INSIDE: A 12-PAGE SPECIAL REPORT ON COLOMBIA

The Economist

OCTOBER 31ST–NOVEMBER 6TH 2015 Economist.com

007 and the spectre of Britain's past

Turkey votes to the sound of bombs

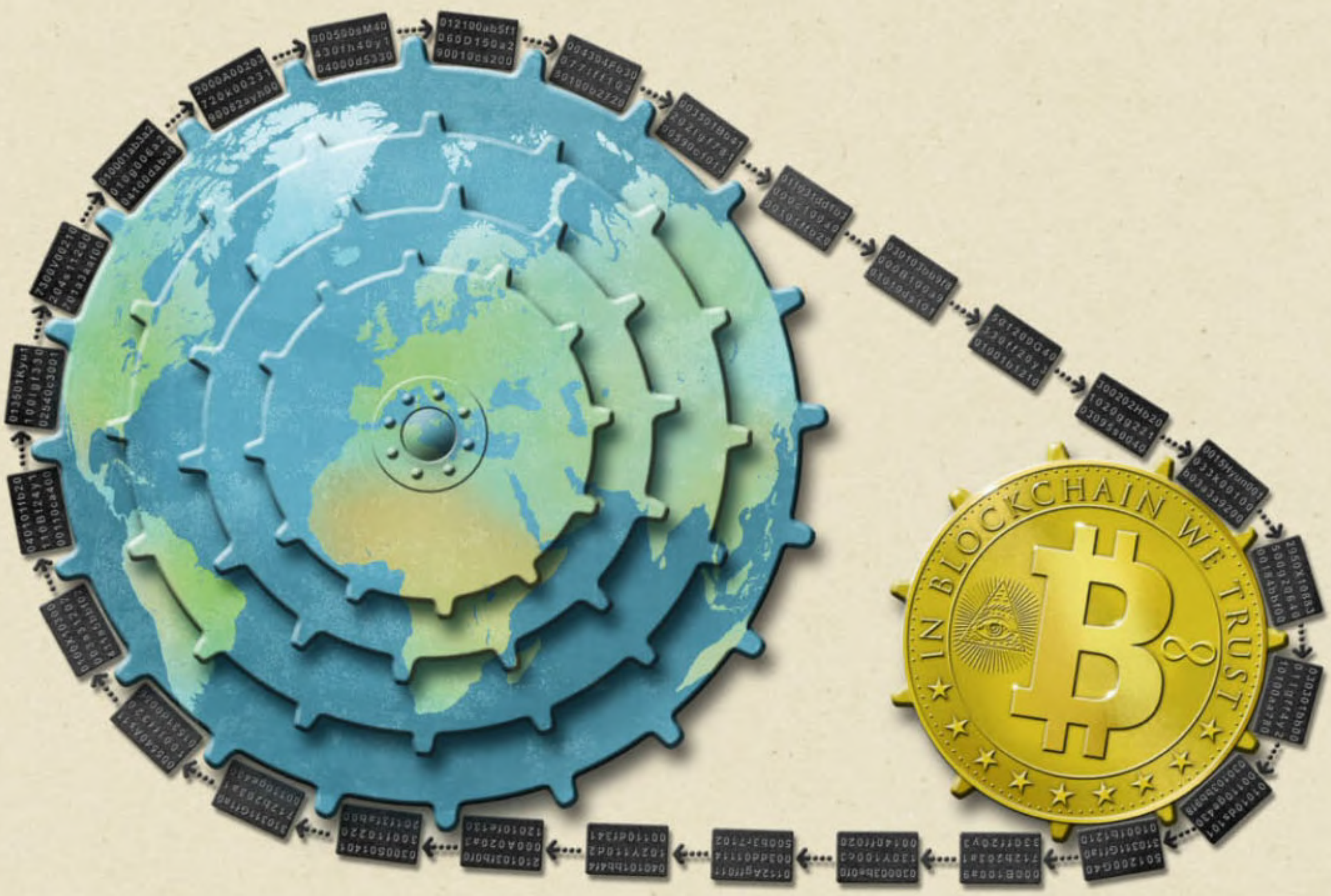
Those ever-creative accountants

America takes the fight to IS

Coywolves: the new superpredator

The trust machine

How the technology behind bitcoin could change the world

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The Economist

Volume 417 Number 8962

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

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

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Print only UK – £126

Principal commercial offices:
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Politics

An American naval ship has sailed within 12 nautical miles of a reef in the **South China Sea**, one of several where China has been building artificial islands (pictured). The Chinese government called the manoeuvre "illegal". America wants to show that all ships have a right to pass through the waters.

