for a delegation of officials from his hometown to visit America (quite legally).

Since 2013 the anti-corruption campaign of Xi Jinping, China's president, has made conspicuous consumption politically suspect and reined in the practice of lavishing gifts on officials. Tea used to be a favourite present, especially Pu'er, a fermented and aged variety from the south-western province of Yunnan. The price of top-of-the-line Golden tea from the Tae tea company, the world's largest Pu'er maker, fell from 917 yuan per 357 grams in March 2014 to 512 yuan, before rallying a bit (see chart). The president of the Yunnan Tea Association told the *Kunming Daily* that, after a boom and bust, the tea business was entering "a new normal" (a term popularised by Mr Xi, who uses it to describe slower growth of the economy as a whole). This means lower prices and more modest sales.

The abalone business shows that it is Mr Xi's rule against "extravagant eating and drinking", rather than a lack of cash, that lies behind the luxury squeeze. Mr Chen, the seafood-dealer in Fujian, says abalone is not especially pricey, but because it is seen as a luxury "sales took a big hit". Of the breeders he knows, 40% quit during 2013 and 2014.

At the top end of the mastiff business, it is not so bleak. In 2011 a coal baron is said to ▸▸

have paid 10m yuan ($1.5m) for Big Splash, a Tibetan mastiff puppy. In 2014 a property developer paid 12m yuan for a dog, making it the world's most expensive canine. Han Lianming, a mastiff breeder near Beijing, says the market for such finest-quality dogs still looks good. "Someone offered me 20m yuan for that one. It was crazy," he says contentedly, pointing to a vast ball of russet fur and teeth that is lumbering around the courtyard (the deal did not come off). A select few millionaires appear immune to the anti-corruption campaign and unfazed by dog-breeders' efforts during the boom years to boost supply by crossbreeding. This diminished the rarity-value of mastiffs, but it also produced some highly sought-after specimens.

The jade market, however, has little good news to report. Yu Ming, the director of the jade committee of the China Traditional Culture Promotion Council, a state-run body, says that though sales at big auction houses are holding up, the retail business is plummeting. In big cities such as Beijing they have fallen by 10-20%. In second- and third-tier cities (such as provincial capitals), he says, sales are down by 40-50%. In 2013 there was a spike in the price of raw jade from neighbouring Myanmar, when political violence briefly disrupted supplies. Mr Yu says many thought the conflict would lead to higher prices in China. But to everyone's surprise the retail price actually fell. "There just isn't that big a market any more," he laments. ■

Film and television

Blood and cuts

BEIJING

Unusually, some Chinese want more censorship

A FLYING dagger stabs a Japanese soldier in the heart. Another fighter has his neck slit by a Chinese secret agent. Others are shot at close range, gassed or drowned. Like war dramas everywhere, "Royalty in Blood", a 36-part television series about the war between China and Japan from 1937-45, is pretty gory. Yet unlike elsewhere, the on-screen violence is not just for adult viewers. It is aired each week at 7.35pm, the most popular television-watching hour, when even very young children in China have yet to go to bed.

All films and TV shows are vetted by a government committee. Oddly, however, China has no ratings system to denote a film's suitability for certain age-groups. It has no TV "watershed" either, as many countries do, dividing the day into family-oriented programming and late-night viewing with more adult content. Violent TV dramas are sometimes shown on public transport. Ticket sales at cinemas increased nearly 50% in the first 11 months of 2015 on the previous year to reach $6.3 billion, a total surpassed only by America. Yet questions are often raised about whether films are safe and appropriate for children, who can watch any of them.

The government does not want ratings or a watershed because it does not want to be seen to be permitting sex and violence for anyone. Its constraints on what may appear on screen represent a laundry list of the state's anxieties. Content must not "endanger" China's unity, security or honour. It also should not "twist" history, feature explicit sex or gambling, advocate "the supremacy of religion" or "meticulously describe fortune-telling". Playing up violence is prohibited, in theory.

Wholesome family viewing

But to attract adult audiences, makers of film and TV entertainment often like to push the boundaries of what the Communist Party regards as good taste. And even the prudish standards of the censors are sometimes flexible enough to allow content that might shock children, who are just as impressionable in China as anywhere else. In apparent response to demand from anxious parents, a handful of cinemas in the far western province of Xinjiang introduced their own unofficial ratings in 2014.

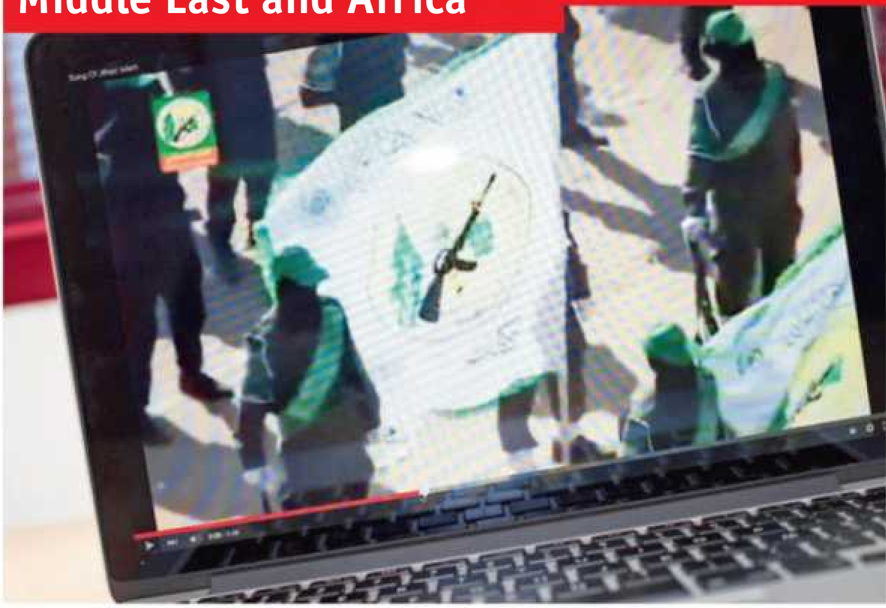
Censors' shockability has varied over time. The first Communist-era on-screen kiss was a peck on the cheek in "Romance on Lushan Mountain" in 1980, the year that Richard Gere appeared naked in "American Gigolo", among the first Hollywood films to feature full-frontal male nudity. China has relaxed a bit since: for a while, one film fan had a blog called "Research Centre for Nipples in Chinese Films".

However, prudishness has revived in recent years. The nude scene in "Titanic", a Hollywood film, was screened intact in China in 1998, for example, but removed from the 3D version released in 2012. Heaving bosoms have been blacklisted too: in the past year two popular TV dramas have been forced to re-edit shots that include plunging necklines and to zoom in on the actresses' faces instead (movies involving such filming techniques are referred to scathingly as "big-head" ones). Online streaming sites, which previously had often succeeded in escaping the censors' attention, are coming under closer scrutiny.

Moral strictures are not applied equally. Regulators warn against "displaying excessive drinking, smoking and other bad habits", for example, yet smoking is routine on Chinese screens. One blockbuster released in 2015, "Gone with the Bullets", had to delay its premiere, probably because it had to adjust some of its sexually suggestive content. But it featured 45 smoking scenes—around one every three minutes.

Tolerance for violence is higher than it is for sex, perhaps because so much of what passes for entertainment on TV and in cinemas is in fact propaganda relating to the war against the Japanese and the party's bloody rise to power. Such historical gore is mostly given a clean pass (although some anti-Japanese war shows were reined in for being "overly dramatic" in 2013). A Chinese film released in 2006, "Curse of the Golden Flower", was given a rating in America that required those under 17 to be accompanied by an adult because of its violent scenes (one is pictured). But these scenes were left uncut when it was screened in China. Viewers were given no warning about them. On TV "The Patriot" (Yue Fei), a popular historical drama, commonly features long fights with bloody swords, arrows through the heart and dripping corpses. It currently airs on one channel in the early afternoon (others show it at 7.35pm).

Censors more often pounce if the context is not related to China's military heroism. A Japanese *anime* film, "Attack on Titan", was pulled from the Shanghai film festival in June, probably because of its violent content. A children's cartoon, "Pleasant Goat and the Big, Big Wolf", a Chinese "Tom and Jerry", was criticised by state media in 2013 for its "vulgar" language and violent images; they said that the wolf was assaulted with a frying pan over 9,500 times in his attempt to bring a sheep home for his wife to cook. There were no apparent objections to the gender stereotypes. ■



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Islamic State

Unfriended

CAIRO

There are signs that Islamic State's propaganda machine is losing its edge

SINCE last month's attacks in Paris, Islamic State has kept up a transcontinental drumbeat of violence. Its claimed recent atrocities include suicide-bombings in central Tunis and Baghdad, mass-murder in suburban California and the assassination of the governor of the Yemeni city of Aden (see later in this section).

The group's horribly imaginative propaganda machine magnifies the menace. A recent IS video from Syria shows children armed with pistols playing "hide and seek", hunting bound captives in a ruined castle before killing them. Another, novel form of murder features in the latest production from Yemen: prisoners in orange jumpsuits are loaded aboard a skiff and pushed offshore, only to be sunk by a barrage of rockets. IS technicians, meanwhile, have released a rebranded version of the group's smartphone app, allowing instant download of such videos. Its musical department has just issued a catchy *nasheed*, or jihadist chant, entitled "I Am a Mujahid"—in Mandarin Chinese.

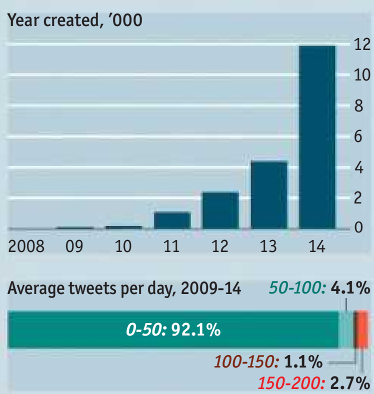
This projection of strength and competence is effective, and not only in fanning terror. A recent report by the Soufan Group, a consultancy, estimates that the cumulative number of foreign recruits to IS has more than doubled since June 2014, to a total of 27,000-31,000. Some may have died or left the so-called caliphate, and the number of new arrivals has shrivelled as a result of tougher Turkish border controls. But the fact that they have come from at least 86 countries testifies to the continued pulling power of IS's message, whether delivered by the slick bimonthly online magazine *Dabiq*, or by radio broadcasts in five languages, or even video games, all chorusing a mantra of Muslim grievance and IS fighters avenging it. And apart from such immigrants, IS has attracted many more stay-at-home groupies, such as the Paris killers and the couple in San Bernardino, California who went on a rampage on December 2nd, leaving 14 people dead.

Yet for all the group's success at purveying and projecting terror, life on the ground within IS territory has grown dramatically darker since Paris. Although far from defeated, the group can no longer live up to its slogan "to remain and expand". IS propaganda depicts a well-ordered caliphate where children learn proper religion, markets are full and the state hands out welfare and regulates fishing in the Tigris and Euphrates. The reality is bleaker.

Anti-social media

Twitter accounts* of the Islamic State

September-December 2014, before shutdown in 2015



Source: Brookings Institution *Based on 20,000 accounts

However much they bicker among themselves, the enemies that surround IS have been slowly advancing on nearly every front. Last month the biggest loss was the Iraqi town of Sinjar, which now makes the journey between IS's main cities, Mosul in Iraq and Raqqa in Syria, far longer and more perilous. A setback that may have been equally significant was the capture by Kurdish forces in Syria of oilfields west of Sinjar, which will dent the IS economy (see next article). Now the much bigger Iraqi city of Ramadi, seized by IS in May, looks set to fall: it is surrounded by Iraqi forces and all but a few thousand residents have fled in anticipation of a bloody final assault. As the edges of the caliphate crumble, its interior is increasingly battered. The American-led coalition that has been systematically bombing IS since August 2014 has ramped up its efforts, flying more than 3,000 sorties in November alone, its highest monthly total.

With no forms of entertainment other than mosques and public beheadings, the internet should provide some relief. Yet, much as the group promotes itself on global social media, inside IS itself private internet use has been banned. Since September even state officials and the group's fighters have been barred from holding personal accounts. Mobile phones are also tightly restricted: where they are allowed, IS police stop users to scour them for subversive material.

And although IS still churns out plenty of propaganda, both its quantity and reach are diminishing. Tabulating the number of ▸▸

pictures uploaded in media releases by the group, Aaron Zelin, a fellow at King's College London, notes a marked decline since a peak in midsummer. Citing other researchers as well as his own observations, Mr Zelin also believes the quality of productions has fallen.

Perhaps more seriously for the group, it is having a harder time getting its message out, too. Aside from the restriction on personal internet use, which affects recruiting, Western governments have successfully prodded a growing number of social-media carriers to make much more serious efforts to weed out and block accounts sympathetic to IS. Twitter has shut thousands of suspect accounts in the past year; before that, there were reckoned to be over 20,000 IS Twitter accounts. YouTube is much quicker to take down ugly content than before. Telegram, an encrypted instant messaging service that had been increasingly adopted by IS as a main channel for its media output, has been blocking the group since mid-November.

As a sign of its growing isolation on the internet, IS announced shortly after the Paris attacks that it would shift its propaganda archive to the "dark web", a hard-to-trace part of the internet largely inaccessible to ordinary web browsers.

As if this were not enough, IS is also suffering from media competition. Its biggest rival, al-Qaeda, has lately boosted both the quality and quantity of its own press releases. Perhaps more galling still, another, less radical Islamist fighting group in Syria, al-Jabha al-Shamiya, recently produced a video that deliberately mocked the style and content of IS's notorious productions. It showed a group of orange-clad prisoners—actually captured IS fighters—being lined up and made to kneel before their executioners. But instead of pulling their triggers, the soldiers proceed to pocket their pistols, and the astonished prisoners are treated to a sermon about the Islamic duty of mercy, before being led back to jail. ■

Islamic State's finances

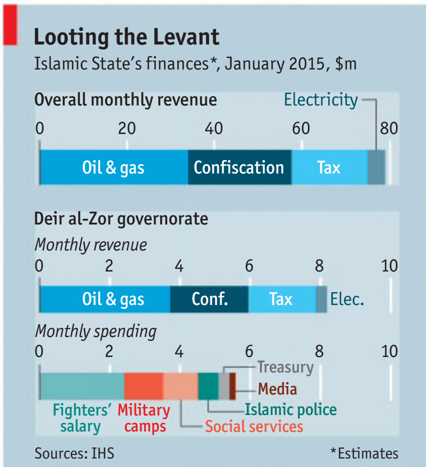
Degraded, not yet destroyed

The self-styled caliphate's income is taking a pounding

WHEN Islamic State burst out of Syria in June 2014, seizing Mosul, Iraq's second city, and nearly reaching Baghdad, it became the richest terror organisation in history. It plundered the banks in Mosul, including the Central Bank, whose vaults contained an estimated $425m. It snaffled a pipeline network filled with 3m barrels of oil. Its self-declared caliphate included some of the best agricultural land in the Fertile Crescent, and the heavy industry that Saddam Hussein had concentrated in loyal Sunni Arab areas. A report compiled for Reuters in October 2014 lists 13 Iraqi oilfields, three refineries, five cement plants, some big wheat silos and a salt mine.

In Syria IS found a captive market for the oil from the 160 fields it had seized. Syria's government is a customer. So, too, are other rebel groups and even some aid agencies operating in the north, says Rim Turkmani of the London School of Economics, whose report says American taxpayers are inadvertently helping to fund IS. "They control the bulk of Syria's oil," says Ludovico Carlino, author of a new report for IHS, a consultancy, "so whether you're a militia, a civilian or a regime, you have to buy from IS's middlemen."

To manage its business portfolio, IS established a bureaucracy, complete with a rule book, the Principles of Administration. Straightforward extortion has evolved into a tax system with reference numbers, fixed rates and regulations for entertainment, including table football (provided the footballers' heads are removed, as human images are forbidden). Oilfields and mines were nationalised (or rather, Islamised). Some businessmen welcomed the ability to pay a single fee for access to a caliphate spanning Iraq and Syria, rather than the many fees that multiple militias squabbling for control charge elsewhere in the area. An income tax of 30% is less than the 50% that Shia militias impose in neighbouring Salaheddin province.



Looting the Levant

Islamic State's finances*, January 2015, $m

Sources: IHS *Estimates

Some 200,000 Sunni Arabs who initially fled IS rule to the ungoverned spaces south-west of Kirkuk later returned home.

Earlier this year, monitors estimated the caliphate's GDP at $6 billion. That is a huge sum for a terrorist group, but peanuts for a state of 7m at war. IS's army consumes over 70% of revenues, according to the IHS report. Foreign fighters are particularly costly, with foreign Arabs being paid at least twice as much as locals and European fighters getting over three times as much. The Mosul windfall was quickly spent, forcing IS to mount fresh raids in search of loot. Waving IS flags and spouting jihadist ideology, Sunnis have chased their Christian neighbours from the prime farmlands of the Nineveh plains—a prize they had long coveted. IS's destruction of antiquities has bolstered demand for those that remain. Its push towards Aleppo's industrial zone has yielded a fresh crop of scrap metal.

But more recently, with coalition air attacks having checked IS's advance and oil prices having plummeted, its finances have faltered. Its retreat from Kobani in January 2015 cost it not only access to a key Turkish border crossing, but the big Lafarge cement plant there. This October it lost Baiji, Iraq's largest oil refinery. American air support for anti-IS rebels now threatens to cut off IS's last direct access to the Turkish border, hampering its ability to attract new foreign fighters. In early 2015 Abu Saad al-Ansar, an IS leader in Mosul, announced a budget of $2 billion for the year. Monitors now expect it to get half that.

Feeling the strain, IS's taxes and fines have climbed and grown more arbitrary. Where once governors across its 12 provinces fixed tax rates, now local municipalities do. Scores of imprisoned suspected collaborators have paid upwards of $30,000 to avoid having their heads cut off. Tensions fuelled by pay differentials have degenerated into skirmishes between local and foreign fighters in Tal Afar. Young men no longer attend Friday prayers for fear of being conscripted.

The bombing surge since October has prompted some to ask whether IS will survive. Of its 160 Syrian oilfields, 20 have come under attack. Al-Omar, Syria's second largest, has faced four attacks in a fortnight from American, British and Russian planes. Total oil production has reportedly fallen from 100,000 barrels a day to below 40,000. Iraqis from Tal Afar say tanker traffic between Mosul and Raqqa has fallen sharply following repeated attacks. After strikes on big refineries, refining has become a cottage industry. Fuel prices have soared, as IS salaries and morale have fallen. Fearful of an exodus, IS has raised the cost of an exit permit to $1,800, and demands two named guarantors, who risk being murdered should its holder not return. So far, though, hopes for a collapse remain just that. ■

Yemen

Houthis, Saudis and jihadis

BEIRUT

The three-way war in Yemen is not going well

IF EVER a war caused pointless death and destruction, it is the one in Yemen. The Houthis, a rebel force, ousted the government from Sana'a, the capital, earlier this year but are nowhere near their aim of ruling the country. The government has only the most tenuous hold over areas it retains or has liberated from the Houthis. A Saudi-led military campaign to reinstate Abd Rabbo Mansour Hadi, the deeply unpopular president, has only added to the carnage.

Amid this, the country has provided fertile turf for various groups of jihadists. On December 6th an offshoot of Islamic State (IS) said it was responsible for the bomb that killed Jaafar Muhammad Saad, the governor of the southern city of Aden. The government recently won back Aden from the Houthis, but its motley crew of allied fighters has failed to secure the place. Officials who hoped to govern from the port city have been too scared to make more than brief visits.

The main group that now claims to hold the IS franchise in Yemen is relatively new, but it has carried out a string of suicide bombings against both the internationally recognised government and the Houthis. It has filled the vacuum left by the decline of Yemen's longer-established Sunni terrorists, al-Qaeda in the Arabian Peninsula (AQAP).

The most potent remaining franchise of al-Qaeda was dealt a blow by the killing of its leader, Nasir al-Wuhayshi, by an American drone in June. Yet although their commander is no more, the jihadists are far from finished. AQAP has recently seized two southern cities, including Zinjibar, the capital of Abyan governorate, only 50km north-east of Aden.

In a little over nine months of war Yemen has gone from terrible to worse. The death toll is now thought to have passed 6,000 and food, always in short supply, is getting scarcer. Roads, schools, shops and houses have been destroyed in battle or bombed to rubble. Aid workers complain that their warnings fall on deaf ears, and the international coalition is making things worse.

On December 3rd Doctors without Borders, a medical charity, said the Saudis had bombed one of its mobile health clinics in Taiz, Yemen's third city. In a sign of frustration with the Saudi campaign, Germany's foreign-intelligence agency criticised the kingdom directly.

All parties are under pressure to go to UN-run peace talks on December 15th. But prospects for peace are dim. Past rounds of these talks have led to nothing. There have been no signs of willingness to offer goodwill measures, such as the Houthis releasing prisoners or the coalition lifting its blockade on the country. The fighting for Taiz continues. "The parties to the war know how to destroy things," says Farea al-Muslimi of the Carnegie Middle East Centre, a think-tank in Beirut. "But not how to govern."

South Africa's debts

Sprinting towards a bail-out

A respected finance minister is fired, just when his restraint is most needed

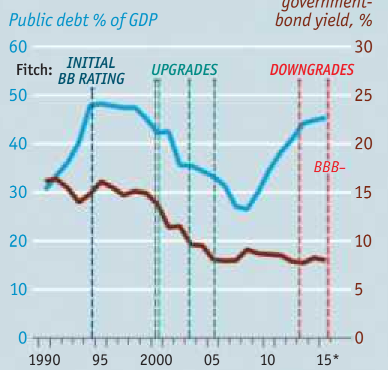
THE warning shot across South Africa's bows could not have been clearer. Its response could not have been more foolish. On December 4th Fitch, a rating agency, cut its assessment of South African public debt to just one notch above "junk" (financial jargon for bonds that are deemed risky and so must offer a higher interest rate than "investment-grade" debt). Standard & Poor's, another agency, implied it was likely to downgrade the country's rating to junk. Both cited concerns about South Africa's slow rate of economic growth and its spiralling public debt.

Instead of heeding the warning, President Jacob Zuma compounded the damage by firing Nhlanhla Nene, his respected finance minister, on December 9th. (He said he was moving him to "another strategic position".) Mr Nene had earned the trust of investors (and the irritation of other ministers) by consistently trying to hold the government to its pledge to limit increases in state spending. He was replaced by David van Rooyen, a backbencher so obscure that one member of the shadow cabinet confessed he had to search for him on Google after the appointment to find out who he was. The rand fell sharply against the dollar, having already slumped to a record low earlier in the week.

Mr Zuma did not give reasons for the change but many South Africans suspected it was because Mr Nene had stood up to powerful allies of the president. Earlier in December he had stymied an attempt by Dudu Myeni, the chairman of perennially loss-making South African Airways, to

Near the cliff edge

South Africa



Sources: Economist Intelligence Unit; Fitch *Forecast

sign contracts that appeared to make little financial sense. Ms Myeni, who is also the chairman of the Jacob Zuma Foundation, a charity, had wanted to renegotiate contracts to lease jet aircraft from Airbus in a way that might have caused the airline to default on its debts.

The change in finance ministers comes at a time when the government is desperately trying to avoid going over an economic precipice. Public debt is rising fast, as are the costs of servicing it. Investors fret that South Africa may soon lose its investment-grade rating, which would trigger a sudden sell-off of its bonds since many fund managers are barred from holding junk-rated debt. That in turn would drive up borrowing costs and potentially force South Africa to consider an IMF rescue.

Under Mr Zuma, who was elected president in 2009, debt has steadily crept up to 45% of GDP from about 26%. That may seem low compared with European countries such as Britain, where public debt is about 80% of GDP. But given its wobbly credit rating, South Africa must pay four times as much interest as Britain on every dollar of debt (8.6%, compared with 1.9%).

Ideally, South Africa would grow its way out of this hole. But growth is expected to be no more than 1% this year. Both Fitch and Standard & Poor's cited this as a big worry. Yet much of what holds the economy back is within the government's power to fix. Power shortages that have closed factories and mines, for example, are due to underinvestment by the state-owned electricity firm. Liberalising the energy market could raise growth by about a percentage point a year.

The country probably has 18 months before its debt might be downgraded to junk. That is enough time to change course, but there is little will. "In the cabinet there are those who understand why a credit rating is important and those who have no clue about what it means," said an executive at a large South African firm, shortly before the finance minister was axed. Mr Nene understood. And now he is gone. ■

Congolese politics

Will Kabila go?

KINSHASA

War-weary citizens are scared that their president may not retire gracefully

ON THE rooftop of La Crèche, a bar in Kinshasa, Mbalane Seli-Ja sings the rumba. Even in the muggy evening heat, he looks sharp in his shiny shoes and crisp white shirt. His bassist sports a trilby; his backup singer, a tight black dress. The crowd look dapper, too, for in Kinshasa sartorial elegance is almost a religion. The bar, by contrast, looks shabby. Beers are served from a rust-flecked ice box; the dance floor is lit only by a string of fairy lights. On the lower floors, seedy-looking rooms are rented by the hour.

Kinshasa, capital of the Democratic Republic of Congo, is one of Africa's fastest-growing cities. Some 12m people live there; in Africa only Lagos and Cairo are larger. It is a hard place to live, says Mr Mbalane, a resident for 27 years. The nightlife may be vibrant, but the streets are filthy. And with Congo's president, Joseph Kabila, up against term limits next year, with no clear successor, no one takes peace for granted.

Congo's horrific civil war—fought mostly in the east, far from Kinshasa—is winding down. It split the country into warring fiefs and claimed somewhere between 800,000 and 5m lives, depending on which estimate you distrust less. Over the past decade Congo has reunited, more or less. Ethnic militias that once controlled vast swathes of territory no longer do so.

With peace has come economic growth, which is estimated to have averaged more than 7% a year since 2009 and 9% in 2014. Inflation is low; the exchange rate stable. Aid has surged into Kinshasa even as a mining boom has filled public coffers. The capital has had a facelift: the Boulevard du 30 Juin, its main thoroughfare, is now a modern highway; the airport has a gleaming new terminal from which most of the rapacious officials who used to fleece travellers have been banished.