More than 360 people are known to have died and more than 2,000 others injured in a 7.5-magnitude earthquake centred in **Afghanistan**. Many of the casualties were in neighbouring **Pakistan**.

Nepal elected Bidhya Devi Bhandari as the Himalayan country's first female president. Ms Bhandari replaces Ram Baran Yadav, who was the country's first elected head of state in 2008 after Nepal abolished its monarchy. The new president faces several problems, including a row over the constitution and a dispute with India over fuel deliveries.

Joko Widodo, **Indonesia's** president, cut short a state visit to America to handle an air-pollution crisis caused by fires used to clear farmland in rural areas. The annual haze is one of the worst in memory. With this year's rainy season delayed by the **El Niño** weather cycle, it could take months to douse the flames.

Saudi Arabia and Iran said they would hold their first face-to-face talks on **Syria** in Vienna on October 30th, at a multilateral meeting in which America and Russia are also taking part. This is the first time Iran will have attended such a forum, aimed at bringing an end to a conflict that has lasted almost five years and claimed 250,000 lives.

Fuelling controversy

Saudi Arabia's oil minister said that his government is considering an increase in domestic energy prices, in an attempt to rein in a budget deficit that is approaching 20% of GDP. The low oil price around the world has caused government revenues to fall.

Tanzania held a largely peaceful presidential and parliamentary election, albeit tarnished by reports of fistfights in some polling stations. Early results showed wins for the ruling party, but the opposition is demanding a recount. Local elections in **Zanzibar**, a pro-opposition island, have been annuled, but the government said this had no effect on the national poll.

Ivory Coast elected its president, Alassane Ouattara, to a second term by a landslide, while in **Congo-Brazzaville** the incumbent, Denis Sassou Nguesso, easily won a referendum on a constitutional amendment that will allow him a third consecutive term.

Voting for Christmas

As **Turks** prepared, amid rancour and violence, to vote in an election on November 1st, the authorities muzzled potential critics by sending police to take over a broadcasting firm linked to an Islamic preacher who has fallen out with the government. The ruling **Justice and Development** party is determined to regain its parliamentary majority and see off a challenge from the pro-Kurdish **HDP**.

In **Portugal**, President Aníbal Cavaco Silva asked the leader of the ruling centre-right Forward Portugal Alliance (PAF) to form a government, even though it lost its majority in parliament earlier in October.

In **Poland**, the conservative Law and Justice party, which is allied in the European Parliament with Britain's Conservative Party, won an unexpectedly impressive victory in elections on October 25th.

All over Europe, relations between neighbouring countries were strained as governments struggled to cope with the ever-increasing influx of **refugees**. Germany criticised Austria as the numbers entering Bavaria rose sharply. Austria said it would build a fence on its border with Slovenia.

Deal or no deal

Barack Obama and John Boehner (pictured), the outgoing Speaker of the House of Representatives, struck a deal to suspend **America's debt ceiling**—and thus allow the government to go on borrowing money—a full week before the deadline on November 3rd. The deal is much closer to what the president wanted than to what House Republicans had hoped for, infuriating many within the already fractious party, and promising trouble ahead for the incoming Speaker, Paul Ryan.

The Pentagon announced that Northrop Grumman, maker of the B-2 bomber, had defeated a rival bid by Boeing and Lockheed Martin to develop and build a next-generation **long-range strike bomber.** The order could be worth up to $80 billion if the United States Air Force buys all 100 stealth bombers it says it needs.

Don't cry for me, Argentina

Argentina's presidential election will go to a second round on November 22nd after an unexpectedly close contest in the first. Daniel Scioli, the Peronist candidate backed by the current president, Cristina Fernández de Kirchner, finished in front. The surprise was that Mauricio Macri, the mayor of Buenos Aires, who wants to break with Ms Fernández's populist policies, was close behind. He has a good chance of winning the run-off.

Jimmy Morales, a comedian who has never before held political office, won **Guatemala's** presidential election, on a platform against corruption. A scandal at the customs agency had forced the previous president, Otto Pérez Molina, to resign in September.

Colombia's president, Juan Manuel Santos, has offered the FARC, a guerrilla army that has fought the government for more than 50 years, a bilateral truce. It would depend on reaching agreement on the FARC's disarmament and demobilisation.

A **Venezuelan** prosecutor who helped jail Leopoldo López, a leader of the opposition to the country's left-wing government, has fled to the United States and declared that Mr López is innocent. Mr López was sentenced to nearly 14 years in prison in September on charges that he incited violence during protests against the regime last year.