The gains have been unequally distributed, however. In Gombe, the central, Belgian-planned district where expats and the Kinois (Kinshasan) elite live, new apartments are sprouting up. Developers are spilling outwards: one project, called the "Cité du Fleuve" (River City), is a self-contained block of plush flats built on reclaimed land, selling for as much as $900,000 each. Posh nightclubs are full at weekends; hip restaurants serve steaming plates of *cossa cossa* (giant river prawns). Even the music scene, which had withered, is recovering as Congolese musicians flock back from Europe to play for local yuppies. "It was all in Paris, but now, Kinshasa is the place to be," says Reddy Amisi, a musician who lives in France but returns to Kinshasa every few months.

Outside this bubble, however, life is different. Most Kinois live in crowded slums without electricity or clean water. When the river is high, their homes flood. Over a third of the population is younger than 15; of the adults, fewer than 10% have salaried jobs. There are some signs of progress. The streets are full of motorbike taxis, which were almost unheard of a few years ago. (They are known as *wewa*, which means "you" in the language of many drivers and is what Kinois shout to hail one.) At the Marché de la Liberté, a sprawling market, traders do a roaring business in food, clothes and mobile phones. But the cost of living is high, and widespread corruption makes it hard for honest folk to get ahead. "I sometimes make a lot of money, but always it is taken by the police," says José Kalenda, a mobile-phone trader.

Where every prospect displeases, and loads of men have style

This divide is what makes Congo unstable. The state is perilously fragile. It all but collapsed under Mobutu Sese Seko, a flamboyant despot who allowed officials to steal so that he didn't have to pay them. Since 2001 the country has been run by Joseph Kabila, the son of the man who overthrew Mobutu in 1997 with a lot of help from Rwanda, Congo's neighbour. Kabila senior ruled atrociously until his assassination in 2001. His son quickly assumed the presidency and was elected to the job in 2006. The constitution, adopted in 2006, says he must stand down next year. But many doubt he will. Officials have suggested that elections due to happen in November 2016 will have to be delayed, perhaps for years. They talk about the need to conduct a census first—an impossible task in a continent-sized country with hardly any decent roads.

Kinshasa is the key

Few in the capital support the president. He is seen as an outsider. Having been educated in Tanzania, he struggles with both French and Lingala, the two local languages. Slum-dwellers see money flowing into the capital but never reaching them. If Mr Kabila refuses to step down when his term is over, protests will surely erupt. In January, during demonstrations against electoral rule-changes, Congolese troops killed about 40 people. Many fear a larger revolt next year. "Kinshasa is the key" to Congo, says an expat businessman.

Congo's problems are a grander, more dangerous version of what is happening in neighbouring countries. In October, in next-door Congo-Brazzaville, troops fired on protesters who objected to President Denis Sassou Nguesso's plan to extend his three-decade rule (the protesters' slogan was "Sassoufit", a play on the French for "That's enough"). In Burundi several hundred people have been killed since President Pierre Nkurunziza said he would run for a third term. If a similar dynamic plays out in Kinshasa, the result could be far more destructive. The mining boom has stalled, thanks to the drop in commodity prices. If Mr Kabila ever fails to pay the army properly, all bets are off.

For the moment, however, most Kinois prefer not to think about such things. James Peter, who runs a stall at the Marché de la Liberté selling bathroom fittings, says that the problem with politics is that when elections are approaching, nobody wants to buy anything. He doesn't have time for debates about who will succeed Mr Kabila; he has three children to send to school. ■

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France's National Front

Eyes on the prize

HÉNIN-BEAUMONT

For Marine Le Pen's party, regional elections are just a stepping-stone

IT IS market-day in this red-brick former mining town in northern France. Stallholders wrap up fat slices of rabbit terrine, or flog discounted hairspray and nail varnish. Outside the town hall, workmen are putting up wooden chalets for the Christmas market. Inside, the National Front (FN) mayor has installed a Nativity scene with life-size figures. French public buildings are meant to be strictly secular, but Steeve Briois insists he is just bringing back a French "tradition". Last year he was elected mayor with 50.3% of the vote. On December 6th in the same town, Marine Le Pen, the FN leader running for president of the surrounding region, got 59%.

Ms Le Pen heads into the second round of regional elections on December 13th on the back of resounding first-round scores. The far-right FN came top countrywide with 28%, beating its previous national record of 25% in European elections last year, and more than doubling its result in regional elections in 2010. Her party finished first in six of France's 13 regions, including some, such as Burgundy or the Loire valley, with no strong history of supporting the FN. In both Nord-Pas-de-Calais-Picardie, where Ms Le Pen is running, and Provence-Alpes-Côte d'Azur in the south, where her niece Marion Maréchal-Le Pen is the candidate, the party grabbed fully 40%.

Up to a point, the French saw this coming. Since she took over in 2011 from her father, Jean-Marie Le Pen, who founded the party in 1972, Ms Le Pen has racked up electoral successes. Polls have long suggested that she could top first-round voting at France's next presidential vote, in 2017, securing a place in the run-off, as her father did in 2002. For months Manuel Valls, the Socialist prime minister, has warned that the FN is "at the gates of power".

But France has been shaken nonetheless. Unlike Mr Le Pen, who traded in outrage and provocation (and whom she evicted from the party for it), Ms Le Pen is intent on appearing respectable—and on governing. The northern region alone is more populous than Denmark. *Le Monde* called the result an "earthquake". Mainstream parties are scrambling for a way to thwart her. Mr Valls ordered three Socialist candidates who came third to step down (one refused), and urged voters to back the centre-right instead. For the long-ruling Socialists in the north, asked to tread pavements and hand out leaflets for the centre-right, this was a cruel defeat indeed.

Polls suggest the run-off will be tight, and the FN may struggle to win even a couple of regions. But that would still be historic. Should Ms Le Pen or her niece fail to win, the party will play the victim card and denounce the ruling elite for ganging up on it. In his turreted grey-stone town hall, Mr Briois says with a grin: "We win either way." For these elections are part of a long-term strategy: to build up a network of local officials, and a record of government, as a stepping-stone to the Élysée Palace. An FN poster says it all: *Marine, présidente*.

To this end, Ms Le Pen has distanced herself from the ultra-nationalist and anti-Semitic rhetoric of her father and told her 11 FN mayors to concentrate on making their towns work properly. In Hénin-Beaumont, where she was once a councillor, the Nativity scene—a thinly veiled reaffirmation of Catholicism—is about the most controversial move by Mr Briois, along with a cut to subsidies for a human-rights group. The Christmas market is popular; so are policies such as installing more speed bumps. "He's put in more flowers and mended the roads," says Mahir Kurtul, who runs a Turkish kebab shop. "Maybe they want it to be a model for the FN."

Le Pen, mightier than the scimitar?

Above all, there seems to be an urge for an alternative to the Fifth Republic's two-party dominance. Recent crises over migrants and terrorism have played into Ms Le Pen's hands. For years she has been treated as hysterical by polite society for railing against radical mosques and leaky borders. An FN election poster in the Paris region trades on fear of Islamism by portraying a woman in a face-covering burqa. Yet today it is a Socialist president, François Hollande, who has introduced a state of emergency, reintroduced border controls and shut down three Islamist mosques.

Still, there is also popular disillusion with the unkept promises of the Paris-based elite. Unemployment rose in the third quarter to 10.6%, its highest level for 18 years. The FN is now the most popular party among working-class voters and those who left school without qualifications—the "forgotten people of the republic", says Ms Le Pen. Next to a former president (Nicolas Sarkozy, leader of the centre-right) and the current one (Mr Hollande), Ms Le Pen, who learned politics at her father's knee, appears positively fresh. "We've tried the right, we've now got the left, why not try something else?" shrugs a voter at a café in Hénin-Beaumont.

The FN's success in playing the people against the elites is confounding not only the left. Mr Sarkozy's refusal to withdraw candidates in order to block the FN has dismayed those in the party who fear it hands the moral high ground to the left. Between Mr Hollande's tough security line and Ms Le Pen's anti-immigration agitation, Mr Sarkozy's space has been squeezed. Whatever the final result, both left and right have some deep thinking to do. "People see Marine Le Pen as a life-belt," says a forlorn Eugène Binaisse, the former left-wing mayor of Hénin-Beaumont. "It's dramatic what's happening to France." ■

Anti-immigrant populism

The march of Europe's little Trumps

AMSTERDAM, MALMO AND ROME

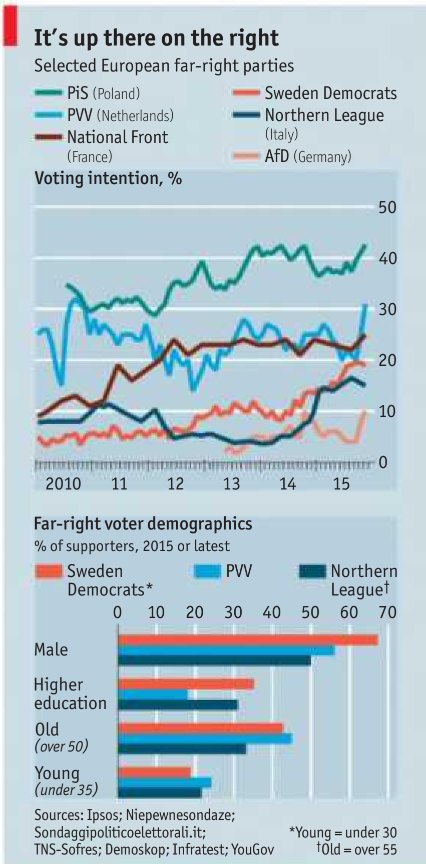
Xenophobic parties have long been ostracised by mainstream politicians. That may no longer be possible

KENT EKEROTH, a 34-year-old member of parliament for the far-right Sweden Democrats (SD) party, has a pithy response to the idea that immigration can be good for a country: "Bullshit." Mr Ekeroth's party would like to block any more refugees from coming to Sweden and kick out many of those who have come already. Most migrants, Mr Ekeroth thinks, are in Sweden to take advantage of its welfare system. That money should be spent on Swedes, he feels.

Opinions of this sort used to be marginal in Sweden. For years the country has taken pride in accepting more refugees per person than any other in Europe. In the 2006 election the SD, which once had ties to neo-Nazi groups, drew just 2.9% of the vote. But in last year's election it won 13%, and recent polls give it 20% or more, making it the country's biggest or second-biggest party. It is expanding beyond its working-class base, attracting supporters who have been to university. In multicultural Stockholm, *bien-pensant* yuppies anxiously confess that childhood friends now support the SD.

As with Sweden, so with Europe. Across the continent, right-wing populists are gathering steam. This year's migrant influx has proved a huge boon to politicians hostile to Islam, immigration and the European Union. The attacks in Paris on November 13th have added fear of terrorism to the mix. In France the National Front (FN) took 28% of the vote in the first round of regional elections (see previous story). In Poland voters have tossed out a pro-European centrist government in favour of the religious-nationalist Law and Justice (PiS) party. Besides Sweden, anti-immigrant parties are at or near the top of the polls in the Netherlands, and governing or sharing power in Denmark and Hungary. In country after country, fringe movements are entering the mainstream, firing up voters who feel despised by governing elites, and threatening to scramble the European project.

Anti-immigrant populism in Europe is newly powerful, but it is not new. Many of today's groups date back to the 1990s, when Europe's debates about Islam and integration began to heat up. By the late 2000s their support had largely stalled. The start of the euro crisis in 2011 re-energised them. The share of the vote won by France's Eurosceptic FN declined between 2003 and 2011, but began to climb in 2012. In the Netherlands, Geert Wilders



switched his main target from Islam to the EU's bail-out of Greece. By 2013 Germany had its own right-wing populist party, Alternative für Deutschland (AfD), which called for breaking up the euro.

The euro crisis boosted the populist vote because it hit specific groups of voters especially hard. Support for xenophobic populism is strongest among those who are older, non-university-educated, working-class, white and male (see chart). These voters do not think they benefit much from EU membership, but they certainly felt the effects of the crisis: tax hikes, benefit cuts and unemployment. Populists blamed austerity measures on untrustworthy Greeks and Spaniards, or on the EU's strict budget-deficit limits, or both.

As refugees poured into Europe this year, right-wing populists switched back to denouncing immigration. Television footage of chaos at the border served as perfect campaign propaganda. In Sweden 180,000 asylum-seekers have arrived in 2015; some are being put up in school halls or sleeping outside in tents. In Germany, schools and municipal governments have strained to handle an influx that has reached 1m this year. The AfD had floundered after a split this summer between its anti-euro and anti-Muslim wings. But the refugee crisis saved the party; polls now put its support at between 6% and 11% nationally.

In Italy the migrant crisis has created opportunities for the formerly secessionist Northern League. Under its young leader, Matteo Salvini, the once struggling party has transformed itself into an anti-immigrant group along the lines of the FN, pulling itself back up to 16% in the polls. In June Mr Salvini responded to Pope Francis's calls to welcome refugees by acidly demanding how many migrants the Vatican City has accepted (other than the pope himself, presumably).

Crucially, the populists offer more than just opposition to immigrants and Islam. Most combine cultural conservatism with left-wing economic policies that please their older, less-educated supporters. Poland's PiS is lowering the retirement age and promising state aid for the country's inefficient coalminers. France's FN supports a lower retirement age and more protectionist agricultural policies. Mr Wilders demands that money now spent to house migrants be spent on cancer treatment for Dutch citizens.

Two exceptions are the Swiss People's Party and the AfD, both liberal opponents of large welfare states. (Asked recently whether she would collaborate with Marine Le Pen, the AfD's leader, Frauke Petry, answered with surprise that the FN is "a largely socialist party" whereas her party believes "in freedom and personal responsibility".) But most right-wing populist parties are more like PiS, the FN or Mr Wilders' Party for Freedom (PVV): they "like certain ▸▸

parts of the welfare state, but only for natives," says André Krouwel of the Free University in Amsterdam. Governments that offer benefits to refugees but subject their own citizens to austerity play into the populists' hands.

Grumbling that refugees are treated better than citizens was once frowned upon in Sweden. The Sweden Democrats do not care. "We say what people think," says Julia Kronlid, an SD deputy. This is another shared trait of Europe's right-wing populists: the belief that rather than expressing obnoxious prejudices, they are voicing truths which others are too politically correct to admit. Both Ms Le Pen and Mr Wilders faced hate-speech trials this year, one for comparing Muslim street prayers to the Nazi occupation, the other for calling for "fewer Moroccans" in the Netherlands. ("He tells it like it is. Speaks truth to power, you know?" says a PVV-voting construction worker in Amsterdam.) Trying to ban such speech feeds the populists' persecution complex, confirming their supporters' sense that the political elite is trying to exclude them.

In this, if nothing else, the populists are right. In many countries, the political elite has been excluding them for decades, and still is. In France the Socialists have withdrawn in three regions to give their Republican rivals a better chance of beating the FN in the election's second round. In Sweden mainstream politicians shun the populists; the right and left blocs made a pact in 2014 that neither would form a coalition with the SD. In a suburb near the city of Malmo, where support for the SD is strong, Madeleine, a 27-year-old electrical-store clerk, finds this disgusting: "This country is not a democracy. More like a dictatorship."

If populists were included in government instead of shut out, some argue, their approval would fall as they were forced to compromise and take responsibility for failures. The Finns Party has been in government since May; its support has dropped from nearly 18% to about 9%, thanks to Finland's miserable economy.

Why Serbia and Spain are immune

But including them in government does not necessarily dampen their support, argues Cas Mudde, an expert on European right-wing populists. The Danish People's Party is supporting its country's governing coalition; it has never been more powerful or popular. The Swiss People's Party has been in government since the 1990s, and won 29% of the vote in the most recent election. Fidesz, the party of Hungarian prime minister Viktor Orban, has been in power since 2010. This summer Mr Orban carried out the most radical anti-immigrant policy in Europe: he built a fence to keep them out. His popularity has soared from 28% in April to 43% in October.

The European countries where anti-immigrant populism has failed to take hold are sometimes surprising. The western Balkan states, with their history of nationalist violence, are fertile ground for xenophobia. Yet in 2015 hundreds of thousands of migrants have trooped through Macedonia, Serbia, Croatia and Slovenia with no local political reverberations whatsoever.

The main reason for this is clear: no one expects the migrants to stay. "They are just marching through," says Ana Petruseva, editor of *Balkan Insight*, a news website. (But then, the same was true of Hungary.) Memories of refugees suffering during the Yugoslav wars may be relevant; as Ines Sabalic, a columnist, puts it, everyone in Croatia remembers when they too "lived out of plastic bags".

Another case is Spain, where from 2000 to 2010 the number of immigrants (mainly from Latin America and Africa) multiplied sixfold to nearly 6m people, or 12% of the population. Yet attempts to set up xenophobic parties all flopped. José Ignacio Torreblanca of the European Council on Foreign Relations says Spaniards associate nationalism and racism with the fascist dictatorship of Francisco Franco.

Northern Europe, however, seems stuck in a vicious circle. As populists take up ever more room in parliaments, says Paul Scheffer, a Dutch sociologist, mainstream right- and left-wing parties must form coalitions with each other simply in order to govern. This sucks the energy out of right-left politics, and confirms the populist argument that government is a stitch-up by a clubby elite.

That is not likely to increase voters' willingness to welcome new immigrants. But the immigrants have not stopped coming. Sweden expects over a hundred thousand more next year. They will be arriving in a country where more and more citizens do not want them. ■

Corruption in Ukraine

Making Joe Biden mad as hell

KIEV

Ukraine is not punishing its criminals. The West is getting tired of nagging it

JOSEPH BIDEN, America's folksy vice-president, is not known as an enforcer—except in Ukraine, where he has become the spearhead of American policy. This week Mr Biden made his fourth visit to Kiev since Ukraine's Maidan revolution and delivered a fiery speech in parliament, imploring the country's leaders to eradicate "the cancer of corruption". He invoked the "Heavenly Hundred", the protesters slain on Kiev's icy streets in 2014. "Their sacrifice, to put it bluntly, is now your obligation," Mr Biden roared.

Even as Mr Biden was speaking, Roman Baidovsky faced a panel of expressionless judges in a cramped courtroom halfway across town. Mr Baidovsky's 23-year-old son, Sergey, was one of the Heavenly Hundred. Sergey's killers and their superiors have yet to be punished. Incompetence has hampered the investigation, and the old guard in the security services have undermined it. Most crucially, says Taras Hatalyak of OPORA, a human rights group, "there's no political will" among the country's leaders to pursue the cases, an assessment echoed by senior Ukrainian law-enforcement officials.

When Sergey left for the protests, he told his father that "I want my kids to live in a normal country." So far, the promises of the revolution have not been fulfilled: Ukraine remains far from normal. Since the Maidan, it has run through three chief prosecutors, none of whom has closed a single case against high-level officials from former president Viktor Yanukovych's regime. Only two men have been convicted of crimes connected with the murder of protesters, both low-level foot soldiers. Key suspects have been allowed to escape. So little has been done to prosecute economic crimes that the European Union may have to lift its sanctions on ex-Ukrainian officials.

The latest prosecutor-general, Viktor Shokin, a close ally of President Petro Poroshenko, has ignored high-level corruption among the new authorities. Talk of Mr Shokin's fate dominated Mr Biden's meetings in Kiev this week. Ukrainian activists have been calling for Mr Shokin to be fired, but Mr Poroshenko has refused. An independent prosecutor would deprive him of a powerful political instrument and might expose his associates to investigation.

Attempts to create new anti-corruption institutions have encountered enormous resistance. "If they let big fish get caught, ▶▶

those people will start to speak," says a Western diplomat. Selecting a special anti-corruption prosecutor, needed for the new National Anti-Corruption Bureau to start, dragged on till the last possible day, endangering Ukraine's hopes of visa-free access to the European Union. Last week a seemingly independent candidate was picked, but only under the dual press of civil society and the West. "Many of us are feeling tired of patronising these guys and watching them all the time," the diplomat adds.

Yet removing Mr Shokin alone would amount to little. An ongoing project to select new prosecutors will likely result in some 80% of the old guard being rehired, says Vitaly Kasko, a deputy prosecutor-general who has been at odds with Mr Shokin. "Herpes is not on the lips, it's in the blood," says Yulia Mostovaya, editor of *Zerkalo Nedeli*, a weekly. "We have to fight the virus, not just its symptoms." As justice fails to materialise, many in Kiev have come to blame not just Prime Minister Arseniy Yatsenyuk, whose authority eroded earlier this year, but Mr Poroshenko as well. "The guys who came to power weren't the ones who should have," says Volodymyr Bondarchuk, whose father Sergiy, a high-school physics teacher, was also killed last year. "Their goals are far from the ideals of the Maidan." ■

German politics

Ursula major

BERLIN

The smiling defence minister is the most likely candidate to succeed Angela Merkel

URSULA VON DER LEYEN strides into her office without a minute to spare, straight from parliament, which just gave her a mandate to send six reconnaissance jets to fly over Syria and a frigate to guard a French aircraft-carrier. In the evening she wants to be on her country estate near Hanover with her husband and seven children. Then it is off again to Afghanistan to encourage the German soldiers. But no matter how harried, she insists on lighting an Advent candle on her table before starting the interview with her trademark smile. Atmospherics matter.

"Every generation has its chancellor, and in my generation that is Angela Merkel," she says. It is her stock phrase whenever she is asked—and she is constantly asked—whether she wants to succeed her. The question keeps coming up because no one believes the ambitious defence minister aims for anything less. It has also become more interesting as Germans start looking beyond the Merkel era.

As recently as the summer the chancellor, in her tenth year in office, appeared a shoo-in for the next federal election in 2017. But in this autumn's refugee crisis she took many Germans, including her own Christian Democrats (CDU), aback. According to one poll, more Germans are now opposed to Mrs Merkel staying for a fourth term than are for it. Polls suggest that the centre-right CDU will keep the chancellorship, so Mrs Merkel's successor will probably come from within its ranks. In a recent survey of its members 33% preferred the finance minister, Wolfgang Schäuble, to succeed her. But he is 73. Mrs von der Leyen, who is 57, came second with 31%.

She comes from a privileged and highly political family. Her father, Ernst Albrecht, was the premier of Lower Saxony for 14 years. He called his daughter *Röschen* ("little Rose") and doted on her. The family lived in a rural manor surrounded by farm animals, chamber music and visitors from Germany's elite. *Röschen* became expert at dressage. But in the 1970s the family worried about being targeted by Germany's left-wing terrorists, and sent her to study at the London School of Economics under the pseudonym Rose Ladson.

Back in Hanover studying medicine, she met her husband, also a doctor, in the university choir. Together they moved to California for four years; Mrs von der Leyen still raves about America's open-mindedness towards working women. Returning to Lower Saxony, she found local culture stuffy. For a while she stayed at home, bringing up her seven children on a farm. But in 2003 she followed her father into politics, becoming Lower Saxony's minister for women and the family.


Camouflaging her ambition

In 2005, when Mrs Merkel became chancellor, she made Mrs von der Leyen the national minister for women and the family. She did the job with zeal, calling for bigger subsidies for crèches so that women could work. Leftist parties began worrying that she was invading their turf. Some of her more socially conservative colleagues in the CDU became suspicious of her.

Promoted to labour minister in 2009, she again wowed the left and scared the right, this time by demanding quotas for women on corporate boards and a national minimum wage. This frightened business, and Mrs Merkel forced her to back down. But this year the "grand coalition" of Christian and Social Democrats (SPD) passed both a quota and a minimum wage into law. The SPD claimed credit, but Mrs von der Leyen felt vindicated.

The defence ministry is her biggest challenge yet. She must manage a growing international role for a country that still distrusts its own army. Besides the new mission assisting allies in the fight against Islamic State (IS), Germany will send 650 soldiers to Mali to relieve the French. And it is already training Kurdish Peshmerga fighters in northern Iraq to take on IS.

But "the defence ministry is a time bomb", says Daniel Goffart, co-author of a biography of Mrs von der Leyen. "You can't be noticed positively, only negatively." Procurement projects often run over cost. One of the army's assault rifles has been found not to shoot straight when hot. Half of Germany's 60 Tornado jets are out of order. Mrs von der Leyen will be blamed if anything goes wrong on any foreign mission. And yet she cannot set the overall strategy; that is Mrs Merkel's job.

Her ascent could be halted in other ways. An investigation is under way into whether she plagiarised part of her doctoral dissertation, which argued that warm baths can help women in labour. And some Germans, especially women, feel that she is simply too perfect—bringing up seven children, caring for her father (stricken with Alzheimer's) until his death a year ago, running huge ministries, and keeping slim and smiley all at once.

To keep rising, Mrs von der Leyen must avoid mistakes. Hence she can seem over-rehearsed in conversation. But she also needs a vision for German leadership. She compares the European Union to a family, perhaps with her own teeming dinner table in mind. Such a community cannot have one leader. But when it is pulled apart by centrifugal forces, it needs "a centripetal force, coming again and again as the uniter". This, she thinks, is Germany's role. She may end up playing it herself. ■

Charlemagne | Battling with Britain

The EU faces many crises. One of them is unlike all the rest

LIKE blows from a fearsome heavyweight, the crises keep raining down upon Europe's battered brow. Refugees, terrorism, Syria, Russia, Greece and Britain's threat to quit the European Union: collectively they have left the EU punch-drunk and gasping for breath. But one of these problems is different from the others.

The migration crisis was a product of epic forces outside Europe's borders; the Greek row stemmed from a mismatch between democracy and the rules of euro membership. But Britain's "renegotiation" of its EU membership, ahead of an in/out referendum to be held (probably) next year, looks like a self-inflicted wound. Why should semi-detached Britain seek yet more special treatment? Europeans are exasperated. Foreign friends, from Hong Kong to America, are baffled. All are worried.

How did it come to this? For months negotiations proceeded quietly as David Cameron, Britain's prime minister, took his concerns to other EU leaders and Eurocrats in Brussels oversaw technical talks. British diplomacy was conducted "very skilfully", says one. Even the French were starting to believe that Britain was seeking not to wreck the project, but to secure its place within it.

Hopes were high that a deal could be struck at an EU summit later this month. But soon after Mr Cameron detailed his proposals in a letter to Donald Tusk, the president of the European Council, the wheels came off. Having previously hinted that he was open to discussion on his fourth "basket" of reforms, on migration, Mr Cameron suddenly reverted to an old demand. The EU treaties must be changed, he insisted, to allow Britain to impose a four-year delay before paying in-work benefits to migrant workers. The gambit flopped. On December 3rd Angela Merkel, Germany's chancellor, told Mr Cameron that he could not expect rapid acquiescence to such a contentious request. Optimists now hope for a deal in February.

Some of Mr Cameron's other requests are reasonable; some are strange but achievable. But on welfare Mr Cameron is trafficking in trivia. By most accounts his proposals would do next to nothing to reduce EU migration: frustratingly, Britain's labour market is simply too open and successful. Worse, he has picked a fight that may prove unwinnable. Every other government opposes changes that would violate the cherished principle of non-discrimination. Brussels's finest legal minds will spend the next two months trying to square the circle. But whatever solution emerges will be a long way from the "fundamental, far-reaching" EU reform that Mr Cameron once promised. The problem is "very intractable", frets a British official who is involved in the talks.

What will Mr Cameron do? He is said to believe that his powers of persuasion can override the objections of pettifogging bureaucrats, including his own. He might be right; politics often trumps law when the EU is in crisis. But his form is not good. Many fear a repeat of previous diplomatic misadventures, such as Mr Cameron's "veto" of an EU fiscal treaty in 2011, which left Britain looking exposed and inept, or his attempt to block the 2014 appointment of Jean-Claude Juncker as president of the European Commission, which he persisted with long after it became clear that he would lose the vote. For most Europeans the prime minister's recent antics are of a piece with an approach to negotiation they have never understood. "Just who is advising him?" asks one exasperated German.

When Mr Cameron began his quixotic quest for EU reform, many predicted he would need a scrap to demonstrate to British voters that his renegotiation was not empty. Perhaps he will emerge in February bloody but unbowed, wielding a "concession" on benefits that he can sell at home. But for the moment he looks boxed in. It is little wonder that fears of Brexit are growing. One concerned British official now puts the chances at 30-40%.

Still, Britain's partners will not allow irritation to cloud their judgment that the EU remains stronger with Britain inside than out. Its liberal preferences are shared by many and its defence clout valued by most. This week Mr Tusk urged compromise with Britain, warning that the issue was "destabilising" Europe. There is also a question of balance, says Anand Menon, a British academic: the Germans do not want to be left with the French; the French do not want to be left with the Germans; and no one else wants to be left with the French and the Germans.

Clausewitz this is not

Such calculations may have fuelled complacency in London. Some in No 10 murmur that the EU's endless crises might help their case: best to give the troublesome Brits what they want and move on. But that is a stretch, as well as dispiritingly small-minded. Mrs Merkel and others certainly seek a speedy resolution to the problem, if only to get back to some proper work. They want Mr Cameron to hold his referendum as early as possible. But when the EU's signature projects, from the euro to Schengen, are tottering, they are hardly minded to let an irascible Britain weaken the union's foundations yet further.

Britain, they might add, is not the only country with domestic politics. Even friendly countries, such as Denmark and the Netherlands, fear that obliging Mr Cameron would boost their own Eurosceptics. Negotiators in Brussels were so worried that other governments would use the talks to seek Britain-style carve-outs that they issued pre-emptive warnings that none should try. France and Germany are terrified of emboldening Marine Le Pen, the leader of France's Front National, who has described the prospect of Brexit as "marvellous".

Somewhere in a parallel universe exists an alternative renegotiation that Britain would be well placed to lead, focused on the EU's persistent economic torpor and its weak, fragmented foreign policy. Instead, the EU must grapple with Mr Cameron's parochial concerns while confronting some of the toughest challenges it has ever faced. Vexing this may be; heavyweight it is not. ■

Also in this section

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Bagehot is away

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Britain and the European Union

Cameron's Brexit gamble

BRUSSELS, LONDON AND PARIS

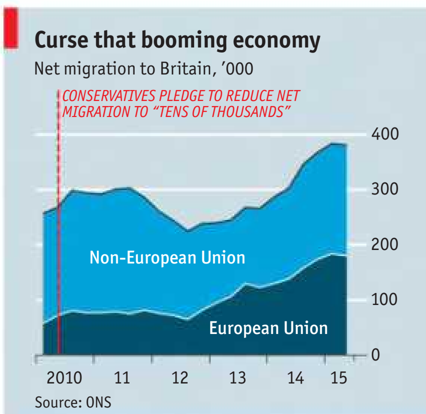
The prime minister's raising of the stakes with other EU governments over migrants' benefits is a risky move

UNLIKE earlier Eurospats, David Cameron's campaign for European Union reform had seemed to be going more or less to plan—until this month. The Tory party won an unexpected majority in May, so the prime minister had to honour his commitment to wring a few concessions for Britain from the EU and hold an in/out referendum by the end of 2017. But he was diplomatic enough to meet all 27 other heads of government and even leaders of the European Parliament before putting his demands on the table. And when he set them out in a letter to the president of the European Council, Donald Tusk, they were calculated to be achievable.

The prime minister's watchword was flexibility, in four areas. He wanted the EU to become more competitive and pursue more trade deals. He sought a bigger role for national parliaments and a recognition that Britain was not bound by the goal of "ever closer union". He demanded guarantees that euro-zone members would not discriminate against non-members. And he called for an end to "benefits tourism" by stopping EU migrants claiming in-work tax credits and housing benefits until they had been in Britain for four years.

Most of these reforms were doable, even if some governments sucked their teeth for form's sake. Mr Cameron did his bit by not insisting on a new treaty: he merely wanted his changes to be "legally binding and irreversible". As one French official puts it, clarifications of the treaties are fine, but changes are not.

The exception to the harmony was the benefits change, which other governments declared illegal under EU laws on non-discrimination and free movement of labour. Even here Mr Cameron offered flexibility: if another solution could be found, he would consider it. Proposals to redesign the British benefits system on contributory lines were a non-starter. But there was talk of a four-year residency requirement that would catch young Britons as well as EU migrants. And a new debate has begun about allowing Britain to impose an emergency brake on migrant workers.



Curse that booming economy

The stage was thus set for a deal at an EU summit on December 17th-18th and a referendum in the first half of 2016. But then Mr Cameron dropped a bombshell. Far from being flexible, he demanded an early protocol (a treaty needing to be ratified by all national parliaments) to permit the bar on in-work benefits for four years. He hinted that if this were rejected he might lead the Brexit campaign himself. Mr Tusk's response was swift. He called Mr Cameron's demand "most delicate" and declared that it had no support (one of his advisers says flatly that it is 27 against one). And he said there was now no chance of a deal in December, though he hoped a compromise might be found in February.

Why has Mr Cameron raised the stakes like this? One answer is the appeal of brinkmanship. He knows no EU country wants Brexit, so his bargaining position seems strong. His party fondly recalls Margaret Thatcher's tough negotiations to win a European budget rebate. Four years ago Mr Cameron basked in Westminster ovations after "vetoing" an EU fiscal treaty, even though it went ahead without him. The British love of one against all in Brussels dies hard (see Charlemagne, page 56).

Mr Cameron's team also thinks the benefits demand is justified. Welfare is a national not a European competence. Several countries have discriminatory laws: Denmark limits foreign property-buying, Germany wants to impose motorway tolls on non-Germans, the Dutch are said to discriminate financially against other EU students. Britain is seeing a big inflow of EU migrants (see chart).

Few migrants come just to collect benefits. Stephen Nickell of the Office of Budget Responsibility, Britain's fiscal watchdog, suggested this week that the four-year bar would not reduce migration by much. Yet ▸▸

the fact that low-paid jobs taken by migrants attract generous tax credits and housing benefits from the start seems unfair to many voters. Some ministers say that without some change, the referendum will be lost. And after embarrassingly losing a House of Lords vote on tax-credit cuts in October, Mr Cameron is loth to solve his problem by curbing benefits for all.

He is also impatient with lawyers who bleat about breaches of the treaties. Some officials in London thought the benefits proposal could pass without treaty change, but they were overruled. Mr Cameron hopes that in February political leaders will be willing to go over the heads of mere lawyers. Yet there are three big reasons to worry about his tactics.

One is that, unlike the Thatcher budget rows, there is no easy way to split the difference. If the benefits change is unlawful, it may be overturned by an individual appeal to the European Court of Justice unless the treaty is changed. A two-year limit is no better than a four-year one. And it is surely politically impossible for parliaments in Poland, Slovakia, Romania or Bulgaria to ratify a treaty authorising discrimination against their own citizens.

Second, prolonged argument over welfare benefits could further delay the referendum. Most pollsters reckon a later vote is likely to boost the leave campaign. Avoidance of delay was a big reason why the government this week pressed the House of Commons swiftly to overturn a House of Lords plan to extend the referendum franchise to 16- and 17-year-olds.

The third concern is that a fuss over migrants' benefits has the effect of putting immigration at the heart of the debate. The UK Independence Party's leader, Nigel Farage, has long tried to make the referendum a vote not about the EU but about limiting migrant numbers (see next story). Mr Cameron promised in 2010 to get net immigration below 100,000 a year, yet his target seems more elusive than ever.

Some in the EU have a deeper fear. Charles Grant of the Centre for European Reform, a London-based think-tank, says officials in Berlin and Brussels fret that if Mr Cameron cannot secure his demands on benefits, he will choose to go for Brexit. Polls have recently been moving against staying in. The Danish government's recent loss of a referendum on opting in to some EU justice and home-affairs laws shows how hard it is to win such votes.

More likely, Mr Cameron's latest demand is a gamble. Quite apart from the potential economic damage of Brexit, his political future and his influence over the choice of his successor would surely suffer. Complex negotiations over the terms of withdrawal would dominate the rest of his government. Brinkmanship can work in Brussels. But the trouble with gamblers is that they often get the odds wrong. ■

The UK Independence Party

Unrisen fruitcakes

The populist right is surging across Europe, but UKIP trails in its wake

Fruitcake eats humble pie

FROM Finland to Hungary to the Netherlands, populist, Eurosceptic, anti-immigrant and far-right parties are on the rise. In France Marine Le Pen's National Front did so spectacularly in the recent regional elections that some fear she could even win the presidential election in 2017 (see page 51). Britain is soon to hold a referendum on its European Union membership, a prospect that ought similarly to boost the UK Independence Party, which was founded to campaign for Brexit. But it has not turned out that way: although the party once dismissed by David Cameron as bunch of "fruitcakes" saw a surge in its popularity two years ago, UKIP has since remained stuck on around 15% in the polls.

Worse, a much-ballyhooed breakthrough in the Oldham West by-election on December 3rd did not materialise. The party raised its share of the vote by just three percentage points, whereas Labour's winning candidate added seven points. UKIP's failure in Oldham West was partly the result of poor organisation. Its grassroots campaigning is shambolic, it does not have enough money and it lacks professionalism, a failing seen in its party political broadcasts in May's general election. In Oldham voters concerned about lost jobs were lectured by UKIP's leader, Nigel Farage (pictured), on the evils of the EU and of Jeremy Corbyn, Labour's far-left leader. After the result Mr Farage tried petulantly to blame postal voting, especially among the constituency's ethnic minorities. This grumpy outburst against the system did nothing to help UKIP's image.

Successful populist parties tend to play simultaneously on two different fears: one of cultural erosion and a loss of sovereignty, blamed on mass immigration or the EU; the other of the threat to traditional jobs and ways of life from globalisation (or "getting slaves to make things abroad to sell to unemployed people here", as Ms Le Pen calls it). But UKIP's focus is only on the first, as it is broadly at ease with free markets: Mr Farage even backs privatisation of the National Health Service. That makes it harder to woo Labour voters. Despite coming second in 44 Labour constituencies in May's general election, and despite Mr Corbyn's unpopularity, UKIP is not making deep inroads in the north.

Paradoxically the Brexit referendum also makes UKIP's life harder. Inevitably it raises the question of the party's future after the vote, especially if it yields a substantial majority for staying in the EU. But the referendum is also a challenge because it is revealing two clashing strands within the party. As Stephen Booth of Open Europe, a mildly Eurosceptic think-tank, points out, it is no accident that there are two separate, warring campaigns for Brexit and that they are dividing UKIP.

Leave.eu, which is supported by Mr Farage, stresses the need to curb immigration and take back control over Britain's borders; it offers a vision of a return to a happy, 1950s kind of Britain with a penchant for warm beer. Vote.leave, which is backed by UKIP's sole MP, Douglas Carswell, dwells much less on immigration and stresses instead the prospect of scrapping all the red tape associated with Brussels and of unshackling Britain from the corpse that is today's euro zone. The future held out by this group is not of the 1950s, but of a Singapore on steroids.

UKIP has also been somewhat more restrained than populist parties elsewhere. In America Donald Trump, a would-be Republican presidential candidate, has grabbed headlines by proposing to stop Muslims entering the country. Some UKIP members, says Matthew Goodwin of the University of Kent, are itching to make similar statements. Mr Farage once mused that he too should adopt Trump-like attack-dog politics (though he has condemned Mr Trump's mooted Muslim ban).

Mr Goodwin predicts that UKIP will eventually splinter, with a far-right section breaking away. Over the next 20-30 years Britain will see a lot more ethnic change. Mr Goodwin reckons a worried 10-20% of voters will remain susceptible to the lure of far-right populism. For all its current troubles UKIP, or something that grows out of its ashes, may be here to stay. ■

Also in this section
60 Randomised controlled trials

Extreme poverty

Leaving it behind

BONABALIA, BANGLADESH

How to rescue people from deep poverty—and why the best methods work

IN A small hut overlooking a muddy river, a dozen women are trying to explain how they fell into destitution. After a few stories of husbands falling ill or vanishing, of ill-paid work drying up, of children sickening, of resorting to begging, almost all are crying. This is quite usual, says Sagarika Indu. BRAC, the large aid organisation she works for, has chosen these women and about 1.6m others since 2002 precisely because they are among the most desperate, ground-down people in one of the world's poorest places.

But then something unexpected happens: the women invite your correspondent to visit again in a couple of years. Is this mere politeness or confidence in the future? It could be either—because they are very likely to be much better off by then.

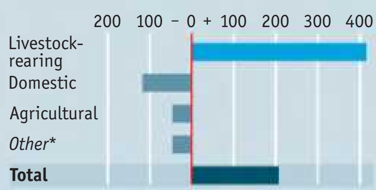
Roughly 700m people are thought to live in extreme poverty, defined as getting by on less than $1.90 a day. That is huge progress: more than 1.9 billion lived on less than the equivalent amount in 1990. Yet the gains are uneven. Poverty has plummeted in China but declined more slowly in sub-Saharan Africa and South Asia. And the poor are diverse. Among them are a particularly desperate bunch: the "ultra-poor", who routinely go hungry. In Bangladesh, most are landless, illiterate rural women with children.

In the 1990s it became clear that microfinance, then the most exciting tool in development economics, was not reaching the very poorest people, recalls Sir Fazle Abed, BRAC's founder. Microlenders offer small loans at lower interest rates than moneylenders charge. Costs are kept down by assembling small groups of borrowers and encouraging them to exert pressure on each other to repay their loans. One reason the poorest were not borrowing, Sir Fazle says, was that other villagers viewed them as hopeless cases.

BRAC came up with a scheme to help the ultra-poor. It gives them a small stipend for food, followed by an asset such as a cow or a few goats, which they are expected to manage. Field workers visit weekly for the next two years, teaching recipients, for example, how to tell when a cow is in heat and how to get it inseminated. The aim is to help women "graduate" from extreme poverty to the normal kind—as Sir Fazle puts it, "to help them back into the mainstream of poor people". Then, perhaps, they can start borrowing.

Better than bootstraps

BRAC programme's impact after four years on hours worked by ultra-poor women in Bangladesh per year



Source: "Labour Markets and Poverty in Village Economies" by O.Bandiera *et al.* Forthcoming. December 2015

*Includes begging

Later research showed that microfinance was not the cure-all that had been thought. But BRAC's graduation programme proved highly effective. Large randomised controlled trials (explained in the next article) show that it makes people wealthier and raises their spending on food and durable goods. It works outside Bangladesh, too. A study published earlier this year in *Science* showed that similar programmes run by other NGOs boosted consumption in Ethiopia, Ghana, India, Pakistan and Peru, with the effects lasting at least a year after they ended. The only failure was in Honduras, where many of the chickens given as assets died.

Such programmes are pricey. In India and Bangladesh they cost more than $1,000 per household at purchasing power parity. In Peru, where field workers are better paid, the cost was $5,742. If they are to expand—and about 30 countries are mulling or testing them—two questions must be answered. Do the recipients stay out of deep poverty or slip back? And how exactly do they work?

The results of two big research projects, presented at a conference in London on December 9th, provided some powerful hints. Esther Duflo of the Massachusetts Institute of Technology showed that women who were offered cows, goats and intensive training in the Indian state of West Bengal not only did not fall back into indigent poverty but kept climbing out of it. Seven years after the programme began their average monthly consumption was almost one-third higher than it had been after two years. The gap between these women and the untreated control group grew much wider.

Other research explains why. Oriana Bandiera and Robin Burgess, both of the London School of Economics, and four others followed 21,000 people in 1,309 ▸▸

Bangladeshi villages. They tracked ultra-poor women, some of whom were randomly assigned to the graduation programme, and also kept an eye on everyone else. Of the 21,000, only 6,700 were deeply poor at the start. The rest were a mixture of fairly poor, middle class and upper class (by rural Bangladeshi standards, that is: they do not swan around in Hermès).

The poorest women, it turned out, did far more hours of income-generating work: 991 per year on average, compared with 553 for middle-class ones. Yet they packed them into fewer days: the average ultra-poor woman worked for only 252 days a year, compared with 302 for a middle-class woman and 325 for an upper-class one.

The reason is that they toil mostly as domestic servants and in the fields—and casual agricultural work is seasonal. During planting and harvest they work extremely hard; the rest of the year they do little. Better-off women usually rear livestock, which is not only steady work but pays about twice as much per hour. When the poorest women are given cows, they quickly fill their idle time (see chart on previous page). They also cut back a little on domestic and field labour.

This is a clue to why microfinance does not reach the poorest. Ms Bandiera and Mr Burgess estimate that the internal rate of return for ultra-poor women going through the graduation programme is between 16% and 23% per year, depending on the assumed opportunity cost of time. That is roughly the interest rate on a microloan. So it ought to be worthwhile for a poor woman to borrow money to buy a cow (and returns would be even higher if they did not require the training BRAC's field workers provide). The problem is that no microlender would lend them that much.

Some questions remain. The big one is whether the schemes would work in cities. Slum-dwellers are seldom as indigent as agricultural labourers, but they can still get trapped in poverty, and cannot be rescued by gifts of cows. Urban populations are growing so much faster than rural ones that this question is becoming urgent. Another is whether the programme can be run more cheaply. BRAC will soon test sending field workers to visit each recipient once a fortnight instead of once a week.

Their words are heard

For all the advances in research, some things defy measurement. Near Bonabalia, another group of women, recent graduates of the ultra-poor programme, have gathered. What is striking is not so much their greater wealth (reflected in their finer saris and mobile phones) but the way they stand straighter, and their direct looks. Their relatives have started talking to them. Asked to explain how their lives have changed, one of the first things they say is that they now get invited to weddings. ■

Randomised controlled trials

Measure for measure

How to test everything from sluggish teenagers to corrupt bureaucrats

RESEARCHERS are as sure as they can be of anything that a particular combination of cash transfers, assets (usually cows) and training lifts people out of deep poverty. That is not just a triumph for the NGOs that came up with the formula. It is also another coup for the randomised controlled trial (RCT), and its controversial but increasingly common use in the assessment of social policies.

In the 1920s Ronald Fisher, an English statistician, came up with a way to measure the effects of fertiliser on potatoes. Rather than spreading it on entire fields and studying the result, he divided fields into small plots and decided randomly which ones would be treated. Since external influences (such as soil quality and shade) would not differ systematically between treated and untreated plots, any difference in yields would probably be due to the fertiliser. Fisher's ideas were seized on by statisticians doing quality control in munitions factories during the second world war. After the war ended, they were taken up in medicine.

These days RCTs are routine in development economics. Like potato plants, people eligible for help are randomly assigned to treatment and control groups. The difference between the two groups' outcomes is used to assess the intervention's effectiveness. The Abdul Latif Jameel Poverty Action Lab in Massachusetts, known as J-PAL, has started or completed 689 RCTs. Earlier this year it was estimated that the number of published papers on development involving formal impact evaluations (often but not always RCTs) rose more than tenfold from 2000 to 2012.

Emerging-world governments are commissioning RCTs partly because others are doing so, says Esther Duflo of J-PAL. As the trials spread, experienced researchers are becoming easier to find. It helps that some studies have had striking results. J-PAL attracted a lot of publicity, and some resentment, when it assembled evidence that microlending barely boosts consumption.

RCTs are being used more often to assess social policy in America, France and Scandinavia. In Britain there has been a flurry evaluating educational innovations—including one called "Teensleep", in which the treatment group starts school at 10am (the idea is that they will learn more after a lie-in). Often the results are underwhelming, though no less important for that. A randomised experiment in New York showed that paying all teachers in a school more if their pupils do better in tests does not raise attainment.

But the emerging world remains far ahead. In Britain and America RCTs are mostly used to test minor policy tweaks, not fundamental reforms. In poorer countries, by contrast, they are being used to design welfare systems and measure corruption. Oriana Bandiera, who studied the BRAC programme in Bangladesh, is discussing with Zambia's government the possibility of doing a randomised trial of political decentralisation. The technical difficulties will be immense. Still, she says, persuading Zambia to sign up is much easier than it would be to get Britain to give it a try.

A good place for an experiment

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European business and refugees

Getting the new arrivals to work

VIENNA

Businesses could benefit, and refugees integrate faster, if newcomers to Europe were able to start working sooner

DANIEL BAPINGA (pictured) enjoys his job at the Magdas hotel in Vienna, where he works at the bar, serves breakfast and prepares rooms. His family fled Congo for Austria six years ago, when refugee flows to Europe were a fraction of those today. He has settled in well, saying that "when you arrive, it is your own duty to integrate, you have to follow the rules."

At the 78-room hotel, opened in February by Caritas, a charity, 20 of the 31 staff are refugees, like Mr Bapinga. (Its motto is: "Stay open-minded".) They are from 16 countries, including Bangladesh, Ghana and Iran, and together speak 27 languages. The restaurant menu is more inventive than at most Viennese hotels.

The hotel's manager, Sebastiaan de Vos, says that working with refugees is mostly a good thing, but he is also frank about some problems. The hotel is overstaffed. Training takes up to 60% of total working hours. Nervous employees, with few qualifications and little work experience, must be shown countless times how to do simple tasks. A few men who refused to take orders from a female boss had to be turned down for jobs. Some were traumatised, including an Afghan chef with debilitating memories of torture by the Taliban. He did not last in the job.

Nonetheless, the Magdas experiment is worth observing. First, because Europe urgently needs ideas on how to integrate better its huge numbers of newcomers. And second, because as European societies age, many businesses face growing shortages of workers—so for them, Europe's refugee problem is a potential solution.

Refugees (those recognised as having a right to stay, having fled persecution) and asylum-seekers (those seeking recognition as refugees) are pouring into the European Union in numbers greater than at any time since the aftermath of the second world war. This week German officials said that 1m refugees had been registered so far this year—half from Syria, and many others from Afghanistan and Iraq. Sweden expects nearly 200,000 arrivals. Next year there could be as many again.

The newcomers are typically a lot younger than the greying populations of the countries they are fleeing to, as is the case with their immigrant populations in general (see chart 1, next page). Eurostat, the EU's statistics agency, says that of 729,000 asylum-seekers registered between May and October, 82% were younger than 34 years. Their median age is around half that of Germans, which is 46. Some of those arriving are poorly educated, but as surveys of refugees arriving in the Netherlands show, many have secondary schooling and even university-level education (see chart 2), especially those fleeing Syria's conflicts. And a significant proportion have skills and experience in various professions and trades.

They are coming at a time when Europeans have become less inclined to do many low-skilled jobs, and sometimes lack the skills for the most demanding ones. Germany alone needs 173,000 workers trained in mathematics, IT, natural sciences and technical subjects (known as MINT jobs) and this shortage could almost quadruple by 2020 without additional measures. Small firms, notably manufacturers in the Mittelstand, crave apprentices. A survey of 3,000 such firms in Germany found that most are anxious about getting and keeping skilled staff. Over 1,000 employers offer work and apprenticeships on workeer.de, a website specifically aimed at refugees. A Swedish government website lists 80 trades, from butchery to midwifery, desperate for more skilled workers.

But for most refugees the easiest route to work, as Mr Bapinga shows, will be into lower-skilled professions of the sort Europeans increasingly spurn. Hairdressing is typical: "Finding employees is the number-one problem for salons," says Kerstin Lehmann, a representative in Düsseldorf of L'Oréal, a maker of hair products and cosmetics. Germany had 40,000 trainee crimpers eight years ago, she says, but has just 25,000 now. Young Germans prefer to study for other careers; recent attempts to recruit hairdressers from southern European countries failed to add much volume.

It is a similar story in the hospitality business, notably in Scandinavia. Henrik Dider of Scandic Hotels, with 7,000 staff across 80 hotels in Sweden, says young Swedes are shunning catering and hotel schools, even as the industry is growing fast. Visita, a hoteliers' trade body, reports chronic shortages of chefs, waiters, receptionists and porters.

Labour shortages are even more acute in rural and remote areas, such as northern Norway. Salmon farms there need workers to gut fish, a job locals spurn. SalMar, a big ▸▸

farmer, boasts it has workers of 23 nationalities—migrants, rather than refugees—at its main plant near Trondheim. Parts-manufacturers for Norway's oil and gas industry also cry out for labourers: ManpowerGroup, a recruitment agency, has placed hundreds of refugees from resettlement centres in temporary jobs in the industry since 2000. Where Russian migrants and Sri Lankan Tamil refugees have gone before, Syrian refugees could follow.

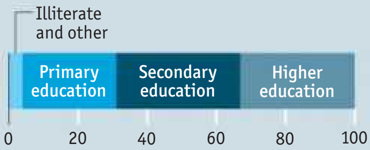
Newcomers alone will not fix Europe's long-term demographic problems. Germany's overall labour force, for example, will shrink sharply in the next couple of decades, almost irrespective of what happens with migration. Still, the OECD forecasts that refugees will boost Europe's labour force by up to 1m people by the end of 2016, a rise of 0.4% in just over a year. In Germany, with an extra 430,000 workers, the labour force could grow by 1%.

If you could fix four problems

A series of problems, however, hinder the smooth movement of refugees into European workplaces. The first, and broadest, of these is legal. America generally lets in people it has already screened and recognised as refugees, and allows them to start work almost immediately. There are plenty of low-paid jobs waiting for them, and they typically integrate, and learn English, quickly. Europe mostly gets asylum-seekers, and keeps them waiting, sometimes for years, for refugee status. In this legal limbo they typically get welfare and shelter but are usually barred from work, and even from state-funded language lessons.