Peering into the abyss

Britain's **House of Lords** voted to delay an unpopular plan to cut tax credits, a welfare payment for the low-paid, an embarrassing defeat for George Osborne, the chancellor of the exchequer. The government plans to review the proposal—as well as the future of the unelected Lords, which it says has no right to veto financial measures.

Business

The **World Health Organisation** said that processed meat causes cancer. After assessing the evidence, the WHO categorised ham, sausages, bacon and the like as "Group 1" carcinogens, a list of things certain to be dangerous. Other Group 1 substances include alcohol and tobacco, although the risk posed by processed meat is much lower. The WHO also said that red meat was probably carcinogenic.

There was a double blow for embattled **Volkswagen**. First, the German carmaker lost its position as the world's biggest car-producer to Toyota. Although VW outsold its Japanese rival during the first half of 2015, Toyota sold 7.49m vehicles in the nine months to September compared with VW's 7.43m. Then the firm reported a net loss of €1.7 billion ($1.9 billion) for the third quarter, its first loss for 15 years. VW has put aside €6.7 billion to deal with cars that cheated emissions tests, although it is too early to say the extent to which the scandal, which came to light last month, has hit sales.

Britain's GDP figures gave some cause for concern. They show that in the third quarter Britain's economy grew by just 0.5%, down from 0.6% last year in the same period. The economy is suffering from the strength of the pound, which has hit the country's manufacturing exports. The news could mean a delay to the first interest-rate rise since 2007.

The Federal Reserve declined to raise **interest rates in America**. However, it made explicit reference to the possibility of raising rates at its next meeting in December.

When in Rome, roam

The European Parliament voted to ban **data-roaming charges** for mobile phones within the EU. The ban will come into effect from June 2017. Separately, internet providers will be barred from charging extra for "fast lanes", except for certain specialised services, after the parliament voted to protect "**network neutrality**"—equal treatment for all internet traffic.

BP's profits fell by 40% in the three months to the end of September, compared with the same period last year. The firm blamed the low price of gas and oil. BP, which has already slashed its costs, said it would find billions of dollars more savings in the coming year. **Shell**, another oil firm, reported a loss of $6.1 billion in the same quarter, compared with a $5.3 billion profit last year.

Square, a payments company run by Jack Dorsey, who is also boss of Twitter, reported a loss of $53.9m in the three months to the end of September. The results are expected to be the last it will publish before an initial public offering. Square will be one of the first "unicorns"—startups valued at over $1 billion—to go public.

Deutsche Bank said it would cut 9,000 full-time jobs and pull out of ten countries after announcing a €6 billion third-quarter loss. It will also suspend dividends for two years.

Theranos, one of Silicon Valley's most prominent start-ups, with a valuation of around $9 billion, faced a barrage of negative press reports suggesting the firm's blood-testing technology is not all it purports to be. Theranos claims it can do a wide variety of health tests by drawing a few drops of blood from the finger. However, the *Wall Street Journal* claimed that its tests are not reliable.

Everything remains rosy at **Apple**, after the firm released strong fourth-quarter results. The firm sold 48m iPhones during the last three months of its fiscal year, with sales particularly strong in Greater China. Apple's net income was $11.1 billion, compared with $8.5 billion during the same quarter last year.

American regulators said they would be looking into accounting practices at **IBM** and the way it recognised revenue. The news came as the computer firm said it would buy back $4 billion of its shares.

Two of America's biggest pharmacy chains look set to merge. **Walgreens Boots Alliance** says it has agreed to buy **Rite Aid** for $17.2 billion. The deal is likely to need approval from competition authorities.