An asset, not a liability 2

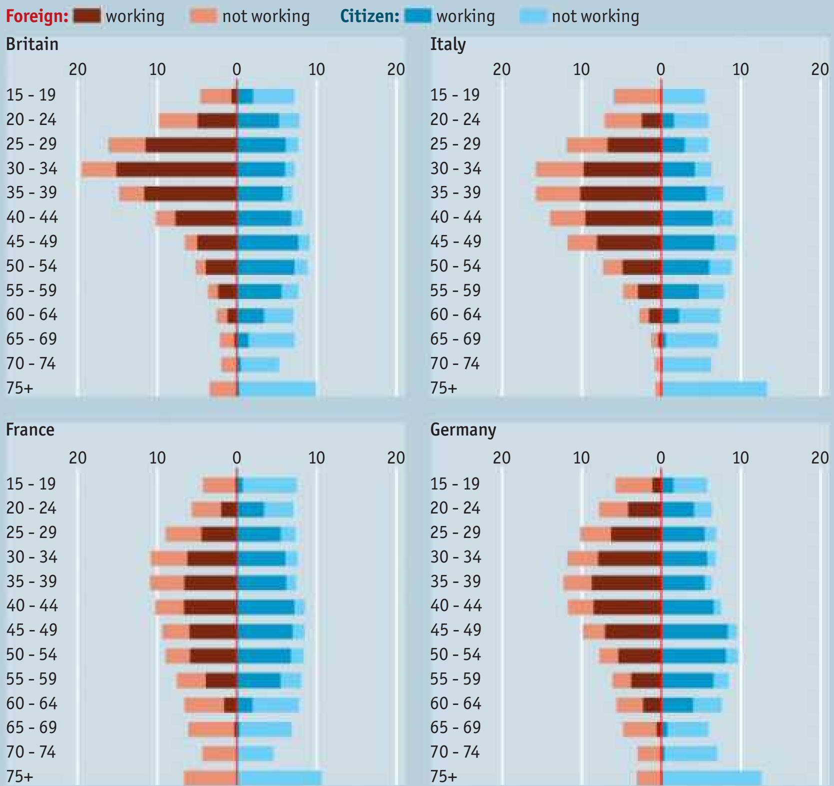
Education level of registered refugees* aged 18-65 in the Netherlands, %



Source: COA *Based on sample in first half of 2015

Young arrivals in a greying Europe 1

Europe's population by age, 2014, %



Source: Eurostat

Europeans have been too slow to grasp that getting newcomers quickly into the labour market is "the only way" to integrate them, says Demetrios Papademetriou of the Migration Policy Institute in Washington, DC. Leaving asylum-seekers waiting endlessly for a decision makes it much harder to integrate them later. A Guinea-Bissauan now at the Magdas hotel, fluent in seven languages, had to wait a decade before he could seek work.

Germany's chambers of commerce want any asylum-seeker recruited as an apprentice to have an automatic right to stay for two years after completing the apprenticeship. Employers will otherwise be reluctant to take them on. But for asylum-seekers whose chances of gaining refugee status are uncertain, the immigration office has said that their stay could be prolonged only if the apprenticeship started when they were under 21. The German government is adding to the uncertainty for employers by contemplating ending the near-automatic granting of long stays to Syrian refugees, and going back to an earlier system of case-by-case reviews (a decision on this is expected soon). Delays either force asylum-seekers into informal or black-market jobs, or make them less employable later.

A second impediment to getting the new arrivals working is the failure to assess their education and skills systematically. There are a few schemes here and there, such as ones in which German state governments have hired recruitment agencies to identify those with high-level skills among groups of refugees. SAP, a German software firm, wants to build a national database for the federal government, to record and analyse the skills of all asylum-seekers, then share the data with employers. But politicians are nervous of anything that opens them to accusations of encouraging more immigrants of all kinds, so such ideas have not prospered.

A third broad obstacle to getting refugees into work concerns the recognition of foreigners' qualifications—which matters more because of Europe's excessive demands for credentials. Despite a growing need for carers for the elderly in Germany, for example, job applicants need to have completed three years of training and passed a written exam.

Governments could at least find ways to translate paperwork faster. In Sweden getting foreign qualifications recognised typically takes 11 months. Officials in Stockholm hope to cut that time as part of a plan to reduce, from six years to two or less, the average time a well-educated newcomer takes to find a suitable job. Where unions and employers agree there are labour shortages, rules are being eased to let foreigners start working sooner. The idea is to do this for about 20 different occupations in the next few months, says Soledad Grafeuille of Sweden's labour agency.

Sweden has identified 1,700 teachers among its newly arrived refugees. They will be put on a fast-track programme from January, preparing them to work in schools—especially ones in which refugee children are swelling classes.

A Dutch foundation, UAF, helps refugees finish their studies and get into jobs, for example by getting their paperwork certified and languages up to scratch. One of its star pupils is an Iraqi cardiologist who learnt Dutch in six months and now works as a surgeon.

Typically, however, refugees lack the paperwork to verify their training and experience, so what helps most is letting them prove themselves in the workplace. Beginning in January, Scandic Hotels will give about 50 refugees a tryout in its kitchens, and decide by the summer whether to recruit them on a larger scale. Ms Lehmann of L'Oréal says the first five potential trainee hairdressers have been recruited this month among refugees in Düsseldorf. She will try them out first on mannequins.

In the Netherlands, Accenture is recruiting among highly skilled refugees. Manon van Beek of the management consultant says that 60 staff coach newcomers, helping them to prepare their paperwork and get qualifications recognised. The firm has so far signed up five staff and five paid interns, including software engineers, and helped others find jobs with its clients.

Fluent, or functional?

A fourth and final task is overcoming language barriers. Those Swedish trainee teachers, for example, will begin preparing for classes with the help of Arabic interpreters, while learning Swedish simultaneously. That is more flexible than before. In the past applicants had to be fluent in Swedish before any other training began. In contrast, although Germany is short of doctors, even the best-trained newcomers still cannot practise until proficient in German to a high level known as C1, which can take years to attain.

A number of European firms are looking at ways to help incomers improve their language skills. Berlin's water company is opening a training scheme that includes language instruction. SalMar, the salmon firm, already offers its immigrant fish-gutters lessons in Norwegian. McDonald's in Germany, with an eye on future burger-flippers, is funding 20,000 three-month language courses for refugees.

A lesson from past attempts to integrate immigrants in Europe is that "We shouldn't try to be too perfect," says Heinrich Rentmeister of the Boston Consulting Group. Even in the case of doctors, fluency in non-medical matters is not essential, notes a Swedish official working on the integration of refugees into the labour market. The government is looking for ways to teach refugees "occupationally relevant Swedish", not to write essays on Strindberg.

Many employers in the EU would second the view of Airbus's boss, Tom Enders, who wrote in October that Germany needs "the courage to deregulate" labour markets to integrate foreign workers. But even short of a wholesale reform of labour law, there is clearly more that EU governments can do to help refugees into work, and help employers fill jobs they might otherwise have to leave vacant. As Manpower's boss, Jonas Prising, notes, the huddled masses streaming into Europe represent "a wealth of untapped talent". Businesses are beginning to recognise them as such. Governments should, too. ■

Mergers and antitrust in America

Pushing the limits

NEW YORK

A frenzy of deals is awakening America's antitrust regulators

AMERICA is in the midst of one of the biggest dealmaking booms in its history. Since Lehman Brothers failed in September 2008, $11 trillion of mergers and acquisitions have been done or await completion. Activity this year has been at a record high. The latest marriage may be of Dow Chemical and DuPont, two of America's oldest firms that together dominate the chemicals industry. They are talking about combining to create a $130 billion giant.

Antitrust regulators are finally losing their rag. Responsibility for policing deals is mainly shared between the Federal Trade Commission (FTC) and the Department of Justice (DOJ). So far in December the DOJ has scuppered the planned sale of General Electric's electrical-appliance division to Electrolux, and the proposed sale of Bumble Bee Seafoods, owned by a private-equity firm, to a Thai rival. On December 7th the FTC said it would try to block the acquisition of Office Depot by Staples. A big railway takeover—Canadian Pacific wants to buy Norfolk Southern—is also causing a stink. Railroads have been at the heart of antitrust battles since the 19th century. Norfolk fears that the deal will not pass muster with the transport regulator.

Most merger waves eventually lead to blowback as ever more ambitious companies test the boundaries of what is permissible. In the late 1990s and early 2000s, regulators blocked deals in defence (Lockheed

Regulators won't sit on this fence

Martin and Northrop Grumman), telecoms (WorldCom and Sprint) and helicopter-making (Bell and Boeing) among others. European officials terminated General Electric's takeover of Honeywell in 2001.

This time round, too, some big deals are attracting political heat. The public already detest some industries that have consolidated, or plan to, such as airlines and health insurers. On the campaign trail, Hillary Clinton has criticised plans to merge several large insurers. On December 8th Congress held hearings on the combination of AB InBev and SABMiller. "Nobody wants to take a seat at a bar and discover their only choices are between a Bud and a Miller," grumbled Chris Coons, a thirsty senator. (The firms, if combined, promise to sell one of the brands of watery brew.)

There are more serious grounds for a tougher approach than politicians' boozing preferences. In four-fifths of America's big industries the top 50 firms had a higher market share in 2007 than in 1997. Profit margins are at a near-record high, hinting at a lack of competition. The scale of dealmaking—total transactions since Lehman's failure amount to 46% of American firms' current market value—points to more concentration, too. In the run-up to the financial crash many takeovers were by private-equity firms, which assembled vast portfolios of unrelated businesses. Now most deals are "strategic", with two firms seeking to combine similar operations, boost their prices and cut costs. Food, cable TV, telecoms, airlines, computer chips and other industries all have consolidated in the past half-decade.

Acquisitive firms are now trying clever tactics, which they hope will annoy regulators less. Dow and DuPont are likely to combine and then split again into three smaller firms, each with a speciality. Canadian Pacific has proposed putting itself into an independent trust, that will be combined with Norfolk but be run separately from it until regulators give the nod. If they do not, the two firms will be split again.

But regulators are changing their approach, too. In the Bumble Bee case, the DOJ defined the market narrowly, examining the sale of just canned tuna, rather than all canned fish. And Nelson Fitts, a lawyer with Wachtell Lipton, a law firm, points out that in 2010 the DOJ and the FTC changed their merger guidelines. Rather than emphasising traditional yardsticks such as market shares in specific places, or barriers to entry, they are using a broader sense of whether a deal hurts competition—for example whether margins or prices will rise. In June a judge blocked the merger of Sysco and US Foods, arguing that they would have pricing power nationwide over restaurants, hospitals, hotels and other food buyers. A similar argument is being used in the case against Staples and Office depot: the FTC argues that it would raise prices for large businesses.

How far will the antitrust backlash go? One measure is the number of pending deals where the shares of the target are trading at a big discount to the proposed offer price, suggesting that arbitragers and investors do not expect the transaction to go through. Of the 20 largest pending transactions nine are trading at a discount of over 10%, including the merger of Baker Hughes and Halliburton, two oil-services firms.

A few more nasty jabs from America's regulators could create more uncertainty about the $1.4 trillion of deals outstanding that involve North American firms. It could also make executives thinking about new deals more nervous—one banker says that some chief executives are already getting cold feet about potential deals, when faced with a protracted period of wrangling with antitrust officials.

As antitrust regulators get tougher, firms that already have high market shares may come to fear being broken up, even if they won their position under their own steam, rather than through takeovers. Tech firms such as Google and Facebook may be deemed to dominate their industries. Microsoft barely escaped being dismembered in 2001. With America in a populist mood, antitrust is back in fashion and the tremors could even reach Silicon Valley. ■

Clamouring for content

Selected Alibaba investments in media-content and distribution businesses

	Type of firm	Stake bought, %	Cost, $bn
Youku Tudou	Online video	60.6	4.5
Wasu Media*	Cable TV	20.0	1.1
China Vision Media (renamed Alibaba Pictures)	Film studio	59.3	0.8
Huayi Brothers	Film studio	8.8	0.24
China Business News	Print media	37.6	0.19
South China Morning Post	Print media	*Under negotiation*	

Sources: *The Economist*; press reports

*Investment was by Jack Ma and others

Alibaba's media investments

Mission improbable

SHANGHAI

Jack Ma, China's biggest e-commerce tycoon, wants to be a media mogul too

CINEMA-GOERS in the West are used to seeing majestic Leo, the roaring MGM lion, and comely Columbia, the torch-bearing maiden meant to embody the United States, at the beginning of films. The audience for "Mission: Impossible—Rogue Nation", the latest in a series of action pics starring Tom Cruise, saw something surprising. The opening titles of this blockbuster featured the logo of Alibaba Pictures, the film-making arm of China's e-commerce goliath.

Jack Ma, Alibaba's billionaire boss, wants to be a global media mogul. He is already one at home, thanks to a flurry of recent acquisitions (see table). His firm bought control of China Vision Media (renamed Alibaba Pictures), and has a stake in Huayi Brothers, another studio. It controls Youku Tudou, a leading online-video portal. Mr Ma has also put his own money into Wasu Media, a digital-media firm rumoured to have held talks with Netflix, which hopes to enter the China market.

Whereas Rupert Murdoch has separated his film and TV interests from his news outlets, Mr Ma is busy adding news businesses to his media empire. Alibaba has invested in a number of mainland publications, including the respected *China Business News*. Now it is in talks to buy the *South China Morning Post*, a 112-year-old English-language daily in Hong Kong. The paper, once owned by Mr Murdoch, is controlled by Robert Kuok, a Chinese-Malaysian billionaire who has been hugely successful doing business on the mainland.

Why bother? Print newspapers are a shrivelling business, and the *Post* is no exception, though it still turns a profit. Journalists are an unmanageable bunch. And English is not widely spoken on the mainland, so the paper's brand is currently worth little there. The *Post*, like Hong Kong, is still seen by foreign businesspeople as a gateway to China. However, Zhang Zhian of Sun Yat-sen University in Guangzhou notes that its management has been "conservative and chaotic" of late, and its digital efforts "far lag the market".

Alibaba may see an opportunity to apply its digital sophistication and data-analysis expertise to the *Post*, to drag it into the social-media age. Mr Ma recently talked about using news media to help promote small business, in turn encouraging such firms to advertise in those news media. He could likewise use those outlets to promote his films and TV shows, which again would be a handy source of advertising.

This optimistic view of Mr Ma's intentions jostles with a more Machiavellian one. Officials in Beijing have clamped down on mainland news media, while tolerating more openness in the former British colony (albeit through gritted teeth). They would surely be delighted if, as some fear, Mr Ma were buying the paper to silence it, and curry favour with the Party bosses. On this argument, the *Post* is a last bastion of press freedom, and about to fall.

Mark Natkin of Marbridge, a consulting firm, disagrees. First, he thinks that the ostensible business case for the deal has "reasonable logic". As Alibaba expands into entertainment and increases its presence in global markets, he thinks it makes sense to take "great leapfrogs" by buying existing media brands instead of starting from scratch—as it did by buying into Mr Cruise's blockbuster. Second, he argues that many of the *Post*'s greatest writers and editors have left or been forced out, so its most courageous reporting may well be behind it anyway.

Becoming the *Post*'s proprietor could still prove a poisoned chalice for Mr Ma. The business case might make sense if Alibaba made the *Post* a must-read source of business news in Asia (as the now-defunct *Far Eastern Economic Review* once was). But that means earning readers' trust. Given how independent-minded many Hong Kongers proved to be during recent protests, Mr Ma would surely face a tough editorial judgment eventually. If an Alibaba-controlled *Post* does not report any future clashes in Hong Kong frankly and fearlessly, for example, it could tarnish the image of China's putative media mogul in the world's eyes, rather than burnish it. ■

Talent versus hard work

Best or Keegan?

Recruiters and investors think talent counts for more than determination

IT MIGHT be described as the "George Best versus Kevin Keegan" question. In their day, each was considered the finest footballer in Europe. But the first was a natural talent for whom the game came easily. The second was less gifted but reached the top through unstinting determination. Which would represent the better signing?

Choosing whether to hire someone who displays innate ability over a hard worker is not just a question for fantasy-football punters. Investors and recruiters sometimes face the same choice.

In a soon-to-be-published paper, Chia-Jung Tsay of University College London (UCL) tested whether investors prefer to back "naturals" or "strivers". As Ms Tsay accepts, things are rarely that black-and-white. Few people—Messrs Best and Keegan included—are successful without being at least a bit of both. But often the scales are tipped in one direction, at least in people's perceptions.

In an experiment, Ms Tsay presented would-be investors with profiles of a group of fictional entrepreneurs, including attributes such as their leadership experience, management skills, IQ and the amount of capital they had raised. In one variant of the experiment, it was hinted that each entrepreneur had reached his position more through natural ability or talent. In another variant, it was stated explicitly that they were either naturals or strivers, though the investors were not told that this was the factor of most interest to the researcher. The study then calculated how much, on average, the investors would be willing to trade off any of the entrepreneurs' other attributes in order to choose a natural or a striver.

The investors were divided between those with real-life investment experience and those without. Both groups showed a clear preference for the supposed naturals. To gain backing from an experienced investor, for example, a striver would need on average 4.5 more years of leadership experience, 9% better management skills, a 28-point higher IQ and nearly $40,000 more accrued capital than a natural. Yet before the experiment, most participants had expressed a proclivity for someone who could demonstrate motivation and hard work. This suggests that the bias for natural talent over hard work is unconscious.

Achieving goals through determination is a recurring cultural meme—think of the American dream, say, or the Protestant work ethic. So maybe it is not surprising that people parrot it as an ideal. When it comes to investing, however, the UCL experiment suggests that such puritan values fall by the wayside.

The same may apply for employers. In a 2012 study, Michael Norton of Harvard Business School found that recruiters show a "preference for potential". That is, they will choose someone unproven for whom they think glory may lie ahead, over someone who can demonstrate a glorious past. It may be that those who have reached their position through hard work do themselves no favours by over-stressing their achievements so far at the expense of other qualities. Ms Tsay suggests that naturals may be chosen because they are deemed to be better at adapting to an uncertain future.

If people do have a predisposed bias for naturals, then they may end up nursing some regrets. Let George Best serve as a salutary tale. While his football career fizzed brightly it also fizzled out early. He quickly got distracted by champagne and the serial pursuit of Miss Worlds. As a penniless Best later lamented: "I spent a lot of money on booze, birds and fast cars. The rest I just squandered." ■

Avon's troubles

Ding-dong

NEW YORK

The decline of a famous American beauty company

A TRAVELLING salesman founded Avon in 1886, recruiting women to hawk perfumes while their husbands were at work—a chance for them to earn an independent living at a time when such opportunities were rare. By 1920 Avon had more than $1m in annual sales. By the early 1970s the company's advertising campaigns had made the cheerful, confident "Avon lady" an instantly recognisable figure, and its sales had reached $1 billion. Today the company boasts that its brand "stands for beauty, innovation, optimism, and above all for women."

To many investors, however, Avon now stands for incompetence. Its share price has plunged by nearly 60% so far this year. Quarterly earnings calls, usually polite affairs, have become decidedly less so, as stock analysts press executives to explain another set of dismal results. This month there have been reports that Avon may sell its floundering North American business to Cerberus, a private-equity firm. Activist investors, including Barington Capital Group and NuOrion Partners, are wary of such proposals. Instead they want Avon to sack its chief executive and replace some board members, cut costs and shake up its distribution system.

All these protect against angry investors

Avon is keeping mum on the reports about selling to Cerberus. In response to the activists, who together have a stake of more than 3%, Avon gave a predictably bland response about "continuing our dialogue with our shareholders". Privately, the company is sure to be less sanguine.

Avon is still sizeable, with nearly $9 billion in revenue last year. It has 6m independent saleswomen (and a few salesmen) who buy Avon products at a discount, then peddle those goods to customers. Avon now operates in 60 countries, with Latin America as its biggest market. In developing economies, where conventional retailing remains underdeveloped, door-to-door selling can be a good way to reach consumers who are beginning to enjoy some disposable income.

Despite this global reach, Avon looks increasingly wan. Its operating margin is less than half what it was a decade ago. It faces growing competition from other retailers of beauty products, both bricks-and-mortar and online. Avon's woes cannot be blamed on the direct-sales model: other firms are doing just fine with it. Barington blames "chronic mismanagement" and a "lack of effective board oversight".

Its most disastrous move, in hindsight, was to reject a $10 billion takeover bid in 2012 from Coty, another beauty company. When Avon's board rebuffed the offer, it argued that a new chief executive would be a "greater opportunity to improve shareholder value". However under the new boss, Sheri McCoy, Avon's share price has crumpled, and the company is now worth less than $2 billion.

In America Avon has struggled to retain its freelance sales reps and has done little to market its products in other ways, such as on Amazon and other e-commerce portals. In Brazil, Avon's business has suffered from meagre marketing and glitches with its supply chain, according to analysts at Citigroup, a bank. Its costs are bloated. Barington notes that executives are paid handsomely, despite the company's grim results. When Avon has cut costs, argues Ali Dibadj of Sanford C. Bernstein, a research firm, it has reduced them in the wrong places, such as advertising.

Barington and its allies argue that Avon can be fixed if it finds another new boss and shakes up its board. Rather than sell the North American business at what might be a "fire sale" price, they would streamline and decentralise its management. More attention would be paid to selling Avon's products in shops and online. Mr Dibadj of Bernstein takes a gloomier view. "I think at this point the best value in the company is actually to dismantle Avon," he says. Avon will hold a long-awaited "investor day" on January 21st. Unless its bosses can come up with some convincing new ideas, the door may slam on them. ■

Schumpeter | School for frugal innovation

South African entrepreneurs have good ideas for bringing private education to the masses

MANY MBA students dream of striking it rich. Stacey Brewer dreamed of reforming education. Ms Brewer worried that South Africa's education system was perpetuating racial divisions with its combination of substandard public schools for the black majority and elite private schools for a mainly white minority. So in her MBA thesis for GIBS Business School in Johannesburg, in 2011, she produced a blueprint for a chain of private schools that would use standard business methods (such as economies of scale and technological innovation) to provide cut-price private education for the masses. The chain, SPARK, now operates four schools and will open another four in 2016.

Everything about SPARK Bramley, in a mixed district of Johannesburg, bespeaks aspiration. The pupils are racially diverse—about 80% are black and the rest are white or "coloured", to use the ugly local term for mixed-race—but they are all in smart uniforms. The school has some of the flavour of a conventional private school with its emphasis on character and discipline. But it also uses lots of unorthodox methods such as chants and dancing. The pupils start each day by reciting a creed that includes the phrase, "I am a SPARK scholar and I am going to university."

SPARK is determined to provide private education for less than the 18,000 rand ($1,200) a year that it costs to educate a state-school student. The schools specialise in "blended learning": pupils spend some time in conventional classes and some time in a computer room where they complete lessons on the screen. The schools save money by renting their premises, centralising their administration, getting parents to help with maintenance and paying their teachers less than in state schools.

Ms Brewer and her business partner, Ryan Harrison, a fellow GIBS graduate, have scoured the world for ideas. They modelled SPARK on California's Rocketship Schools, a chain of charter schools. They will measure SPARK students' progress against the best in the world—British students in English and Singaporeans in mathematics. They believe that modern technology will allow them to scale up much faster than used to be possible in education: teachers can share materials over the internet and supporters can build the school's brand via social networks.

South Africa has seen a dramatic increase in the number of low-cost private schools since the end of apartheid, says Ann Bernstein of the Centre for Development and Enterprise, a think-tank. The country spends a generous 6.2% of GDP on state education. But results are dismal: for every 100 students who started school in 2003 for example, 48 took the school-leaving examination ("matric"), 36 passed and 14 went on to higher education. A big reason for this is that education is an accountability void. The country's state-school teachers are among the world's best paid in terms of purchasing-power parity, according to the National Planning Commission. But the combination of high starting salaries and powerful unions means that it is impossible to reward them if they do well or sack them if they fail. "You do whatever you want and you still get paid," says one teacher, who asked not to be identified. "Sometimes you die and you still get paid."

Many of the earliest low-cost private schools were "pop-ups" that made use of abandoned factories, disused apartment blocks and the like. But today a handful of school chains are bringing capital and sophistication to bear. They come in three forms. The first group are those listed on stockmarkets, such as AdvTech and Curro. AdvTech now operates in the high-fee market but wants to expand into low-fee schools in much the same way that hotel chains expand into the budget market. Curro was only started in 2011 but already has 42 schools. The second group consists of unlisted for-profit schools such as SPARK and outfits like them. The third and biggest group consists of not-for-profit schools, known as independent schools, that charge fees but also get money from the government. Many of these chains have been operating under the radar for years: BASA Educational Institute Trust was founded by a group of black entrepreneurs in 1993 but they have recently attracted funding for expansion from banks such as Old Mutual and from the government employees' pension fund.

Beyond just staying alive

Not everyone is impressed with all this talk of "scaling up" and "leveraging technology". Helenne Ulster has been teaching in the United Church School, an independent school, for two decades. The school is in Yeoville, a much tougher district than the one SPARK Bramley is based in. Pupils have to pass through two sets of iron gates to enter; outside them, pedlars sell "dagga" (cannabis). More than half the children are immigrants from neighbouring African countries. The school's social worker frequently discovers signs of beating and sexual abuse. Ms Ulster is amused by talk of the magic of technology: even if the school could afford iPads, she says, they would be stolen in a flash if they left the premises. She doesn't think there are enough charismatic heads or motivated teachers to create successful chains of schools: "Staying alive is hard enough."

Such scepticism is salutary given the customary hyperbole surrounding educational initiatives. But private schooling in South Africa has lots of room to grow. It is much less developed than in India, where 40% of urban pupils go to private schools, or Punjab, Pakistan, where the state provides vouchers that can be spent in public or private schools. Private schools can add to the capacity of a state-education system that is bursting at the seams: between 2000 and 2010 the number of state schools in South Africa fell by 9% while the number of independent schools grew by 44% (from a much lower base). They can also act as laboratories for new ideas: BASA schools use technology in classrooms even though some are in areas as tough as Yeoville. But the most important thing that schools like SPARK can do is nurture aspiration in more South African children than the offspring of the elite. ■

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Interest rates in America

Buckle up

WASHINGTON, DC

The first of three pieces on the Federal Reserve's imminent interest-rate decision looks at whether America is ready for lift-off

SINCE interest rates hit rock-bottom in 2009, the Federal Reserve has repeatedly made optimistic forecasts about when they would start rising, only to delay the big day again and again. If the Fed has been a bullish coach, the markets have been trusting fans, continually believing that an increase is imminent, only to have their expectations dashed. At last, however, the moment seems to have arrived. On December 16th, when the Fed's rate-setting committee meets, it seems all but certain to raise rates.

For that, thank the strength of the labour market. Unemployment, at 5%, is as low as most analysts reckon it can sustainably fall. During the recession, America lost 8.7m jobs. It has since gained 13m. In 2010 there were six unemployed workers for every job opening; today there are 1.5.

Wages, long stagnant, finally appear to be growing again, too. In September, when the Fed toyed with raising rates, average hourly pay had just grown by 2%, on an annualised basis, over the prior three months. Now that has risen to 2.8% (see chart). By one measure, wages grew by fully 4% in the third quarter of the year. Accelerating pay suggests that slack in the labour market has almost gone.

The pick-up in wages could peter out, however. Since the recession hordes of workers have left the labour force altogether: labour-force participation among 25- to 54-year-olds in the third quarter of the year was lower than at any time since 1984. If some can be tempted back to work, wages will be held down.

Moreover, the Fed's preferred inflation measure stands at just 0.2%, well below its 2% target. Cheap oil bears much of the blame. But core inflation, which excludes volatile energy and food prices—and so is a better indicator of underlying price pressures—is only 1.3%.

Janet Yellen (pictured), the Fed's chair, chalks up some of the shortfall to a strong dollar making imports cheap (the greenback is up by 19% since mid-2014). That effect should dissipate if the dollar's ascent stops. There is also less scope for the oil price to plunge, having already fallen by almost two-thirds over the past year. This suggests inflation may pick up in 2016. That, in turn, argues for a rate rise soon, since monetary policy is thought to have only a delayed impact on the economy.

An uptick at last
US wages, quarterly growth, annualised

Source: BLS
*Private employees

The Fed is in a jam, though, because it faces asymmetric risks. If it raises rates too soon, its scope to cut them, should the economy then sour, is limited by the fact rates cannot fall far below zero. If it waits until inflation is stronger, it has unlimited capacity to raise rates to tame it.

Getting this balance right will be tricky. Ms Yellen likes to emphasise that starting early keeps the journey smooth; abrupt rises later might rattle markets. Yet the Fed's forecast for rates is steeper than what the market predicts. The Fed's median rate-setter expects interest rates to rise to around 1.5% by the end of 2016; by contrast, traders expect rates of only 0.85% in a year's time.

Two roads in a wood

Who is right depends on how the economy reacts to the first rise. That is hard to predict, because the channels through which monetary policy works are mysterious. Take consumption, which has driven America's recent growth. The impact of rates on consumer spending is muted by the fact that, unlike in much of Europe, most American mortgages come with fixed interest rates, shielding many Americans from swings in monetary policy. The first rate rise will nudge up the cost of borrowing, but only very slightly.

Nor is a rate rise likely to slow investment much. The evidence for the responsiveness of investment to rates is mixed; business confidence is probably more important. If—as some think—a rate rise is a signal from the Fed that America's economy is healthy, investment could even rise.

That leaves exports. If rising rates cause the dollar to appreciate further, American goods will become still more expensive abroad. America's embattled manufacturers will not welcome that (a recent survey suggests manufacturing output shrank in November for the first time in three years). But another surge in the dollar is unlikely, ▸▸

since a rate rise in December is now widely expected.

If the Fed follows through on its forecasts, though, and raises rates faster than markets expect in 2016, the dollar may well rise further, dampening inflation quickly. Stanley Fischer, the Fed's vice-chair, recently estimated that a 10% rise in the dollar reduces core inflation by half a percentage point within six months. For all her horizon-gazing, Ms Yellen is unlikely to persist with rapid rate rises if they push inflation too far below target in the short term.

Further falls in commodity prices could also keep the brakes on. This would drag down inflation directly, but could also reduce it indirectly by pushing up the greenback. Much of the dollar's recent appreciation, on a trade-weighted basis, derives from weakness in the Mexican peso and the Canadian dollar. Those currencies weaken when commodity prices fall, argues Paul Ashworth of Capital Economics.

Most uncertain of all is where interest rates will end up. That depends on the so-called "natural" rate of interest; the sweet-spot which balances demand and supply. This is tricky to pin down, but it is commonly thought to be falling, in part due to systemically slower growth since the crisis. One estimate—based on work by John Williams, a rate-setter himself—puts the inflation-adjusted natural rate of interest at -0.1%, down from 3.1% in 2000. Given an inflation target of 2%, that points to rates eventually settling at just under 2%. That is worryingly low; in 2007, before the crisis, the Fed had leeway to cut rates by over 5 percentage points.

The last time monetary policy changed in a comparable way was in 1947, when the Fed started raising rates from a lowly three-eighths of a percent, where they had sat for five years. This time, the wait for another stint near zero may not be nearly so long. ■

Buttonwood | Taking the training wheels off

Markets must learn how to survive without the Fed's help

IF THE Federal Reserve does increase interest rates on December 16th, very few investors will be taken by surprise. It will be the most discussed, most anticipated rate rise in history.

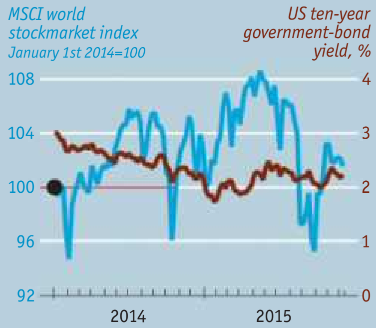
Typically, markets buy on the rumour and sell on the news. So although higher interest rates might be expected to boost the dollar, and be bad for both equities and Treasury bonds, the market may have fully anticipated the impact. The dollar has already risen by 10% against the euro this year.

History suggests that the first rate increase is not a huge market-mover. BCA Research has looked at 17 rate-tightening cycles since 1971. In the three months after the Fed raised rates for the first time, the stockmarket fell on ten occasions, rose on six and was flat in the other instance. Thanks to a couple of very strong rallies during the mid-1980s and mid-1990s, the average movement was a 1.1% gain. On average, the Treasury-bond market marginally underperformed equities in the three months after a first rate hike.

But as Citigroup points out, the Fed is starting to tighten at an unusual time. Normally, the move is made to head off inflationary pressures, but commodity prices are falling at the moment, not rising. In part, this may be down to oversupply in some commodities (like oil), but weak demand is also playing a role.

Furthermore, tighter policy usually comes when investors' appetite for risk is reviving. But credit spreads (the difference between the interest rates on bonds issued by companies and those paid by governments) are rising, not falling—a sign of caution. By the same token, the first Fed increase usually occurs as the economy is rebounding and when corporate profits are rising; this recovery has been going on for so long that profits have already started to falter. The profits of S&P 500 companies in the third quarter were 1.2% lower than in the same period in 2014.

Busily going nowhere



Source: Thomson Reuters

In other words, the Fed usually increases rates when the economy is steaming ahead and investors can ignore the adverse impact of monetary policy in favour of the good news. This time is genuinely different. Global equities have been flat since the start of 2014 (in dollar terms) and Treasury-bond yields have fallen slightly over the same period (see chart).

A related issue is the huge reliance of markets on central-bank support since the crisis broke in 2007. This was neatly illustrated on December 3rd when the European Central Bank failed to cut rates by as much as expected; disappointed equity markets fell sharply.

A low-rate policy has encouraged investors to buy risky assets like corporate bonds and equities instead of holding cash. Economic fundamentals have been almost irrelevant to the market mood. When the economy has looked strong, that has been good news for equities and corporate bonds because profits are boosted. But a weak economy has also been good news, since central banks have been driven to offer more stimulus.

Sentiment is bound to change once the Fed starts to tighten. Good news on the economy might not be positive for markets, since it could signal further rate rises. The first rate increase may be baked into asset prices; what matters from here is the pace of further tightening. Futures prices imply only two further quarter-point hikes in 2016. When the Fed raised rates more quickly than the markets expected in 1994, it instigated a rout in government bonds.

The impact on markets makes it all the more likely that the Fed will proceed cautiously. The best analogy is with a parent teaching a child to ride a bicycle: the prudent approach is to stand close enough to catch the falling tot, and only remove the training wheels later on.

A sharp rise in bond yields and spreads during 2016 would have a dampening effect on economic activity. A sharp fall in equities would weaken consumer confidence. In the past the Fed has reacted to such developments by cutting rates, not increasing them.

The worst news for the markets would be if the Fed has miscalculated in either direction. Perhaps it has been too slow to tighten and inflation is about to take off. If that is the case, then Treasury-bond yields will rise sharply, probably hurting corporate bonds and equities. The more plausible risk is that America's central bankers are acting too soon and the signs of a slowdown in the global economy may show up on their doorstep next year. If that proves to be the case, equities will suffer but Treasury bonds will do fine. Investors have to hope that the Fed has judged things exactly right.

Economist.com/blogs/buttonwood

The Fed and emerging markets

The secular sulk

SHANGHAI

America's looming rate rise will expose more frailties in emerging markets

THE prospect of interest-rate "lift-off" in America gives investors a reason to take their money there. So it has been odd to see a procession of emerging-market officials call on the Fed to get on with it, the sooner the better. Central bankers from India, Indonesia, Malaysia, Mexico and Peru are among those who have professed a desire for America's rates to rise.

One explanation is that they are a little like patients waiting to give blood, tired of the excruciating wait and just hoping to be done with it. Things could certainly get painful. As it is, capital is already being diverted away from developing countries and towards America. In 2010-14 non-residents put $22 billion into emerging-market stocks and bonds every month, on average. In November they moved $3.5 billion out, the fourth month of such outflows in the past five, according to the Institute of International Finance, a trade association.

Further outflows in the coming months would put more pressure on the beleaguered currencies of many emerging markets. Depreciation makes their hefty external debts even more daunting. Dollar credit to non-banks outside America reached $9.8 trillion in the middle of this year; a bit more than a third of that was owed by borrowers in emerging markets, according to the Bank for International Settlements, a forum for central bankers.

To defend their currencies, central banks can raise interest rates in line with the Fed. In recent weeks Peru, Chile and Colombia have done just that in anticipation of lift-off, as have Angola, Ghana, Zambia and others. Higher domestic interest rates, though, come at a cost, dampening economic activity. They also make it more expensive for companies to refinance domestically, a problem since the bulk of their new debt in recent years has been in their local currencies. Whichever route emerging markets choose to take, in other words, some pain is inevitable—hence the desire to get it over with quickly.

Another explanation for their *sang-froid* in the face of the Fed is that the worst might already be behind them. It has been a brutal year for the assets and currencies of many developing countries. Average real exchange rates for emerging markets, excluding China, are now as weak as in late 2002, when investors still had raw memories of the crises of the 1990s.

A decade of furious growth had dimmed those memories, but this year has revived them. The MSCI index of emerging-market equities has fallen by 15% (see chart), badly underperforming developed markets and hitting its lowest level since the height of the financial crisis in 2008.

From this vantage, much of the downside from rising American rates appears to have been priced in already. Take two of the most battered currencies, the Malaysian ringgit and the Russian rouble. They are down by some 25% and 50%, respectively, over the past two years. A steadying of their value would make nominal corporate earnings in both countries look far healthier in dollar terms: other things being equal, they would go from double-digit falls to being flattish. Jonathan Anderson of Emerging Advisors forecasts that the big theme of 2016 will be a "stabilisation trade", as portfolio investors are lured back to developing countries.

The International Monetary Fund sees a similar trajectory for economies as a whole. It forecasts that emerging-market growth will average 4.5% next year, up from 3.9% this year, breaking a streak of five straight years of decelerating growth. It is not that emerging markets will have suddenly regained their lustre. Rather, it is that recessions will be less severe, if not over, in places like Brazil and Russia.

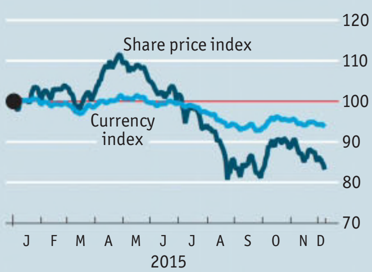
Yet if the best that can be said about emerging markets is that they will stabilise, this points to a more troubling reason for their relative indifference: the realisation that the Fed is the least of their problems.

In 2013, investors dumped emerging-market assets when America signalled the beginning of the end of its programme of quantitative easing. That episode came to be known as the "taper tantrum". This time the gloom that envelops emerging markets might be more accurately described as a "secular sulk".

Annus horribilis

MSCI emerging-market indices

January 1st 2015=100, $ terms



Source: Bloomberg

The fear is that a golden era of growth, fuelled by China's ravenous appetite for commodities, has come to a close, exposing deep cracks in their economic foundations. David Lubin of Citigroup, a bank, talks of a "broken growth model". Governments cannot stimulate their economies because their creditors will not tolerate big deficits. Companies are also unable or unwilling to invest more because they have built up big debts. Exports are of little help because many of these economies are now overly reliant on commodities.

The feeble state of manufacturing across emerging markets, with the exception of parts of Asia, means that many will miss out on the one big upside to lift-off. The Fed is set to raise rates because of America's relative economic strength. America, in turn, should provide a boost to countries that make the things it wants to buy. But emerging markets such as Indonesia and South Africa that specialise in commodities have not just been hit hardest by China's slowdown; they are also the least likely to benefit from America's growth. To them, lift-off will sound like a cruel joke. They will stay pinned to the ground. ■

Bill Gates and the IDB

Two-pronged attack

Western and Middle Eastern donors pool cash and expertise

TO ESCAPE from penury, poor countries must build schools, roads and power plants. By definition, they do not have the tax revenue to do so. Foreign aid helps, but rich countries do not donate anywhere near the amount needed. That leaves loans as the only way to fund the necessary investment. For countries with limited means, these are in short supply too. The poorest spots on earth, dubbed highly-indebted poor countries (HIPCs) by the IMF, lose access to international debt-relief schemes if they take out loans at commercial rates. Yet concessionary loans are even harder to come by than the usurious sort.

It is this shortage that Bill Gates, whose foundation is the world's biggest charity, and the Islamic Development Bank (IDB), which finances worthy projects in poor Muslim countries, hope to diminish. They are launching a new scheme to provide poor countries with cheap loans for things that banks rarely fund, such as disease eradication and sanitation. Over the next five years the bank will lend up to $2 billion to projects in health, agriculture and infrastructure, aimed at improving the lot ▸▸

A pilot, not a plot

of the poorest households. Mr Gates is raising $500m for grants to reduce the interest payments on these loans. His foundation is putting in $100m; the Islamic Solidarity Fund for Development, another charity, has chipped in another $100m.

Much more is needed. In 2013 the total stock of concessionary loans was $44 billion, most of them granted by the World Bank. That year donors disbursed just $150 billion in aid, including concessionary loans—equivalent to less than 5% of the estimated annual cost of meeting the Sustainable Development Goals, the United Nations' new poverty-fighting aspirations for the next 15 years. Add in poor countries' own resources, and they still only have a third of what they need to meet the SDGs.

To make their spending go further, Mr Gates is trying to wed Western technical expertise with the IDB's cultural savvy. A pilot scheme for the new fund has paid, through a blend of a loan and a grant, for two-thirds of Pakistan's polio-eradication programme for the past two years. The ruler of Abu Dhabi, Sheikh Khalifa, is the face of the vaccination campaign. This helps counter rumours that the vaccine is a Western plot to sterilise children. Last year all flights to Pakistan on Etihad, an airline based in Abu Dhabi, showed a video featuring a girl disabled by polio—and her regretful father who had refused to have her vaccinated. The Gates Foundation, meanwhile, helped monitor the vaccination campaign, tracking operations, supplies and the number of children immunised. As Mr Gates puts it, "We are polio experts; they are Pakistan experts." The combination seems to be a winning one: Pakistan has had 43 polio cases this year, down from 267 for the same period in 2014. ■

Banking in Congo

Cash in a canoe

KINSHASA

A new system for paying civil servants puts banks through their paces

IMAGINE if, to collect your salary each month, you had to walk to the nearest town, perhaps tens of miles away, to congregate in a school or a football pitch or a church. There, you and your colleagues wait for a man to arrive from the capital, perhaps a thousand miles away, with a suitcase of cash. Most of the time, you do not receive as much money as you should. Sometimes the man does not arrive at all.

Until recently, that is how most government employees in the Democratic Republic of Congo were paid. But over the past three years the government has been urging civil servants to open bank accounts, to which their pay can be transferred directly. In the process, it is accelerating the spread of banking in an economy that, according to Michel Losembe, the bow-tied president of the Congolese Banking Association, is "not very far off barter".

Few countries are as corrupt as Congo. A persistent national joke concerns a mythical "Article 15" of the constitution, which reads "Débrouillez-vous"—"You're on your own". Mobutu Sese Seko, a former strongman, used state funds to charter a Concorde to take him on shopping trips to Paris. By the time of his overthrow in 1997, graft was endemic. Government employees were not paid but rather expected to use their positions to make a living.

Civil war engulfed Congo in the 1990s and 2000s. As it wound down, government was rebuilt and money again began to flow out of Kinshasa, the capital, to roughly 1m functionaries in the rest of the country. But corruption did not disappear. Among the most prized government jobs was that of accountant: the people responsible for transporting bags of cash to the provinces to hand out to employees.

In 2012, however, the Congolese government started helping civil servants to open bank accounts. Around three-quarters of them—some 670,000 people—now have one. In the process, the government has weeded out tens of thousands of ghost employees, since the embezzlers who invented them could not open accounts in their names without a matching ID.

Yet in a vast country with fewer roads than Luxembourg, hardly anyone lives anywhere near a bank branch. So Congolese banks must now do the work the government accountants used to: shipping money to the back of beyond. Cash has to be transported to branches in regional capitals, and thence to account-holders on the backs of motorbikes, in canoes or by foot, explains Oliver Meisenberg, the German boss of Trust Merchant Bank, one of Congo's biggest.

Bank staff with suitcases of cash make easy targets, just as they did in the west of America in the 19th century. Though they usually travel with army escorts, there have been at least ten armed robberies of bank employees since January, says Mr Losembe. One particularly brutal raid in September in South Kivu, in the wild east of the country, killed 13 people.

Congolese bankers hope that the new system will spur the growth of a proper banking sector. At the moment banks are little more than money-transfer companies, and not very sophisticated ones at that. The transfers tend to go only one way—out of Kinshasa—so cannot be netted against each other; instead cash almost always has to be moved physically. Depositors mistrust both banks and the Congolese franc. To attract dollar deposits, banks must pay at least 6% annual interest; rates for borrowers are generally as high as 25%. There is hardly any corporate lending beyond short-term overdraft facilities.

A decade ago there were just 50,000 bank accounts in the whole country, which has a population somewhere between 60m and 80m. Now there are 3m. As more employees get accounts, selling them loans and insurance, and moving them from cash to mobile transactions, becomes more realistic. In the meantime, actually receiving their salaries at all marks a big step forward for civil servants. ■

Investing in railways

On the right track

Private investment in rolling stock is set to gather steam

AS AN asset class, railways have a worrying history. Railway mania in Britain in the 1840s left plenty of unwary investors nursing hefty losses; that episode sits in most lists of history's biggest speculative bubbles. But the prices of shares and bonds are dauntingly high, which has stoked interest in all manner of outlandish "alternative" assets in recent years. That, along with legal changes making it easier to repossess collateral that goes clickety-clack, may soon have investors funnelling cash into locomotives, carriages and goods wagons again.

Precious little private money is currently invested in rolling stock. That partly reflects the ownership of railways around the world, which are mainly in state hands. Around 87% of the €10.8 billion ($14.4 billion) spent on locomotives and railway cars in Europe in 2011-13, for example, came from governments, according to a new study by Roland Berger, a consulting firm. This reliance on the public purse means that investment comes fitfully, if at all, arriving when it is available rather than when it is needed. Romania's state railway still operates 60-year-old steam trains.

The scarcity of public funds has hastened deregulation. The European Union's fourth package of railway reforms, for example, is designed to open all domestic rail markets to full competition by 2019. Operators should be keen. Passenger services tend to provide a steady income even when the local economy is derailed (freight is more likely to hit the buffers in a downturn). What is more, the public-private partnerships involved typically include a guaranteed return.

Deregulation should, in turn, encourage the growth of firms that lease rolling stock to operators, according to Howard Rosen of the Rail Working Group, a non-profit organisation representing the rail industry. It was outfits of this sort that accelerated the expansion of budget flying in the 1990s, by sparing startup airlines the cost of buying new planes. A good number of banks and other institutions are ready to invest.

The hitch is that investors in rolling stock currently have little security over their assets. These are hard to identify and are designed to be moved across borders, from one legal jurisdiction to another. There is an international treaty called the Cape Town convention, which allows creditors to establish their interest in capital goods that cross borders, and repossess them if necessary—but it focuses mainly on aeroplanes. However, a new codicil to the treaty, which is now on the verge of ratification, seeks to institute a similar system for rolling stock. The addition will create a centralised record of serial numbers—something that exists for planes but not for bits of trains. This will reduce risks and costs for private investors.

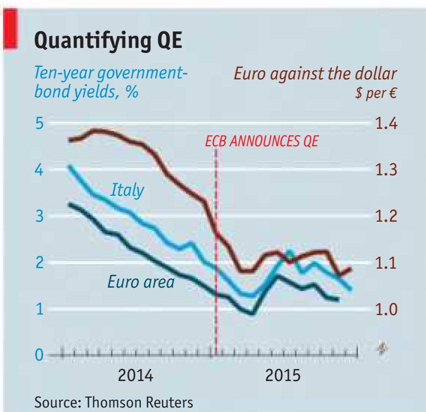
So far the protocol has been ratified by the EU and awaits rubber-stamping by its member states. Other countries outside Europe are likely to sign up too. Indeed the opportunities may be even greater in Latin America and South-East Asia, where private cash is almost entirely absent but railways are needed more than ever. Another mania is unlikely, but the signal could be about to turn green for private capital. ■

The ECB's medicine

Raising the dose

The treatment is helping but the patient remains weak

THE year started with the belated adoption by the European Central Bank of quantitative easing (QE)—creating money to buy bonds—in the euro area. As the year ends, QE, which loosens monetary policy even when there is little scope to cut interest rates further, is being extended by an extra six months, so that the purchases will last until March 2017. Does this mean that the ECB's monetary medicine is proving less effective than expected?



Mario Draghi, president of the ECB, argues on the contrary that the adoption of QE has been crucial in fostering the recovery in the euro area. QE has driven down long-term interest rates, the bank reckons, just as it did in America and Britain. Like their counterparts in those countries, ECB staff have analysed the effect of announcements about QE on the markets. Their study found that both the prospect of QE in the autumn of 2014 and the formal embrace of it in 2015—the policy was adopted in January and started in March—was responsible for half of the percentage-point fall in the average yield of ten-year government bonds in the euro zone between the start of September 2014 and the end of March 2015. The contribution to declines in countries such as Italy, which had been assailed by the bond markets, was even bigger, at 0.7 percentage points (see chart).

In America, where markets rather than banks dominate finance, such a reduction would in itself provide a direct stimulus, as the fall in government yields spreads to corporate bonds and mortgage finance. In contrast, banks are the main providers of finance in the euro area. However, QE appears to have indirectly eased credit conditions. In particular it helped to reduce lending rates in the stressed economies of southern Europe. These had stayed stubbornly high long after the acute phase of the euro crisis ended in the autumn of 2012. The ECB's study argues that by improving the economic outlook, QE lowered credit risk for banks, enabling them to cut their loan rates.

Another way in which QE has supported the euro-zone economy is by pushing the euro down. That helps exporters, as well as boosting inflation by making imported products more expensive. The ECB's study estimates that QE was in itself responsible for a 12% fall in the euro against the dollar. In fact the euro has dropped by even more than that. It is currently trading around 20% lower than in the spring of 2014. Another ECB policy—the imposition of negative interest rates, which started in June 2014—provides a possible explanation for the extra weakening. The ECB lowered its deposit rate still further this month, to -0.3%.

QE has proved its worth in other economies, so it is hardly surprising that it seems to be working in the euro area too. Yet the pace of recovery, though stronger than before, remains disappointing. Euro-zone GDP is still below the level it reached in early 2008, before the financial and euro crises; America's GDP surpassed its previous peak during 2011. Headline inflation is barely above zero. Core inflation, which excludes volatile items like food and energy, is close to 1%, well below the ECB's goal of nearly 2%. All this suggests the ECB may have to prescribe yet more QE next year. ■

Bitcoin's schism

Stumbling blocks

HONG KONG

A split of the digital currency now seems unlikely, but problems remain

"IT'S time for a group hug," one of the participants joked at the end. After a long and lively exchange, programmers, who write the software behind bitcoin, and "miners", whose computers mint the digital currency, had indeed found some common ground. But the rapport between the two camps still seemed tentative. At one point a developer asked whether miners, who now mostly hail from China, would ever collude to steal bitcoin.

Suspicions between developers and miners were not the only ones on display at "Scaling Bitcoin", a conference in Hong Kong this week. Developers themselves have been feuding, too. The event was intended to end a dispute about how to expand the capacity of the bitcoin system. Currently, it can only handle seven transactions per second—a fraction of what conventional payment systems can manage. The number could be increased by allowing bigger "blocks"—the name given to the batches into which bitcoin transactions are assembled before they are processed.

For years developers have disagreed about how much, if at all, blocks should grow. Fearing that the system would soon hit its limits, two of them, Gavin Andresen and Mike Hearn, lost patience this summer: they called on miners to install a new version of bitcoin's software which works with much bigger blocks. The result was a rift between developers and a spasm in bitcoin's yo-yoing value (see chart).

Virtual and volatile

Bitcoin price, $'000

Source: Bitcoin charts

Highly technical talks, lengthy debates and much socialising allowed the more than 200 participants at the conference to air their grievances and discuss all sorts of ways to allow bitcoin to grow. It helped that the two renegades did not attend (Mr Andresen is now a researcher at MIT's Media Lab and Mr Hearn has joined R3 CEV, a coalition of banks developing bitcoin-like technology). Bitcoin XT, as the controversial new software is called, has not been widely adopted.

Although details still need to be worked out, it now looks likely that developers will first—perhaps within a few months—implement technical fixes to boost bitcoin's capacity without increasing the maximum block size. A small increase in the block size—probably from one to as many as four megabytes—is expected to come only later; it is considered a risky move that requires all computers on the bitcoin network to install new software at the same time.