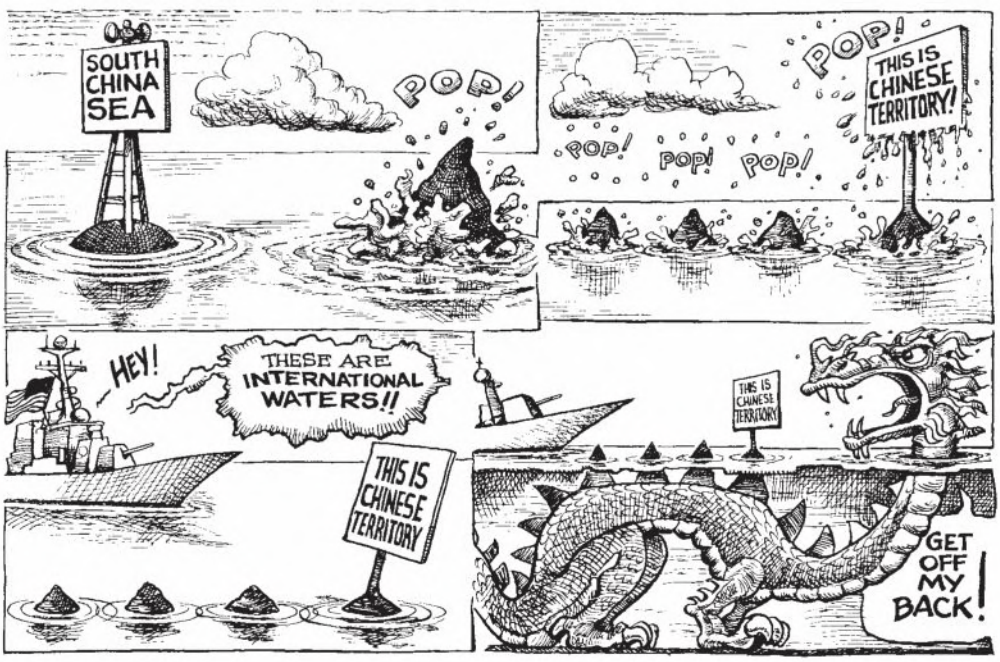
Pfizer, an American drugmaker, was reported to be in talks to buy **Allergan** to create a health-care giant worth more than $300 billion.

A drug problem

Valeant Pharmaceuticals tried to rebut claims it was massaging its figures. Shares in the drugmaker had fallen after it was criticised by Andrew Left, a trader, over its accounting relationship with specialist pharmacies. Valeant denied wrongdoing.

Financial regulators in Nigeria ordered the suspension of four past and present directors of **Stanbic IBTC**, a division of Standard Bank, after it accused them of accounting irregularities. Stanbic denies the charge.

Other economic data and news can be found on pages 92-93

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The trust machine

The technology behind bitcoin could transform how the economy works

BITCOIN has a bad reputation. The decentralised digital cryptocurrency, powered by a vast computer network, is notorious for the wild fluctuations in its value, the zeal of its supporters and its degenerate uses, such as extortion, buying drugs and hiring hitmen in the online bazaars of the "dark net".

This is unfair. The value of a bitcoin has been pretty stable, at around $250, for most of this year. Among regulators and financial institutions, scepticism has given way to enthusiasm (the European Union recently recognised it as a currency). But most unfair of all is that bitcoin's shady image causes people to overlook the extraordinary potential of the "blockchain", the technology that underpins it. This innovation carries a significance stretching far beyond cryptocurrency. The blockchain lets people who have no particular confidence in each other collaborate without having to go through a neutral central authority. Simply put, it is a machine for creating trust.

The blockchain food chain

To understand the power of blockchain systems, and the things they can do, it is important to distinguish between three things that are commonly muddled up, namely the bitcoin currency, the specific blockchain that underpins it and the idea of blockchains in general. A helpful analogy is with Napster, the pioneering but illegal "peer-to-peer" file-sharing service that went on line in 1999, providing free access to millions of music tracks. Napster itself was swiftly shut down, but it inspired a host of other peer-to-peer services. Many of these were also used for pirating music and films. Yet despite its dubious origins, peer-to-peer technology found legitimate uses, powering internet startups such as Skype (for telephony) and Spotify (for music streaming)—and also, as it happens, bitcoin.

The blockchain is an even more potent technology. In essence it is a shared, trusted, public ledger that everyone can inspect, but which no single user controls. The participants in a blockchain system collectively keep the ledger up to date: it can be amended only according to strict rules and by general agreement. Bitcoin's blockchain ledger prevents double-spending and keeps track of transactions continuously. It is what makes possible a currency without a central bank.

Blockchains are also the latest example of the unexpected fruits of cryptography. Mathematical scrambling is used to boil down an original piece of information into a code, known as a hash. Any attempt to tamper with any part of the blockchain is apparent immediately—because the new hash will not match the old ones. In this way a science that keeps information secret (vital for encrypting messages and online shopping and banking) is, paradoxically, also a tool for open dealing.

Bitcoin itself may never be more than a curiosity. However blockchains have a host of other uses because they meet the need for a trustworthy record, something vital for transactions of every sort. Dozens of startups now hope to capitalise on the blockchain technology, either by doing clever things with the bitcoin blockchain or by creating new blockchains of their own (see pages 23-26).