That still leaves open the question of how such decisions should be made in future. Civil wars and subsequent peace conferences are an inefficient way to create consensus. As befits advocates of a currency without a central bank, neither developers nor miners want to be at the helm (in practice they share authority, since the system could not work without both groups). Some at the conference argued that, like the internet, bitcoin needs a formal governance structure. Others presented complex technical solutions that would allow market forces to decide how big blocks should be.

Behind such debates lurks a bigger question: what does bitcoin want to be when it grows up? Should it be immutable, like gold, or should it adapt to the demands of its users, even if that means becoming more like a conventional payment system? Perhaps Satoshi Nakamoto, the mysterious creator of bitcoin, could provide guidance. Reports this week suggested he may be an Australian academic under investigation by the taxman. ■

Slumping commodities

In a hole

SIERRA GORDA

Mining firms and oil producers reel from another downward lurch in prices

COMMODITY busts have left more of a mark on the barren mining region of northern Chile than the booms that preceded them. On the road to Sierra Gorda, a ramshackle copper-mining village in the middle of the Atacama Desert, dusty adobe cemeteries hold the remains of hundreds who died in penury after exports of potassium nitrate, or saltpetre, collapsed in the decade after the first world war.

Sierra Gorda itself looks like it is heading toward a similar decrepitude, despite huge copper mines carved into the hills around it. Chile, the world's biggest copper producer, was a big beneficiary of the China-led commodities boom, yet the only hints of the past decade of high copper prices are newly installed streetlights. The sole open business on a recent afternoon was a woman selling *empañadas* from a tatty tent by the roadside.

From Chile to China the sense that another once-in-a-generation raw-materials boom has come to a definitive end is haunting global commodities markets. On December 9th shares of mining and oil companies took a fresh battering as iron-ore prices sank below $40 a tonne for the first time in a decade, and Brent crude, the global benchmark, briefly dipped below $40 a barrel, its lowest level since early 2009. On the same day Anglo-American, a mining conglomerate, said it would shed up to 85,000 jobs, almost two-thirds of its global workforce; shrink its business by 60%; and suspend the dividend at least until the end of 2016.

The biggest question hanging over the commodities markets is when, or indeed whether, Chinese demand will recover. This week a report showing a slump in China's imports and exports in November was read differently by bulls and bears; though the value of imports of commodities fell year on year, the volumes of copper, iron ore and oil rose slightly compared with the previous month, according to Capital Economics, a consultancy. But with stocks of most commodities at unusually high levels, even a mixed message from China is mostly a reason to fret.

The supply situation is more clear-cut, but no less worrying. OPEC, the oil producers' group, helped trigger the latest sell-off of crude by scrapping its already generous production quotas altogether at its annual meeting, which ended on December 4th. Likewise the world's biggest miners, BHP Billiton and Rio Tinto, have stuck to plans to dig up more iron ore and other metals, shovelling more pain onto weaker rivals such as Anglo.

This glut is apparent throughout the supply chain. The steelmaking industry provides a striking example. Analysts at UBS, a Swiss bank, estimate the world has roughly a third more capacity than it needs. China produces roughly half of the global annual output of 1.6 billion tonnes a year. On one estimate, its hundred biggest steel firms lost some $11 billion during the first ten months of this year, an amount roughly double the profits earned last year. Unwanted products are finding their way onto global markets, even at a loss. Official data released this week confirm that China has, in the year through November, exported over 100m tonnes of steel for the first time. That is more than the total steel production of any country save Japan.

Excess supply on this scale will not disappear overnight. For places like Sierra Gorda and the firms that operate in them, the dust has not yet settled. ■

Free exchange | The gifts of the moguls

Extreme philanthropy is the upside of a worryingly unequal distribution of wealth

THE month of December began with something to like: a post on Facebook in which its founder, Mark Zuckerberg, and his wife, Priscilla Chan, promised to use the vast majority of their vast fortune to support charitable causes. (More than 1.5m people responded with a thumbs-up.) In celebration of the birth of their first child, the pair announced the creation of the Chan Zuckerberg Initiative, which will eventually receive 99% of the shares they own in Facebook, a pile currently valued at $45 billion.

Mr Zuckerberg has already added to the lives of more than a billion people by creating an extraordinarily popular social network. Now he is compounding that good with an act of generosity that can only be applauded. Nonetheless, the donation—and others like it—raise two thorny questions. The first concerns how such a staggering fortune could ever have been accumulated; the second whether philanthropy can salve the sting of the increasingly unequal distribution of wealth that it exemplifies.

That the rich are getting richer, and the richest are getting richer fastest, is beyond doubt. Research* by Emmanuel Saez and Gabriel Zucman of the University of California, Berkeley, suggests that the share of American wealth held by the richest 0.1% of households rose from 7% in 1979 to 22% in 2012; that of the richest 0.01% (about 16,000 households, with average wealth in 2012 of $371m) jumped from 2% to 11%. Even the 1% of Facebook shares Mr Zuckerberg plans to retain is worth $450m—400 times the lifetime income of the median college graduate.

Economists worry about such highly unequal distributions of resources for reasons that go beyond questions of fairness. One concern is that as wealth concentrates, democratic societies will lose faith in the fairness of liberal, market-oriented government. That, in turn, could lead to political crises—a point made most recently by Thomas Piketty, an economist at the London School of Economics, in his book "Capital in the Twenty-First Century". But another fear is that unequal wealth may be a sign of inefficiency, accumulated not just through economically beneficial innovation, but also by exploiting market power.

In recent years the gap between the haves and the have-nots seems to have grown among individuals in part because it has been growing among companies. A recent paper by Jason Furman, Barack Obama's chief economic adviser, and Peter Orszag, a former lieutenant of Mr Obama's now at Citigroup, a bank, notes that the return on investment at the most profitable non-financial firms in America is at record levels. It tops 100% for firms in the 90th percentile, compared with just over 20% 30 years ago. Returns at the most profitable firms are now about ten times those in the middle of the distribution; in the 1990s they were just three times larger. This gap has boosted the fortunes of their owners.

To some extent, outsize returns are the reward for innovation. Apple achieved its dominant market position thanks largely to the superiority of products like the iPhone. But the modern corporate landscape is a winner-take-all environment. Tech titans are often supported by network effects—the fact, for instance, that a social network becomes more valuable to potential users as the user base grows. Facebook's users (like Uber's drivers and passengers, and Amazon's buyers and sellers) benefit from being on the same platform as everyone else. Consequently, Facebook's technology and strategy only needed to be a bit better than the second-best social network to push it into the market-dominating position it now occupies.

Network effects may not be the only forces at work. Many businesses have become more concentrated in recent years: ten of the 13 sectors into which government statisticians divide American industry were more top-heavy in 2007 than in 1997. The biggest firms have not been bashful about buying up rivals. America's pharmaceutical companies are in the midst of a trillion-dollar merger blitz. Facebook has acquired a number of popular social networks, such as Instagram and WhatsApp, turning their owners into moguls while defusing competitive threats.

One solution—to break up the tech behemoths—seems like an extreme response in an industry that evolves at lightning speed anyway. Incumbents argue that their dominant market position has been good for consumers. People love free e-mail and cheap music downloads, after all. But in some respects, Facebook and its ilk resemble utilities—the kind of firm whose profits are normally limited by regulation.

Spending review

Many will view donations like Mr Zuckerberg's as a reason not to worry about the intense concentration of wealth, whatever its source. Gifts of extraordinary size are increasingly common, thanks largely to the efforts of Bill and Melinda Gates, whose foundation is supported by a $44 billion trust. Warren Buffett, America's second-richest person, is a big donor, too. Messrs Buffett and Gates have so far recruited more than 100 billionaires to join them in pledging to give away most of their fortunes. If billionaires are giving money away, that is redistribution of a sort.

Yet extreme philanthropy, as laudable as it is, is no answer to worries about inequality. For one thing, it is hard to spend enormous sums both quickly and well. The Gates Foundation is among the world's most ambitious charities. It chooses its donations carefully; as a result, the $5 billion it gave away in 2014 was less than the $7.4 billion it accumulated thanks to new contributions, investment income and rising asset values.

Mr Zuckerberg, Mr Gates and others seem to be doing their best to put their wealth at the service of humanity. But humanity is also served by markets that support healthy competition. ■

* Studies cited in this article can be found at www.economist.com/inequality15

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Downsized car engines

The incredible shrinking machine

Internal-combustion engines are getting smaller, more economical and cleaner—all without a loss of power

FOR years, the motor industry lived by the mantra, "bigger is better". The number of litres that a car's pistons displaced within its engine's cylinders was a matter of pride for its owner. This was because displacement equalled power, and power equalled—well, whatever it was that the owner wanted to show off beyond the mere ability to travel from A to B. Times change, though, and technology moves on. Power is no less in demand than it was, but as the clamour for fuel economy rises, raw displacement, which sucks fuel from a tank like an enthusiastic child with a straw and a bottle of pop, is going out of fashion. Instead, a new mantra is taking over. This is, "small is beautiful".

What tickles today's petrolheads, therefore, is not so much how many litres an engine displaces as how much horsepower it can extract from a given volume. For, even as they get more powerful, car motors are shrinking. The smallest member of Ford's EcoBoost range—a one-litre, three-cylinder device—delivers more power than a 1.6-litre, four-cylinder engine of the previous generation. It is now fitted to one in five of all Ford cars sold in Europe.

No single advance is responsible for this shrinkage; it is the result of a combination of improvements to the whole of engine design, each of which makes things a few percentage points better. But the upshot is that the sort of power per litre which would, until recently, have been the prerogative of a Ferrari is now rapidly becoming available in a family saloon.

The quickest way to squeeze more out of an engine is to use a turbocharger (indeed, the one-litre EcoBoost does precisely this). A turbocharger employs a turbine, spun by hot gases from the exhaust, to drive a compressor that squeezes extra air into the cylinders and increases combustion. Turbochargers have been used for a long time in high-performance cars and diesel engines, but could be unreliable. They are now small, light, robust and dependable enough to be fitted to a wide range of petrol engines.

The improvements which make this possible have come about in a number of ways. Engineers use new materials, such as nickel alloys, instead of cast iron, to construct parts that are better able to withstand high exhaust temperatures. Powerful computer modelling has also improved features of turbochargers' design, such as the shape of their compressors' blades. That reduces the delay in initial acceleration, called "turbo lag", to which older designs were prone.

Downsized turbocharged engines are now cropping up everywhere. BMW makes a 1.5-litre, three-cylinder version. When fitted to one of the firm's MINI Coopers this, BMW claims, increases torque (a twisting force that aids acceleration) by 42% and reduces fuel consumption by as much as 8% compared with the previous four-cylinder motor. With its one-litre EcoBoost, Ford is going even smaller, as is General Motors, which also makes a one-litre, three-cylinder turbocharged motor in Europe, as part of its downsized range of Ecotech engines. And Fiat (whose chairman, John Elkann, sits on the board of *The Economist*'s parent company) beats even these for compactness. It has a 900cc two-cylinder design which develops 105PS (the metric measure of horsepower). This can accelerate one of the carmaker's popular Cinquecentos from zero to 100kph (62mph) in ten seconds, and propel it to 188kph if the driver keeps his foot down.

The boosters

Turbochargers alone, though, do not make for a good downsized engine. A number of other technologies help as well. One is direct fuel injection (ie, injection directly into the cylinder), which offers several advantages over the older method of injecting petrol into an intake chamber, to mix with the air there, before the whole lot was then passed into the cylinder proper. (Carburettors, which performed this mixing job before fuel injection was invented, have long-since gone to the great scrapheap in the sky.) Injecting fuel directly into the cylinder at high pressure permits more accurate control of the amount used. The injector also dissipates the fuel more evenly in the cylinder, so that when it is ignited by the spark plug it burns more completely and so produces less pollution.

Another useful trick is variable valve timing. The opening and closing of the valves that let air into the cylinder and exhaust gases out used to be regulated by a mechanical device operated by the engine's camshaft. These days, the process is ▸▸

controlled by the engine's management system. This runs the output of various engine sensors through a bunch of software that works out just when the valves need to open and close in order to keep a small, highly boosted engine running smoothly and efficiently. "We could not do what we are doing now just with the hardware," says Andrew Fraser, a senior engineer at Ford's Dunton Technical Centre, in Britain.

The shift from four-cylinder to three-cylinder engines also needs a change in engine design. Three-cylinder engines have a tendency to rock backwards and forwards around the middle cylinder. Carmakers have come up with a number of ways to absorb the vibrations and make sure such engines don't shake, rattle and roll. Ford's answer is to have the flywheel on the back of the engine and the crankshaft pulley mounted on the front, each slightly offset to counteract the rocking movement.

Other developments could elicit yet more power and efficiency from small engines, says Mr Fraser. These include more new materials, such as what the industry calls diamond-like carbon (DLC) coatings for the surfaces of moving parts. Nissan reckons a tough DLC it has developed can bind with specially formulated engine oil to produce an ultra-slippery film that could reduce engine friction by 25%. Ford, too, is interested in special lubricants. It commissioned Castrol, the lubricant division of BP, a large British oil company, to develop one specifically for the one-litre EcoBoost.

A process called cylinder deactivation is also being explored for small engines. As its name implies, this turns some cylinders off to save fuel when a car's engine is being used lightly. Cylinder deactivation is already employed in certain large engines. The V8 in a Bentley, for instance, turns into a V4 when the car is cruising. For small engines with few cylinders, though, more tricks are required to do this without vibrations developing. Ford is working on the problem with Schaeffler, a German engineering group, and in one test recorded a 6% improvement in fuel consumption with an experimental cylinder-deactivation system fitted to a one-litre EcoBoost.

Don't spare the horses

Although many carmakers reckon a one-litre engine is about as small as they might go, some engineers are thinking of shrinking things still further. Gordon Murray, who designed the fabled McLaren F1 supercar, now runs a design consultancy. Among the projects he is working on is one with Osamu Goto, a designer of Honda racing engines, and Shell, an Anglo-Dutch oil firm. The partnership is developing an experimental three-seater city car with a 660cc engine and a target fuel economy of more than 100mpg (2.8 litres per 100km). The engine is being designed to minimise internal friction as much as possible and the vehicle will be built with lightweight composite panels.

Other ideas from the racetrack could make their way into downsized engines—for even in Formula 1 the screaming 2.4 litre V8 racing engines have been replaced with 1.6-litre turbocharged V6s, increasing fuel efficiency by 35% but still producing around 600PS. Among the tricks these engines use are energy-recovery systems that capture kinetic energy dissipated by braking and also heat from the exhaust. The recovered energy is used to charge a battery which, in turn, can spin an electric motor to provide a 160PS boost. Some carmakers are looking at energy-recovery systems of this sort as a way to give downsized road engines further spice. They might, for instance, be used to run superchargers—devices that work faster than turbochargers but have until now been eschewed by designers because they have had to be powered mechanically from the engine itself, thus reducing its efficiency.

Just how far internal-combustion engines will shrink remains to be seen. But every improvement keeps them in the race with those who would shrink the number of cylinders to zero, and replace the whole lot with electric motors. ■

Engine oil

Fast lube

A quick-change act could boost lubricant reuse and cut pollution

CHANGING engine oil is a messy business in more ways than one. Every year, despite the various recycling schemes available, Americans pour over 200m US gallons (750m litres) of used engine oil into trash cans, onto land or down the drain. Most of this ends up polluting rivers and streams. The job could become much faster, simpler and cleaner, though, with a new invention: a plug-in oil cartridge that takes around 90 seconds to replace.

Nexcel, as it is known, is a sealed unit that contains both oil and oil filter, along with some electronics to communicate with the host car's engine-management system. An oil change begins by selecting the vehicle's service mode, which tells the engine's oil pump to transfer oil in the sump into the cartridge. That can then be unclipped and swapped for a new one which contains fresh oil and a clean filter.

The idea comes from Castrol, the lubricants division of BP, a large British oil company. Castrol says a Nexcel cartridge should cost about the same as a conventional oil change, but will be better in several ways. It will, for example, be able to monitor the condition of the oil more closely and ensure it is replaced in a timely fashion. It will also let an engine warm up to its most efficient operating temperature more quickly because, when the engine is started, the cartridge pumps into the sump only the minimum amount of oil needed to let it run smoothly. This may sound risky, but it is a system already used in the "dry sump" engines of many high-performance cars. In fact, the first vehicle to use Nexcel is a dry-sump Aston Martin Vulcan, a car made for the racetrack.

Apart from quick oil changes and rapid engine warming, the main benefits of Nexcel would be environmental.

Not like this...

Although garages collect oil for recycling, different grades often get mixed together and other substances, such as brake fluid, may find their way into the tank as well. As a result, much exhausted oil ends up burnt as furnace fuel rather than being reprocessed as lubricants. According to Oliver Taylor, the Nexcel project's chief engineer, employing cartridges could increase the amount of oil thus reprocessed from the current figure of around a tenth, to three-quarters. The cartridges can be cleaned and reused, too.

The main problem with Nexcel is that engine layouts will need to be redesigned to accommodate the cartridge. That is not insuperable, but might require Castrol's proprietary layout to become a more open system which others can copy (perhaps for a royalty), for no carmaker will want to be tied to the product of a single firm. Castrol is discussing this with manufacturers, and hopes the first Nexcel-fitted vehicles will appear in about five years' time.

Camera technology

Round the bend

Efforts to see around corners get a boost from better detectors

USING a cameraphone to catch the indivisible packets of light energy known as photons is easy: around a trillion of them impinge on its sensor every second. Catching just one photon, however—and knowing exactly when it arrived—is far trickier. Many branches of research in the physical sciences depend on specialised kit that can do this, but quotidian equipment is not up to the job. "So what?" you might think. But there is at least one application outside the laboratory that it might be useful for. This is seeing what is around a corner, something both soldiers and drivers would like to be able to do. And, as they describe in *Nature Photonics*, a group of researchers led by Daniele Faccio of Heriot-Watt University, in Edinburgh, have indeed worked out a way to capture simple movies of what is around the bend.

Dr Faccio's group is one of several trying to do this. All use a method similar to that employed in radar, except that it substitutes light for radio waves and is thus known as LIDAR. Unlike conventional LIDAR, though, the pulses sent out from looking-around-the-corner equipment have to bounce off three things before they make it back to the detector. First, they must be reflected from something in the line of sight of their source. This pushes some of them in the direction of the hidden target. Then, they have to be reflected from that target back in the direction of the first reflector so that they can undergo a third reflection, towards the device that sent them out.

Since each step of this journey scatters or absorbs much of the incident light, what returns is a tiny fraction of what was sent out—the trillions of photons are reduced to just a few thousand. But even that handful is, in principle, enough to construct an image of what cannot be seen directly. To do so, however, it helps to have expensive detectors shielded by filters that let through only light of the frequency used by the LIDAR; a set of complex algorithms; and minutes or hours of scanning to provide the data for said algorithms to chew on.

Dr Faccio has managed to speed this process up. Partly, he does so by sacrificing detail. But his main advance is to use an array of devices called single-photon avalanche diodes (SPADS), deposited on a semiconductor chip, to create something rather like a camera sensor. As the name suggests, each SPAD can register the arrival of a single photon. Such a packet of light triggers an avalanche of electric charge through the diode's semiconducting material, creating a signal.

This arrangement can measure a photon's arrival time to within 45 trillionths of a second, a period during which light travels 1.35cm. Like conventional LIDAR, the round-the-corner sort works by measuring the time it takes for a pulse, or part of it, to return. It can then work out how far the photons it has seen are from the bit of the target they have reflected from.

And it works. The system can now see someone (usually one of Dr Faccio's students) hidden four metres away around a corner. It can also produce new images sufficiently quickly (once every three seconds) to shoot a jerky movie of her.

That, of course, falls far short of something that might show a driver what lies around the bend. But Dr Faccio hopes for rapid improvements. A tenfold increase in sensitivity, for example, could be had just by using a more powerful laser. The SPADS themselves are improving swiftly, too. The ability to see around corners, then, could be just around the corner. ■

Malnutrition

Chicken out

Poultry excrement may be stunting infant development

TO ADULT eyes, eating dirt is disgusting. Nonetheless, young children do it routinely. How harmful the habit truly is has never been established. But Mduduzi Mbuya and Jean Humphrey of Johns Hopkins University, in Baltimore, who work with children in Zimbabwe, think it can be very harmful indeed. They suspect, as they write in *Maternal and Child Nutrition*, that in places like Zimbabwe, where chickens roam freely and what is on the ground is thus full of their droppings, it is responsible for stunting infant growth.

One child in five is so afflicted. And stunting's effects are not merely physical. Stunted children also do badly at school, affecting both their own futures and those of the countries they live in. Solving stunting, however, is not merely a question of better nutrition. A study on food programmes carried out in 2008, by Kathryn Dewey and Seth Adu-Afarwuah of the University of California, Davis, concluded that even the most effective of these led to a reduction in stunting of only 30%. Stunting, then, has other causes as well.

Searching the literature, Dr Mbuya and Dr Humphrey found that two pertinent things happen when unfriendly microbes of the sort found in chicken droppings get into the intestine. One is a loss of villi, the finger-like projections from the gut wall that absorb nutrients. The other is a loosening of the joints between the cells that line the gut. This creates holes through which microbes of all sorts can pass into the bloodstream, where they stimulate the immune system. That diverts nutrients needed elsewhere. It also causes the production of chemicals called cytokines which, among other things, switch off the production of growth hormone.

Dr Mbuya and Dr Humphrey have thus laid out how chicken droppings may cause stunting. That they actually do so remains to be proved. A straw in the wind, though, is research done in Ethiopia by Derek Headey and Kalle Hirvonen of the International Food Policy Research Institute, in Washington, DC. Dr Headey and Dr Hirvonen found that households which kept poultry indoors had a significantly higher rate of child stunting than those that kept the birds outside—somewhat ironic, as government policy is to encourage children to eat eggs precisely in order to prevent stunting.

Who makes a good father?

Pot luck

Changes in a man's testosterone level show the kind of parent he will be

MEN want sex and sex leads to fatherhood. If these two statements were propositions in a syllogism, then the logical conclusion would be that men want fatherhood. Observation, however, indicates that this is not always the case. As the number of women left, literally, holding the baby shows, quite a few men run a mile from fatherhood.

Of course, the statements are not part of a syllogism, for the word "fatherhood" has different meanings in the first sentence and the second and third ones—the first meaning is biological and the second social. Moreover, there are quite a few men who do not run a mile from the social form of fatherhood. And Dario Maestripieri of the University of Chicago thinks he has found a way to tell doting dads from deadbeats in advance: check a man's reaction when he watches a smutty movie.

The reaction Dr Maestripieri monitored was the viewer's testosterone level, before and after. This he compared, as a control, with the same man's responses, on a different day, to mock job interviews and mental-arithmetic tests.

This study was a follow-up to one in which Dr Maestripieri had tested the existing theory of who makes a good dad, and found it wanting. This is that the more testosterone a man has, the less likely he is to hang around to help bring up baby. Using a questionnaire which asked things like, "How much do you like babies?", "Do you think most babies are cute?" and "Do you want to have children someday?" Dr Maestripieri showed that the answers are uncorrelated with a man's testosterone level, as measured from a saliva sample. Good news, then, for women who would like to settle down with a hunk, but fear hunks are not the settling-down sort. But there is still the question of which hunk to choose—and that is where the movie (an attractive young lady performing a striptease, and then masturbating) comes in.

Dr Maestripieri's volunteers, who were 107 young, unmarried, heterosexual men, duly filled in the questionnaire and gave their before and after samples of saliva, and Dr Maestripieri and his colleagues found what they were looking for. As they report in *Psychological Science*, they discovered that if a man scored a -3 on the baby questionnaire (which ran from -6, indicating no interest at all in babies, to +6, indicating a heartfelt love for changing nappies) he was likely to have experienced an increase in testosterone of 20 picograms per millilitre of saliva during the video. In contrast, the testosterone of a man who scored +3 was unlikely to increase at all. And, in the case of one participant who scored a +6, his testosterone level actually dropped by 10 picograms per millilitre during the showing. In contrast (and as expected), there was no correlation between attitudes to babies and any changes in testosterone levels that took place following the mock job interview and the arithmetic task.

Crucially, too, the team confirmed their earlier result that men's pre-video testosterone levels are uncorrelated with their attraction to babies, as measured by the questionnaire. And by giving the volunteers a second questionnaire to fill in, the researchers also dug a bit into what might be going on behind the biological scenes, to explain the differences they had found.

The second questionnaire, called the Mini-K test, measures how socially embedded an individual is, by asking him to rate his response to propositions such as, "I have to be closely attached to someone before I am comfortable having sex with them", "I avoid taking risks" and "I often get emotional support and practical help from my blood relatives". The "K" in the test's name is a term ecologists use to describe natural selection that favours small, stable families and lots of parental care. (The opposite, r-selection, favours many offspring and little or no parental care.) The Mini-K has long been used by psychologists to tease out whether an individual is someone predisposed to living a settled life involving marriage and children, or is prone to living life in the fast lane with frequent flings and little commitment.

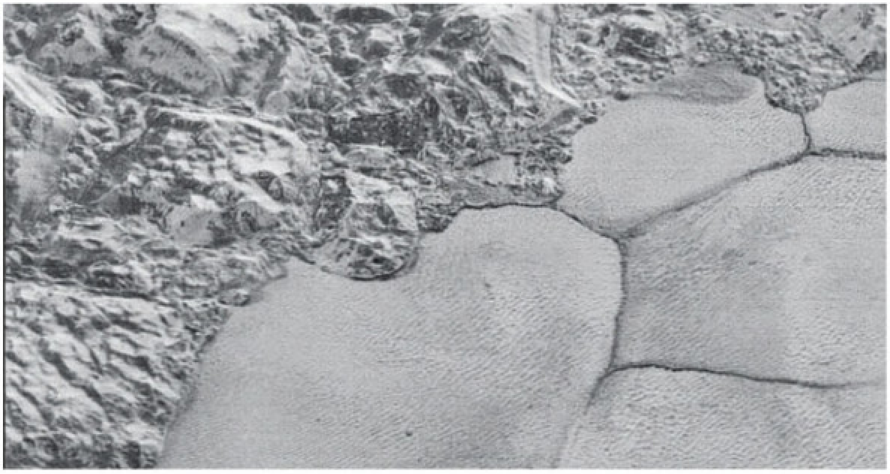
Unsurprisingly, the Mini-K results also correlated with the response to the video, confirming the idea that changes in testosterone levels do indeed, at least superficially, match the r-K continuum. That makes some sense in evolutionary terms. A man who takes an "r" approach to life is likely to have more children (assuming he survives, for he is also more likely to provoke hostility), but they will be less well looked after and probably more likely to die. The "K" approach will sire fewer babies, but they will be well nurtured and tend to survive. Several generations down the track, therefore, genes for both strategies may do equally well.

Even more likely, though, is that r-type and K-type responses develop in reaction to childhood experience, for (and this idea is again borrowed from ecology) "K" will do well in settled environments and "r" in unpredictable ones. But testing that idea will be both difficult and controversial.

On the more immediate question, though, of how a woman can tell whether a man is a potential "keeper" or not, this work does provide a convenient answer. All you have to do is show him a dodgy video and get him to spit in a pot. ■

Distant mountains, frozen seas

NASA's probe to Pluto, *New Horizons*, spent mere minutes skimming past that celestial body's surface on the morning of July 14th. As it did so, though, its camera was snapping at full pelt and storing pictures in the craft's databanks. Since then, those databanks have gradually been disgorging their contents back to Earth. It is a slow process, because only about 1,000 bits a second can be transmitted reliably, given the limited nature of *New Horizons'* power pack (200W—enough for a couple of decent incandescent light bulbs), and the distance (almost 5 billion km) over which the signal has to travel, undissipated, to the receiving stations in Australia, California and Spain that pick it up. This picture, made public on December 4th, shows what is, in effect, a frozen shoreline. Above left are the al-Idrisi mountains, covered with ice. The cracked "sea", Sputnik Planum, below right, is a mixture of ice and frozen nitrogen. More pictures will follow, for the databanks will not be fully empty of their secrets until late in 2016.



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Finance in films

Short and sweet

Hollywood has long been ambivalent about Wall Street. Finally, it has found a terrific story to tell about finance

BANKS failed, unemployment soared, house prices slumped and American politics was transformed by the emergence of the Tea Party. Given the drama created by the 2007/08 financial crisis, one might have expected it to play a bigger role in popular culture. But Hollywood directors and commercial novelists have all struggled with the world of finance.

Financiers are not easy heroes, though they make great villains. Gordon Gekko (as played by Michael Douglas) was the most charismatic character in "Wall Street" in 1987. More recently, "The Wolf of Wall Street" (2013), may have tried to demonstrate the utter cynicism of share pushers, but the film revels in the hedonism of Leonardo DiCaprio and his sidekicks. More often, financiers and businessmen are shadowy off-screen presences, manipulating politicians and the environment for short-term gain.

This is an age-old problem. In the 19th century Charles Dickens and Anthony Trollope both created financial fraudsters who could have been the model for Bernie Madoff in the form of Mr Merdle (in "Little Dorrit") and Augustus Melmotte ("The Way We Live Now"). But neither is as vivid as the hapless Mr Micawber in "David Copperfield", whose homilies on the misery of debt are still quoted today.

Film-makers often try to make financiers and businessmen seem sympathetic by focusing on their human qualities: in "Pretty Woman" (1990) Richard Gere's corporate raider abandons his machinations for the love of Julia Roberts. Mark Zuckerberg is a tough little nut in "The Social Network" (2010) until you realise that he seems to have created Facebook just to impress a girlfriend who dumped him. This year "Steve Jobs" has Apple's co-founder juggling company-building with the need to care for his daughter. Success in business or finance is not enough to nourish the soul; in "Citizen Kane" (1941) Orson Welles dies in his castle, surrounded by luxury, but yearning for his childhood sled.

In "It's a Wonderful Life" (1946) Jimmy Stewart's character, George Bailey, was a rare example of a sympathetic banker in a Hollywood movie. His speech to the citizens of Bedford Falls as he tries to prevent a run on the bank was perhaps the best explanation of finance in popular culture. But George Bailey's heroism stemmed from his resistance to the real villain of the piece—the money-grubbing Mr Potter. Ironically, "It's a Wonderful Life" was not a box-office success; it owes its classic status to its repeated showings on television.

Any director making a movie about modern finance faces two huge difficulties. The first is that there is nothing very dramatic or compelling about someone typing at a computer screen. The second is that the language of finance, full of acronyms and jargon, can be quite impenetrable.

Adam McKay has broken the mould. In adapting "The Big Short", Michael Lewis's book about the debt crisis, for the big screen, he has chosen to tackle the problem head-on. When a complex term has to be explained, he brings on Margot Robbie in a bubble bath (for mortgage-backed securities) or Anthony Bourdain, a chef, to describe collateralised debt obligations with the help of fish stew. This is just one of the many stylistic devices he puts to good use; others include aggressive cutting and asides to camera from the actors. On occasion, a character tells the audience that what they have just seen did not actually happen. "I wanted a *cinéma verité* style because finance films often seem austere, monolithic and cold," says Mr McKay, who is best known for directing comedies starring Will Ferrell. "And I aimed for an unpredictable, visceral effect."

The success of "The Big Short" can also be put down to its sharp dialogue (Mr McKay wrote the script as well as directing) and a starry cast with Ryan Gosling, Steve Carell and Christian Bale, as well as Brad Pitt in a cameo role (pictured). It is a rare breed: an entertaining film with a financial theme that is also educational. The film works because Mr Lewis's book focused on a group of oddball outsiders who realised before anyone else that the American economy was heading for disaster. The protagonists are not conventional heroes (they are betting on a crash in American house prices, after all) but the audience can root for them because, at the same time, they expose the corrupt practices in mortgage lending that were widespread before 2007. They are the little guys taking on a complacent financial system, not unlike Eddie Murphy and Dan Aykroyd end up ruining the Duke brothers in "Trading Places" (1983).

This focus sets "The Big Short" apart from Hollywood's earlier analysis of the ▸▸

crisis. "Margin Call", which came out in 2011, also had an excellent cast (Jeremy Irons and Kevin Spacey), but its focus was on an investment bank trying to sell dud assets before the rest of the market caught on to the coming financial apocalypse. It was hard for the audience to care about bankers struggling to deal with a crisis created by their own greed and stupidity.

Hollywood's ambivalence towards finance—and capitalism in general—sits oddly with an industry marked by high salaries, huge corporations and product merchandising. But actors, directors and scriptwriters are creative types who like to feel they are rebelling. They favour stories where the little guy triumphs; audiences feel the same way. "The Big Short" wins because Mr McKay gives this cliché an entertaining and sophisticated twist. ■

Immigrant history

The rise and fall of the Jewish deli

Pastrami on Rye: An Overstuffed History of the Jewish Deli. By Ted Merwin. *NYU Press; 245 pages; $26.95*

JEWISH delicatessens may now be known for knishes, latkes and pastrami sandwiches, but back in their heyday, during the 1920s and 1930s in the theatre district in New York, they also served beluga caviar, *pâté de foie gras* and Chateaubriand steak. Jewish classics were gussied up and defiled: chopped chicken liver was served with truffles. *Treyf*, like oysters and pork chops, was eaten with abandon alongside kosher delicacies.

In his new book "Pastrami on Rye", one of the first scholarly histories of the Jewish delicatessen, Ted Merwin, a professor of religion and Judaic studies, tracks the rise and fall of delis. The fruit of more than ten years of research and writing, Mr Merwin's account shows that delis have been a rich part of the story of Jewish assimilation in America.

The first delicatessens sold mostly German food. For early Jewish immigrants, deli meats were an indispensable reminder of home. When kosher beef prices in America jumped from 12 to 18 cents a pound in 1902, riots broke out in Jewish enclaves throughout the north-east. Jewish women boycotted and picketed slaughterhouses, attacked deli customers and set fire to meat they had first doused in petrol. After Orthodox religious leaders endorsed the movement, the price of beef finally began to drop.

Delis were popularised as restaurants by a new generation of American-born Jews. The peak year for European immigration was 1907, with more than 1m newcomers arriving at Ellis Island, the major hub near New York. Over the next three decades the children of these immigrants sought ways of gaining access to the commercial and social life of the city. Jews found an opening at the deli, a place where they could express loyalty to their heritage in a public setting, and where non-Jews could also sample Jewish culture.

To many, deli food came to symbolise Judaism in a secular form. After his Broadway shows Al Jolson, a famous Jewish singer, would invite the whole audience, Jew and gentile alike, to join him at Lindy's delicatessen. Martin Kalmanoff, a Jewish songwriter, wrote that at the Stage Deli, "You'll find debutantes with poodles eatin' hot goulash and noodles." In 1926 George Jean Nathan, a theatre critic, declared a "sandwich wave"; Jerome Charyn, a New York writer and historian, has referred to the 1920s as the "delicatessen decade". Jewish culture was suddenly popular culture.

But just as it had started to coalesce, this vibrant world of intermingled classes and races began as suddenly to dissolve. Mr Merwin cites many causes: emigration from cities, concerns about calories and cholesterol, the spread of supermarkets, and a tendency among mid-20th-century Jews to downplay their ethnicity. Mr Merwin writes that there are only 15 proper Jewish delicatessens left in New York—down from about 1,500 in the 1930s.

But in its obsolescence, the delicatessen has also been reconceived. Tourists have been flocking to the original immigrant neighbourhood of the Lower East Side to visit Katz's Delicatessen, founded in 1888. The Second Avenue Deli has come up with promotional stunts such as sending out deliveries in a horse and buggy. Mr Merwin's cherished moment of bawdy Jewish-American secularism seems forgotten in this nostalgia for immigrant origins.

At the same time, hip new restaurants are seeking to reinvigorate the deli by serving embellished classics like bone-marrow matzoh-ball soup and chicken-liver terrine with *verjus gelé*. Such attempts to evoke the past may succeed where they least expect it—delis have been bastardising tradition for a century. But it would be impossible for them to recapture the excitement of Jews' triumphant entry into American society. ■

Katz food

New fiction

Duty and the beast

A Wild Swan and Other Tales. By Michael Cunningham. *Farrar, Straus and Giroux; 144 pages; $23. Fourth Estate; £14.99*

ADULTS need their comforts, too. Homemade sponge cake; warm baths; bedtime stories, on occasion. Michael Cunningham's new collection of fairy tales, "A Wild Swan", will not launch readers into a relaxed, contented sleep. They are too ominous, observant and wry. Just as traditional fairy tales have always done, these contain complex, pointed storytelling that makes one happy to be a grown-up. This writing is not for innocent eyes.

Mr Cunningham reacquaints readers with old characters, reimagined. His prose brings back much of the original swagger and sharpness. Rumpelstiltskin is not villainous, but a good-hearted gnome who yearns to raise a child. He saves a young woman from death and helps her weave gold from straw, only for her to backtrack on her promise to give him her firstborn when she becomes queen. Jack may have climbed a beanstalk three times, but that is the most exercise he has ever done. He is lazy and greedy, and lives with his mother because she is the only person who will not criticise him.

Argentine culture

Dancing in the dark

A Simple Story: Dancing for his Life. By Leila Guerriero. Translated by Thomas Bunstead. *Pushkin Press; 160 pages; £9.99*

IN THIS book about dance in Argentina, the word "tango" appears just once. Its subject, instead, is *malambo*, the floor-pounding, heart-quickening dance beloved of gauchos, cowboys of the pampas, which is at its purest when performed solo. Tango's absence from this poetic account of a contest in Laborde, "one of thousands of places in the country's vast interior" that few Argentines have ever heard of, also has a deeper significance. "A Simple Story" is about an expression of a culture that, unlike tango, has been passed over, neglected or forgotten by all but a few devotees, for whom it is an obsession. Its obscurity, this book suggests, is its salvation.

Leila Guerriero, an Argentine journalist, hangs her story on slight, not-so-young Rodolfo González Alcántara as he prepares to compete in the National Festival of Malambo, an annual contest whose winner may never compete again. He is "crowned and destroyed in the same instant," Ms Guerriero writes. Like nearly all *malambistas* Mr González is clean-living, and toughened both by deprivation and by his gruelling art, which demands five relentless, bone-breaking minutes of prancing and kicking and allows no sign of the breathlessness it causes. He never fails to read his blue-bound Bible before going on stage.

As Ms Guerriero tells the reader more than once, the dancers aspire "to the gaucho attributes: austerity, courage, pride, sincerity, forthrightness"; to "face all that life will throw at them—which is, and always has been, a great deal".

She wonders repeatedly why men endure torture to triumph in this contest "of such slender renown", in which the guitar is not amplified electronically, the champion is crowned at dawn and the prize is a plain trophy made by a local craftsman. Part of the answer is obvious: glory among the relatively few people who care, and generous teaching fees that will come their way if they win. Another answer is the real subject of this moving book: to uphold an art and tradition whose value is enlarged by the meagre rewards they bring.

Mr Cunningham, who teaches creative writing at Yale University, is extremely funny and psychologically observant, but he is no believer in happy endings. "The Hours", a novel published in 1998 for which he won the Pultizer prize for fiction, examines the impact that Virginia Woolf's book "Mrs Dalloway" has on three generations of unhappy women.

Love is equally hard to find in "A Wild Swan". The most moving story from this collection is "Steadfast; Tin", based on the "The Steadfast Tin Solider", in which a man with a prosthetic leg and his wife arrive at peace after decades of unhappiness in their marriage. Beautiful, imaginative illustrations by Yuko Shimizu, a Japanese artist based in New York, complement the stories, spurring the feeling that this is not just a book to read, but also a special object.

In recasting these fairy tales Mr Cunningham is returning them to their dark roots. Nineteenth-century stories by the Brothers Grimm and Hans Christian Andersen were dramatic and often tragic—unlike Walt Disney's later interpretations which were simplistic, joyful animations. In "The Wild Swan" there are no unblemished heroes or princesses, only flawed characters, many of whom never achieve their modest dreams. The worlds that Mr Cunningham so elegantly evokes are just as troubling and disappointing as our own, and that is surprisingly comforting. ■

Economics and legal philosophy

Corrupted bounty

Blood Oil: Tyrants, Violence and the Rules that Run the World. By Leif Wenar. *Oxford University Press; 494 pages; $34.95, £22.99*

LOOK at the tablet or the paper that you are reading. Its making will probably involve oil, minerals or metals. Some of those resources will have come from a country whose government steals from and oppresses its citizens. By one estimate, almost 10% of what the average American household spends on petrol each year goes directly into the coffers of such regimes. This is a nasty, if familiar, thought. But Leif Wenar, a philosopher at King's College London, pushes these ideas further, with uncomfortable consequences.

Mr Wenar's philosophy is influenced by the writings of the young Karl Marx, who maintained that the daily grind of economic life makes it hard for people to live up to their political ideals. In jargon-free prose, Mr Wenar argues persuasively that Western consumers are blinded to the fact that international trade still operates according to the "law of the jungle".

The author asks the reader to consider the example of three gay men sentenced to death in Iran for homosexuality. If the men then escaped to America, a court there would rightly refuse to enforce Iranian law, since to Westerners it is objectively unjust; it would not convict them again. Americans would find it intolerable if the court did otherwise. Contrast that with filling your petrol tank in America. The oil from which it was refined may have come from Equatorial Guinea, which has been ruled since 1979 by Teodoro Obiang. Under Guinean law Mr Obiang is the rightful owner of those resources; his fortune is estimated at $600m. Yet Mr Wenar argues that laws that allow the enrichment of a narrow elite, while the rest live with poverty and repression, cannot be legitimate. Americans also consume plenty of oil from Saudi Arabia, whose wealthy rulers claim similarly dubious legal ownership of the country's oil, this time "from the Holy Koran and the sayings and customs of the Prophet".

However, once that oil is sold in America, Mr Wenar shows, it is legally owned there. If a Guinean took an American driver to court for handling stolen goods, that lawsuit would fail. Dodgy laws about natural resources may be less objectionable than laws that allow the execution of gay people, but as Mr Wenar sees it: "the wrongness of American enforcement of these injustices on its own soil is at most a matter of degree."

For him, the answer is simply to stop ▸▸


#haveKINDLEwillTRAVEL
@FURSTY, OSLO | Tucked away in the Norwegian fjords, I spent my cold and quiet mornings by the water reading The Martian on my Kindle Paperwhite. The otherworldly landscape made each page feel as if I were on another planet.
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buying natural resources from nasty regimes. Doing so would, of course, be costly. But Mr Wenar sees the situation today as analogous to Britain's abolition of the slave trade in the early 19th century. Banning it was indeed expensive—for 60 years Britain's anti-slavery campaign cost nearly 2% of the annual national income—but doing so was vindicated by history.

Most readers will find this comparison less than convincing. (For one, back then Britain was a naval power without rival, making enforcement fairly straightforward.) Mr Wenar does make more practical suggestions—for instance, that Norway, a country that imports almost no oil from unfree countries, should make a symbolic pledge never to do so. But of course Norway is scarcely populated and has its own oil. Mr Wenar's failure to suggest a workable solution is, paradoxically, the most powerful part of the book. He reveals a horrible truth: that global free trade is, at times, bound up in blood. ■

Women artists

No man's land

MIAMI, FLORIDA

A renowned private collection celebrates women artists

DON and Mera Rubell, with their son Jason, are among the world's most important collectors of contemporary art. They root out emerging talent, often by travelling to far-flung studios, then display their purchases in thematic shows at their museum in Miami, the Rubell Family Collection. They want to make a positive impact on the careers of living artists, so they work closely with selected dealers who give them priority access to artworks and discounts on prices. Although they regularly lend pieces from their collection of 6,800 works, they do not join museum boards or give them huge sums, preferring to invest in their own foundation. As Mrs Rubell sees it, museum boards are about "high society" more than art.

One of the Rubells' exhibitions, made entirely of work by African-American artists, has toured nine cities since 2008, attracting over a million viewers. Titled simply "30 Americans", it is on view at the Detroit Institute of Art until January 18th and will go on to at least two more venues. Another show, "28 Chinese", is enjoying its third iteration, at the San Antonio Museum of Art in Texas until January 4th.

Earlier this month, during Art Basel Miami Beach, America's buzziest art fair, the Rubells unveiled "No Man's Land", a thought-provoking exhibition of 136 works by 72 women artists. At first glance it is not obviously a show of women's art, but a longer look reveals various clues: many unconventional representations of women, few come-hither pin-ups, a preponderance of textiles and a relative dearth of metal and expensive fabrication. The average age of the artists on display is older than a typical Rubell show. Women artists often take longer to be discovered, and they generally work with lower budgets and smaller teams. The show has no thesis. Rather, its disparate installations function, at their best, like good short stories.

The strongest rooms create conversations between the familiar and the fresh. For example, in a large space upstairs paintings of partially naked women by well-established artists such as Marlene Dumas, Cecily Brown and Lisa Yuskavage sit alongside intriguing works by lesser known painters, including Amy Bessone and Miriam Cahn. Overlooking the gathering of female figures is a photograph by Cindy Sherman. It shows the artist in drag as a decadent monk. As a parody of the traditional male gaze and an assertion of the particularities of female looking, the installation puzzles and entertains in equal measure.

In a neighbouring room the female form takes on an otherworldly character when Mai-Thu Perett's "Apocalypse Ballet" sculptures, featuring neon Hula Hoops, stand near a network of slim androgynes in a canvas by Silke Otto-Knapp, a German-born artist who lives in Los Angeles. These works are joined by a couple of "infinity net" paintings, celebrated works by Yayoi Kusama, a Japanese superstar, and a trio of R.H. Quaytman paintings, including "Cherchez Holopherne, Chapter 21" (2011), which depicts a nun with a single sideways eye for a face, whose black-gloved hand points ominously out of frame. The weird combination of works comes together like an Olympic synchronised-swimming team.

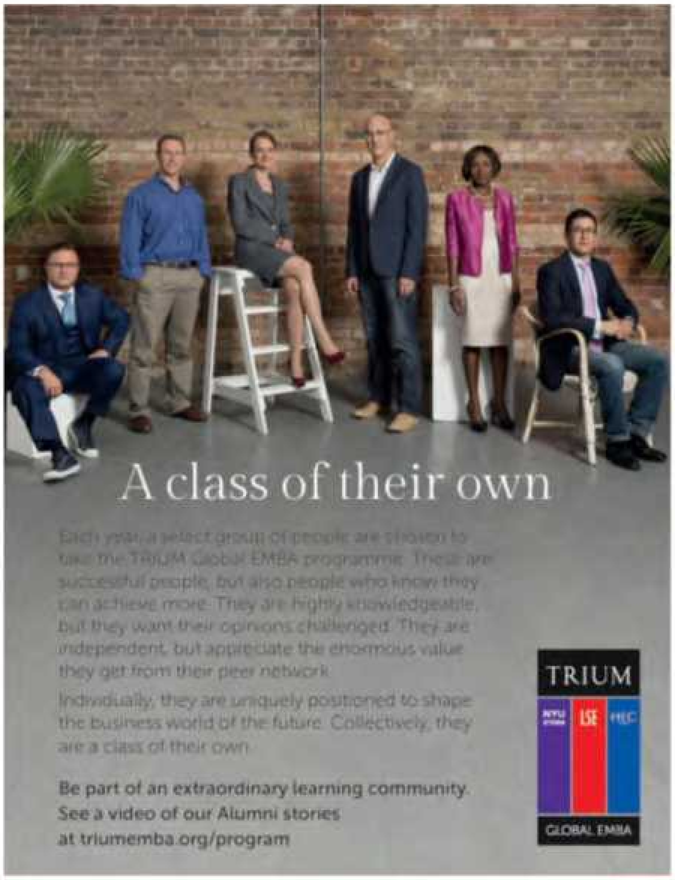
The nutcracker suite

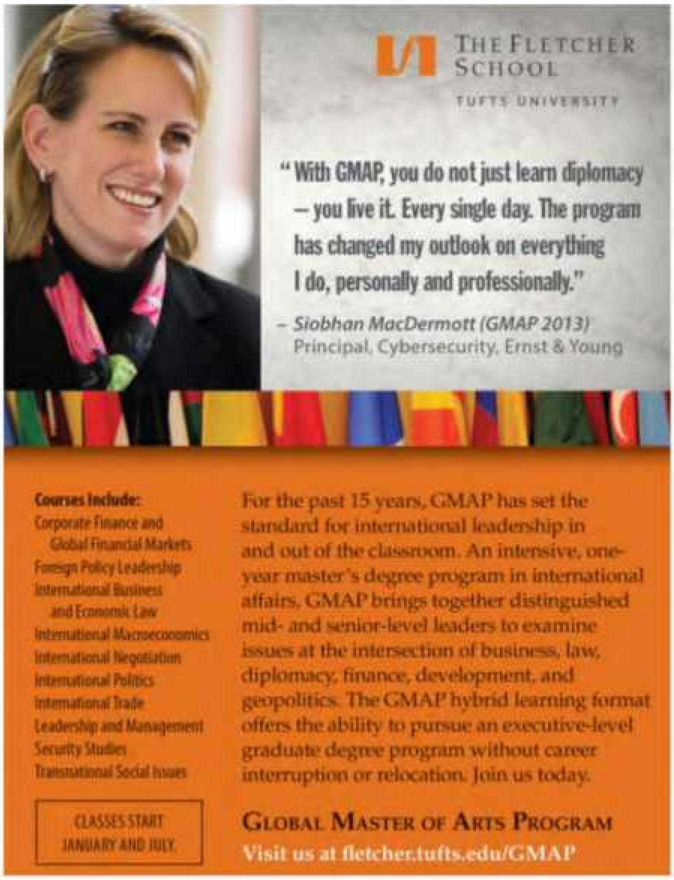
Another room presents powerful little portraits that tackle the theme of gender fluidity. Catherine Opie's colour photographs of self-possessed transsexuals hang across from Elizabeth Peyton's painterly renditions of Johnny Rotten and Sid Vicious, two punk rockers, as red-lipped pretty boys. These, in turn, look out at portraits of Nicki Minaj from the hip-hop world by Katherine Bernhardt, who depicts the singer dripping with paint as if she were a cross-dresser caught in the rain.

With the exception of "This Piece Has No Title Yet", a permanent installation of Budweiser beer cans, flags and scaffolding by a cult American artist, Cady Noland, the Rubells have given less recognised artists a room of their own. The results are uneven; those that stand out include Magali Reus, a young Dutch artist, some of whose works look like giant padlocks adorned with stray letters and numbers that suggest an idea attempting to break out; and Sonia Gomes and Solange Pessoa, two older Brazilians who make voluptuous works from fabric, hair, rope and leather, which weave African spiritualism with Roman Catholicism and a love of nature.

The most popular room in the show contains an interactive work by Jennifer Rubell (Don and Mera's daughter), whose art requires audience participation and usually food. Titled "Lysa III" (pictured), this piece features a giant nutcracker in the shape of a blonde blow-up sex toy, which crushes walnuts that members of the public place between her upper thighs. When viewed as a static sculpture, it can easily be dismissed as a crass one-line joke; but when understood as a prop in a performance enacted by the crowd, the work comes alive as a funny, surreal, political gesture. Indeed, gaggles of young women often linger by the piece, laughing while they chomp on nuts.

"No Man's Land" is a welcome response to other contemporary-art shows in which women are frequently underrepresented. Private foundations vary in their approach, with the best ones offering maverick points of view, often exposing work before public institutions get a chance to bring it into the mainstream. Some people would have preferred to see more of the Rubells' trophies (for example, they own 41 Cindy Shermans and 21 Rosemarie Trockels, but they have included only a few works by these artists). Others are frustrated by the fact that some works promised in the catalogue will not be installed until March, when half the pieces in the show will be replaced with new work. With 28 gallery spaces, a sculpture garden and a research library, the Rubell Family Collection is sizeable, but still perhaps too small for the family's ambitions. ■





Tenders

REQUEST FOR QUALIFICATION

OMAN POWER AND WATER PROCUREMENT CO. (SAOC)

إحدى شركات مجموعة نماء

Member of Nama Group

REQUEST FOR QUALIFICATION
Leading to the development of new Independent Water Projects (IWPs) in Oman

The Oman Power and Water Procurement Company SAOC ("the OPWP"), a member of Nama Group is responsible for procuring new capacity for power and water and for purchasing and selling the output in the Sultanate of Oman in accordance with the requirements of the law for the regulation and privatization of the electricity and related water sector promulgated by Royal Decree 78/2004 as amended ("the Sector Law") and the OPWP license.

OPWP is planning the addition of a new water desalination capacity of approximately 240,000m³/day (52.6 MIGD) which will be located across three sites. The IWPs are to be developed as private sector projects by appropriately qualified developers. OPWP is announcing the launch of the Qualification process for developers through the launch of the Request for Qualification ("RFQ") document. The RFQ is formally available for purchase from the offices of OPWP until 21 December 2015. The offices are located on Floor 5, Building 5, Muscat Grand Mall, Tilal Complex (Office), Al Khuwair Al Janubiyyah, Muscat and the RFQ is available for collection between the hours of 08.30 to 15.00 from Sunday to Thursday. The tender details are provided below;

Tender Title	Tender No.	Tender Purchase Price	Statement of Qualification Submission Deadline
REQUEST FOR QUALIFICATION Leading to the Development of new IWPs in Oman	25/2015	RO 175	17 January 2016 Before 10.00 hrs (Gulf Standard Time).

Note – This tender is for developers and is not applicable to interested or potential EPC contractors.

Payment should be processed by bank transfer and evidence of the bank transfer is to be submitted at the time of collection of the RFQ documents.

Bank account details:
Account Name: Oman Power & Water Procurement Company SAOC
Beneficiary Bank: Bank Muscat
Branch: Corporate Branch
Account number: 0423011072740015
Swift code: BMUSOMRXXXX

P.O. Box 1388, Postal Code: 112, Floor 5, Building 5, Muscat Grand Mall, Tital Complex (Office), Al Khuwair Al Janubiyyah, Muscat
Switchboard: +968 24508400 Fax: +968 24399946 Website: www.omanpwp.com

Economic data

% change on year ago

	Gross domestic product latest	Gross domestic product qtr*	Gross domestic product 2015†	Industrial production latest	Consumer prices latest	Consumer prices 2015†	Unemployment rate, %	Current-account balance latest 12 months, $bn	Current-account balance % of GDP 2015†	Budget balance % of GDP 2015†	Interest rates, % 10-year gov't bonds, latest	Currency units, per $ Dec 9th	Currency units, per $ year ago
United States	+2.2 Q3	+2.1	+2.4	+0.3 Oct	+0.2 Oct	+0.2	5.0 Nov	-429.0 Q2	-2.5	-2.6	2.22	-	-
China	+6.9 Q3	+7.4	+6.9	+5.6 Oct	+1.5 Nov	+1.5	4.1 Q3§	+279.0 Q3	+3.1	-2.7	2.85§§	6.43	6.19
Japan	+1.6 Q3	+1.0	+0.6	-1.4 Oct	+0.3 Oct	+0.7	3.1 Oct	+126.2 Oct	+2.6	-6.8	0.29	122	119
Britain	+2.3 Q3	+1.9	+2.4	+1.7 Oct	-0.1 Oct	+0.1	5.3 Aug††	-149.2 Q2	-4.5	-4.4	1.86	0.66	0.64
Canada	+1.2 Q3	+2.3	+1.1	-3.7 Sep	+1.0 Oct	+1.2	7.1 Nov	-54.1 Q3	-3.2	-1.8	1.49	1.36	1.14
Euro area	+1.6 Q3	+1.2	+1.5	+1.7 Sep	+0.1 Nov	+0.1	10.7 Oct	+348.8 Sep	+3.0	-2.1	0.59	0.91	0.80
Austria	+1.0 Q3	+1.9	+0.8	+0.3 Sep	+0.7 Oct	+0.9	5.6 Oct	+10.7 Q2	+1.7	-2.1	0.82	0.91	0.80
Belgium	+1.3 Q3	+0.9	+1.3	-2.4 Sep	+1.5 Nov	+0.6	8.7 Oct	-5.8 Jun	+0.1	-2.6	0.94	0.91	0.80
France	+1.2 Q3	+1.4	+1.1	+1.8 Sep	+0.1 Oct	+0.1	10.8 Oct	+0.2 Sep‡	-0.3	-4.1	0.88	0.91	0.80
Germany	+1.7 Q3	+1.3	+1.6	+0.2 Oct	+0.4 Nov	+0.2	6.3 Nov	+276.2 Oct	+7.9	+0.7	0.59	0.91	0.80
Greece	-0.9 Q3	-3.5	+0.5	+3.0 Sep	-0.9 Oct	-1.1	24.6 Aug	-2.8 Sep	+2.5	-4.1	8.42	0.91	0.80
Italy	+0.8 Q3	+0.8	+0.8	+1.7 Sep	+0.1 Nov	+0.2	11.5 Oct	+38.5 Sep	+1.9	-2.9	1.57	0.91	0.80
Netherlands	+1.9 Q3	+0.5	+1.9	+0.8 Sep	+0.7 Oct	+0.4	8.4 Oct	+85.3 Q2	+10.6	-1.8	0.73	0.91	0.80
Spain	+3.4 Q3	+3.2	+3.2	-0.3 Oct	-0.3 Nov	-0.6	21.6 Oct	+19.1 Sep	+0.9	-4.4	1.61	0.91	0.80
Czech Republic	+3.9 Q3	+2.2	+3.4	+3.8 Oct	+0.1 Nov	+0.3	5.9 Nov§	+2.4 Q2	-0.1	-1.8	0.57	24.6	22.2
Denmark	+0.9 Q3	-0.6	+1.6	+0.3 Oct	+0.4 Oct	+0.5	4.5 Oct	+22.0 Oct	+6.8	-2.9	0.86	6.81	5.99
Norway	+3.0 Q3	+7.3	+0.7	-2.6 Oct	+2.5 Oct	+1.7	4.6 Sep‡‡	+37.3 Q3	+9.3	+5.9	1.58	8.68	7.09
Poland	+3.5 Q3	+3.6	+3.4	+2.4 Oct	-0.5 Nov	nil	9.7 Nov§	-2.7 Sep	-1.4	-1.5	2.99	3.96	3.35
Russia	-4.1 Q3	na	-3.8	-3.4 Oct	+15.0 Nov	+15.2	5.5 Oct§	+64.3 Q3	+4.7	-2.8	9.54	68.9	54.2
Sweden	+3.9 Q3	+3.4	+3.0	+4.0 Oct	+0.1 Oct	nil	6.7 Oct§	+31.8 Q3	+6.4	-1.2	0.90	8.44	7.50
Switzerland	+0.8 Q3	-0.1	+0.9	-2.8 Q3	-1.4 Nov	-1.1	3.4 Nov	+60.9 Q2	+8.1	+0.2	-0.24	0.99	0.97
Turkey	+3.8 Q2	na	+3.0	+14.7 Oct	+8.1 Nov	+7.6	10.1 Aug§	-40.6 Sep	-5.0	-1.6	10.41	2.91	2.26
Australia	+2.5 Q3	+3.8	+2.3	+1.9 Q3	+1.5 Q3	+1.6	5.8 Nov	-49.5 Q3	-4.1	-2.4	2.82	1.38	1.20
Hong Kong	+2.3 Q3	+3.5	+2.4	-1.2 Q2	+2.4 Oct	+3.1	3.3 Oct‡‡	+7.4 Q2	+2.8	nil	1.57	7.75	7.75
India	+7.4 Q3	+11.9	+7.3	+3.6 Sep	+5.0 Oct	+5.1	4.9 2013	-25.9 Q2	-1.2	-3.8	7.78	66.9	61.9
Indonesia	+4.7 Q3	na	+4.7	+0.7 Sep	+4.9 Nov	+6.3	6.2 Q3§	-18.4 Q3	-2.4	-2.0	8.54	13,843	12,330
Malaysia	+4.7 Q3	na	+5.4	+4.2 Oct	+2.5 Oct	+2.5	3.2 Sep§	+7.8 Q3	+2.5	-4.0	4.25	4.27	3.48
Pakistan	+5.5 2015**	na	+5.7	+2.3 Sep	+2.7 Nov	+3.9	6.0 2014	-1.1 Q3	-0.7	-5.1	9.00†††	104	101
Philippines	+6.0 Q3	+4.5	+6.4	-1.8 Oct	+1.1 Nov	+2.4	5.6 Q4§	+11.7 Jun	+4.1	-1.9	4.12	47.2	44.5
Singapore	+1.9 Q3	+1.9	+2.9	-5.4 Oct	-0.8 Oct	+0.2	2.0 Q3	+68.6 Q3	+21.2	-0.7	2.46	1.40	1.32
South Korea	+2.7 Q3	+5.3	+2.5	+1.5 Oct	+1.0 Nov	+0.7	3.1 Oct§	+105.6 Oct	+7.3	+0.3	2.22	1,179	1,108
Taiwan	-0.6 Q3	-1.2	+3.2	-6.2 Oct	+0.5 Nov	+0.1	3.8 Oct	+77.2 Q3	+12.8	-1.0	1.17	32.8	31.2
Thailand	+2.9 Q3	+4.0	+3.4	-4.2 Oct	-1.0 Nov	+0.8	0.9 Oct§	+31.2 Q3	+2.4	-2.0	2.54	36.0	33.0
Argentina	+2.3 Q2	+2.0	+1.1	-2.5 Oct	— ***	—	5.9 Q3§	-8.3 Q2	-1.8	-3.6	na	9.73	8.56
Brazil	-4.5 Q3	-6.7	-3.1	-11.3 Oct	+10.5 Nov	+9.3	7.9 Oct§	-74.2 Oct	-3.8	-6.0	15.51	3.74	2.59
Chile	+2.2 Q3	+1.8	+2.8	-0.6 Oct	+3.9 Nov	+3.9	6.3 Oct§‡‡	-2.7 Q3	-1.2	-2.2	4.61	702	615
Colombia	+3.0 Q2	+2.4	+3.3	+2.0 Sep	+6.4 Nov	+4.2	8.2 Oct§	-20.8 Q2	-6.7	-2.1	8.31	3,289	2,356
Mexico	+2.6 Q3	+3.0	+2.4	+1.7 Sep	+2.2 Nov	+2.8	4.4 Oct	-29.9 Q3	-2.5	-3.4	6.27	17.0	14.4
Venezuela	-2.3 Q3~	+10.0	-4.5	na	+68.5 Dec	+84.1	6.6 May§	+7.4 Q3~	-1.8	-16.5	10.51	6.31	6.29
Egypt	+4.5 Q2	na	+4.2	-8.0 Sep	+9.7 Oct	+10.0	12.8 Q3§	-12.2 Q2	-1.4	-11.0	na	7.83	7.15
Israel	+2.4 Q3	+2.5	+3.3	-4.5 Sep	-0.7 Oct	-0.2	5.3 Oct	+10.2 Q2	+4.9	-2.8	2.21	3.87	3.93
Saudi Arabia	+3.5 2014	na	+2.7	na	+2.4 Oct	+2.7	5.7 2014	-1.5 Q2	-2.7	-12.7	na	3.75	3.75
South Africa	+1.0 Q3	+0.7	+1.4	-1.1 Oct	+4.8 Nov	+4.7	25.5 Q3§	-14.0 Q3	-4.3	-3.8	8.83	14.6	11.4

Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. ~2014 **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. ***Official number not yet proven to be reliable; The State Street PriceStats Inflation Index, October 25.52%; year ago 41.05% †††Dollar-denominated

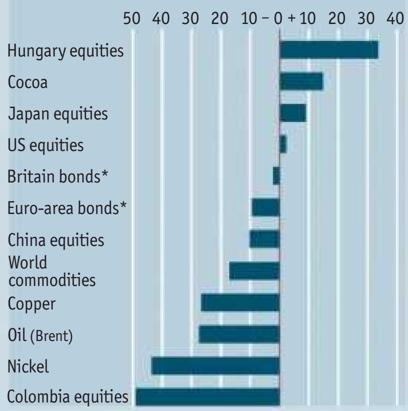
Markets

	Index Dec 9th	% change on one week	Dec 31st 2014 in local currency	Dec 31st 2014 in $ terms
United States (DJIA)	17,492.3	-1.3	-1.9	-1.9
China (SSEA)	3,635.6	-1.8	+7.3	+3.5
Japan (Nikkei 225)	19,301.1	-3.2	+10.6	+8.6
Britain (FTSE 100)	6,126.7	-4.6	-6.7	-9.2
Canada (S&P TSX)	12,937.6	-3.9	-11.6	-24.4
Euro area (FTSE Euro 100)	1,094.7	-5.3	+5.6	-4.4
Euro area (EURO STOXX 50)	3,277.2	-5.5	+4.2	-5.6
Austria (ATX)	2,373.4	-4.6	+9.9	-0.5
Belgium (Bel 20)	3,585.4	-4.0	+9.1	-1.1
France (CAC 40)	4,637.5	-5.5	+8.5	-1.7
Germany (DAX)*	10,592.5	-5.3	+8.0	-2.1
Greece (Athex Comp)	559.8	-10.6	-32.2	-38.6
Italy (FTSE/MIB)	21,500.9	-4.7	+13.1	+2.5
Netherlands (AEX)	440.9	-5.6	+3.9	-5.9
Spain (Madrid SE)	993.9	-4.8	-4.7	-13.6
Czech Republic (PX)	931.4	-2.9	-1.6	-8.6
Denmark (OMXCB)	892.6	-2.5	+32.2	+19.5
Hungary (BUX)	23,324.9	-1.5	+40.2	+26.9
Norway (OSEAX)	650.3	-3.5	+4.9	-9.3
Poland (WIG)	44,670.1	-5.0	-13.1	-22.1
Russia (RTS, $ terms)	792.4	-5.0	+15.1	+0.2
Sweden (OMXS30)	1,440.9	-6.1	-1.6	-8.7
Switzerland (SMI)	8,625.0	-4.3	-4.0	-3.4
Turkey (BIST)	74,583.7	-2.4	-13.0	-30.2
Australia (All Ord.)	5,129.9	-3.3	-4.8	-15.9
Hong Kong (Hang Seng)	21,803.8	-3.0	-7.6	-7.6
India (BSE)	25,036.1	-4.1	-9.0	-14.1
Indonesia (JSX)	4,464.2	-1.8	-14.6	-23.8
Malaysia (KLSE)	1,659.4	-1.0	-5.8	-22.9
Pakistan (KSE)	33,020.3	+1.9	+2.8	-0.6
Singapore (STI)	2,861.2	-0.8	-15.0	-19.8
South Korea (KOSPI)	1,948.2	-3.0	+1.7	-5.2
Taiwan (TWI)	8,229.6	-2.7	-11.6	-14.9
Thailand (SET)	1,297.8	-3.1	-13.3	-20.8
Argentina (MERV)	13,302.9	+4.7	+55.1	+34.8
Brazil (BVSP)	46,108.0	+2.7	-7.8	-34.4
Chile (IGPA)	17,602.0	-1.2	-6.7	-19.4
Colombia (IGBC)	7,935.4	-3.5	-31.8	-50.7
Mexico (IPC)	42,398.1	-2.3	-1.7	-14.8
Venezuela (IBC)	14,654.8	+13.9	+280	na
Egypt (Case 30)	6,629.3	-0.3	-25.7	-32.2
Israel (TA-100)	1,328.4	-2.3	+3.1	+3.7
Saudi Arabia (Tadawul)	7,000.7	-4.7	-16.0	-16.0
South Africa (JSE AS)	49,523.6	-3.2	-0.5	-20.9

Asset performance

Years of ultra-low interest rates mean that investors are eager to alight on any decent source of return. The wise, or plain lucky, among them will have bet this year on Hungarian equities. Despite having a tiny stockmarket with paltry trading volumes, Hungary's main index is up by 34% in dollar terms since the start of the year. This is largely the result of rebounding growth in the euro area, Hungary's biggest export market. There have been plenty of ways to lose money this year, too. China's stockmarket bubble burst over the summer; equities there have lost 10% of their value this year. China's slowdown has had an impact on commodity-producing nations: Colombian stocks are down 49% this year.

Selected total returns
January 1st - December 8th 2015, $ terms, %



Sources: Thomson Reuters; *The Economist*

*Ten-year government bonds

Other markets

	Index Dec 9th	% change on one week	Dec 31st 2014 in local currency	Dec 31st 2014 in $ terms
United States (S&P 500)	2,047.6	-1.5	-0.5	-0.5
United States (NAScomp)	5,022.9	-2.0	+6.1	+6.1
China (SSEB, $ terms)	388.2	+1.2	+38.3	+33.5
Japan (Topix)	1,555.6	-2.9	+10.5	+8.5
Europe (FTSEurofirst 300)	1,430.6	-5.4	+4.5	-5.3
World, dev'd (MSCI)	1,670.7	-1.5	-2.3	-2.3
Emerging markets (MSCI)	795.5	-3.2	-16.8	-16.8
World, all (MSCI)	401.1	-1.7	-3.8	-3.8
World bonds (Citigroup)	869.0	+0.6	-3.7	-3.7
EMBI+ (JPMorgan)	709.8	-0.5	+2.6	+2.6
Hedge funds (HFRX)	1,182.4§	-0.8	-3.0	-3.0
Volatility, US (VIX)	17.1	+15.9	+19.2	(levels)
CDSs, Eur (iTRAXX)†	75.3	+8.9	+19.6	+8.3
CDSs, N Am (CDX)†	85.9	+3.9	+29.9	+29.9
Carbon trading (EU ETS) €	8.4	-0.9	+15.3	+4.5

Sources: Markit; Thomson Reuters. *Total return index.
†Credit-default-swap spreads, basis points. §Dec 7th.

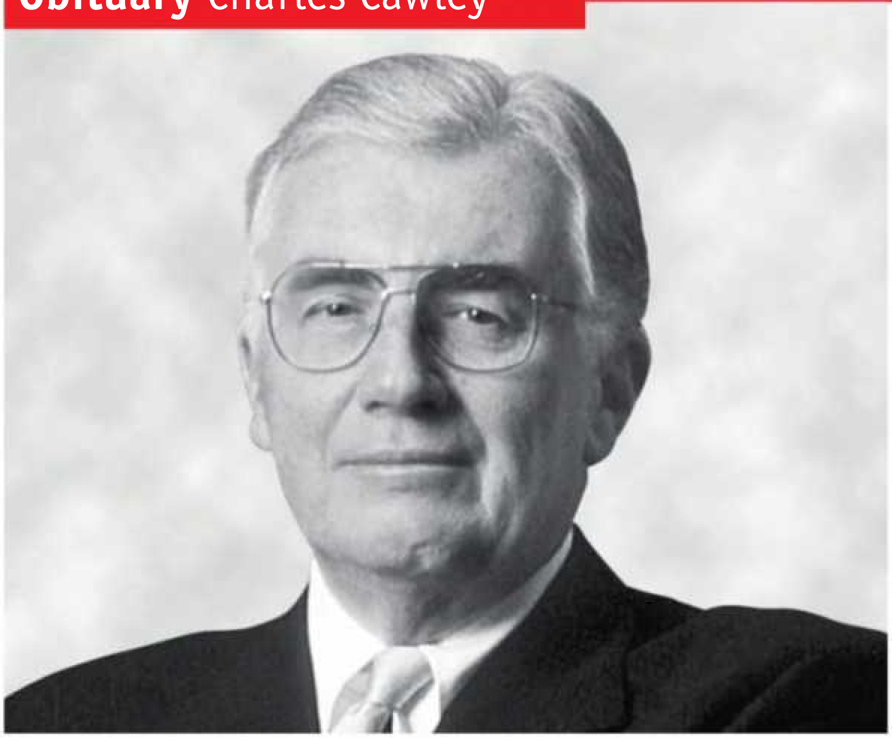
Indicators for more countries and additional series, go to: **Economist.com/indicators**

The Economist commodity-price index

2005=100

	Dec 1st	Dec 8th*	% change on one month	% change on one year
Dollar Index				
All Items	126.2	126.4	-1.3	-19.2
Food	148.8	148.8	-0.3	-15.9
Industrials				
All	102.7	103.0	-2.6	-23.6
Nfa†	108.9	111.3	+2.4	-9.8
Metals	100.1	99.5	-4.9	-28.9
Sterling Index				
All items	152.5	153.4	-0.4	-15.4
Euro Index				
All items	147.6	144.5	-2.9	-7.6
Gold				
$ per oz	1,066.0	1,074.3	-1.5	-12.8
West Texas Intermediate				
$ per barrel	41.6	37.6	-15.0	-41.1

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



The man from MBNA

Charles Cawley, credit-card billionaire and saviour of mid-coast Maine, died on November 18th, aged 75

WHEN he gave lectures to inspire college students, Charles Cawley liked to riff on the bolder meanings of the term "entrepreneur". Yet the word was a pale, fluttering thing when applied to him. He was a rip-roaring old-style corporate boss, directly in the line of DuPont, Carnegie and Rockefeller. And he revelled in it.

He founded MBNA Corporation, built it into a credit-card colossus and ran it as an extension of his will for 12 years. In those years he bestrode Wilmington, Delaware and mid-coast Maine, leaving in his wake not only MBNA offices trimmed in Kelly green but also new wings on museums, new halls for schools, new ballfields and waterfront developments, and a workforce of ex-lobstermen and shoemakers trained (or "educated", as he preferred), to wear suits and ties to work and answer calls promptly in the politest tone of voice. On Wall Street, they hardly knew him and seldom saw him; but in struggling seaside towns up and down Maine, in Portland, Rockland, Belfast and Camden, as well as in unsung bits of Cleveland and Texas, his name was spoken with touch-the-cap reverence. If, as a Mainer, you were forced off the road by some of his chugging antique cars out for a spin on a Sunday, or stuck behind his friends' thronging private jets at the Knox County airport, you reflected that a man who gave so much so freely could surely spend it, too.

Mr Cawley was not a patient man. He knew it, and had a company yacht called *Impatience*, in which he could barge around the islands in Penobscot Bay. It took very little in the way of resistance to him—a flower in the wrong place on MBNA property, a row of tiles set crooked—to turn his face fire-red under the white thatch and get him shouting. Nonetheless he bore with real fortitude, worthy of the monks who had taught him at St Benedict's Prep in Newark, his ten years of trying to run the credit-card arm of the Maryland National Bank while Maryland's legislators ("some of the dumbest people I have ever known"), refused to lift the state's cap on interest rates on credit cards. In 1982 he decided to wait no longer. Just over the state line in banker-loving Delaware the usury laws were more elastic; so he took his team, a mere 50 in those days, to the basement of an empty Delaware A&P store.

The first year was a struggle to hang in there; but in that damply cavernous space Mr Cawley could be king, and his ideas for MBNA could resound. The best scheme of all was to introduce affinity cards carrying pictures of customers' colleges, sports teams or favourite charities, and offer the institutions a cut of the fees. If customers felt proud of, and loyal to, their card, he reasoned—rather than viewing it as a mere bit of plastic—they would be less likely to default. He offered the scheme first to Georgetown University, his alma mater, where he had spent many a student evening singing Irish standards and 50s classics with the Chimes. Georgetown accepted, to be followed by 5,000 other bodies and institutions, while MBNA's jealous competitors scrambled to do the same.

Only his due

In 1991, when he split with the bank and MBNA went public, he had employees in the thousands and loans in the billions. As a result he decided to resurrect poor, post-industrial Maine, the place of dreamy teenage summers on his grandfather's seashore estate. In 1993 Mr Cawley took over the old Knox Woollen Mill in downtown Camden. Nearby Belfast begged to have him; he sheathed its waterfront in glass offices. Call-centres for part-timers were scattered across Maine like diamonds. His slogans boomed from the walls of his buildings, and life-size bronze animals or vintage Duesenbergs prowled in their lobbies. As the father of the firm, he provided his "people" with in-house legal advice, an annual "corn-boil" with famous entertainers, canteens, day care and funeral assistance. He made sure they read the right papers and bought their shirts at the right shops. The drifting young were invited to his 16,000-square-foot "cottage" in the coastal woods, to see what you could get with hard work.

Old-style paternalism went with old-style politics. The Bushes senior and junior received handsome donations from him, as did Democrat Joe Biden of Delaware (then known as "the senator from MBNA"), to ease the passage of the Bankruptcy Reform Act, which came down hard on credit-card debtors. But its signing, in 2005, came too late to do him any good.

For by then Mr Cawley had walked out of MBNA in a rage, and his baby had been swallowed up for $35 billion by Bank of America. In 2003 he fell out with MBNA's board, when his ideas for future compensation for himself and his inner circle, a protective cohort of former FBI and military men, had been rejected. He was then earning $50m a year, in stock and cash: his due, as he saw it, together with private use of the company aircraft and boats and the paintings, mostly by his friend Andrew Wyeth, that hung in his house. As he gave freely, and always had, so he had every right to reward himself.

The bean-counters, though, did not agree. Since they dared to tell him so, he left. And it was inevitable, then, that MBNA—sold with 50m customers, 30,000 employees and $120 billion in loans—should shortly become slim-line, quiet and unshowy, as if it had never been his. ■

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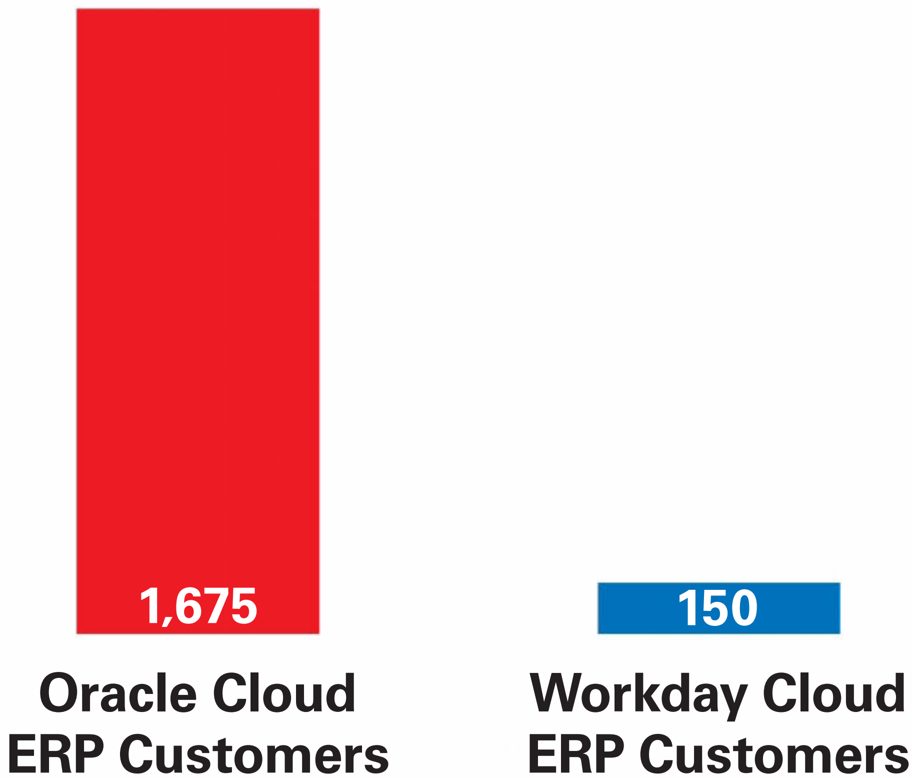

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