One idea, for example, is to make cheap, tamper-proof public databases—land registries, say, (Honduras and Greece are interested); or registers of the ownership of luxury goods or works of art. Documents can be notarised by embedding information about them into a public blockchain—and you will no longer need a notary to vouch for them. Financial-services firms are contemplating using blockchains as a record of who owns what instead of having a series of internal ledgers. A trusted private ledger removes the need for reconciling each transaction with a counterparty, it is fast and it minimises errors. Santander reckons that it could save banks up to $20 billion a year by 2022. Twenty-five banks have just joined a blockchain startup, called R3 CEV, to develop common standards, and NASDAQ is about to start using the technology to record trading in securities of private companies.

These new blockchains need not work in exactly the way that bitcoin's does. Many of them could tweak its model by, for example, finding alternatives to its energy-intensive "mining" process, which pays participants newly minted bitcoins in return for providing the computing power needed to maintain the ledger. A group of vetted participants within an industry might instead agree to join a private blockchain, say, that needs less security. Blockchains can also implement business rules, such as transactions that take place only if two or more parties endorse them, or if another transaction has been completed first. As with Napster and peer-to-peer technology, a clever idea is being modified and improved. In the process, it is fast throwing off its reputation for shadiness.

New chains on the block

The spread of blockchains is bad for anyone in the "trust business"—the centralised institutions and bureaucracies, such as banks, clearing houses and government authorities that are deemed sufficiently trustworthy to handle transactions. Even as some banks and governments explore the use of this new technology, others will surely fight it. But given the decline in trust in governments and banks in recent years, a way to create more scrutiny and transparency could be no bad thing.

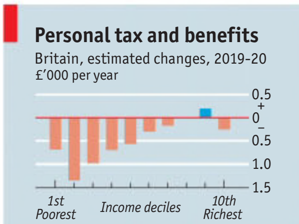
Drawing up regulations for blockchains at this early stage would be a mistake: the history of peer-to-peer technology suggests that it is likely to be several years before the technology's full potential becomes clear. In the meantime regulators should stay their hands, or find ways to accommodate new approaches within existing frameworks, rather than risk stifling a fast-evolving idea with overly prescriptive rules.

The notion of shared public ledgers may not sound revolutionary or sexy. Neither did double-entry book-keeping or joint-stock companies. Yet, like them, the blockchain is an apparently mundane process that has the potential to transform how people and businesses co-operate. Bitcoin fanatics are enthralled by the libertarian ideal of a pure, digital currency beyond the reach of any central bank. The real innovation is not the digital coins themselves, but the trust machine that mints them—and which promises much more besides. ■

Britain's House of Lords

Right answer, spoken out of turn

As long as it remains unelected, the second chamber cannot be a serious check on government



RETURNED to power with a surprise majority in May and now facing a weak Labour opposition, Britain's Conservative government has found everything almost too easy. Sure enough, on October 26th came the banana skin: a flailing defeat in the House of Lords, the drowsy but occasionally deadly upper chamber, which voted to delay a big welfare cut.

The slip-up was richly deserved. The scotched plan, to take £4.4 billion ($6.7 billion) in tax credits, mostly from the lowest-paid, would have inflicted hardship on the country's poorest children and reduced incentives for their parents to work. Britain is better off with the measures on ice. Yet the defeat by the Lords presents a bigger problem. Unelected and unaccountable, the peers tread on dangerous ground when they slap down the plans of an elected government. If the House of Lords is to serve as a check on power—which, as this week showed, is needed—it must undergo a few reforms of its own.

Peer pressure

The tax-credit plans deserved a trashing. The people they affected would not, as the government claimed, be fully reimbursed by other tweaks to tax policy and a higher minimum wage (see page 27). Far from nudging more people into employment, the cuts would reduce the incentive to work for most of them, raising the effective marginal rate of tax to as much as 80%. The higher minimum wage will add to the mess by reducing the incentive for employers to create jobs.

Following the defeat in the Lords the chancellor, George Osborne, has promised to soften the reform's impact, perhaps by raising the threshold for national-insurance contributions. That wouldn't work: tax credits are aimed at poor families, whereas higher thresholds would benefit a broader, richer group. The only way to cancel the effects of this flawed policy is to junk it—or take less money out of the system.

So the Lords are right. But they are also wrong, having overstepped their constitutional limit, in so far as anyone can tell where it lies. A 300-year-old convention—formalised, sort of, in a century-old law—holds that the Lords cannot scupper "money bills" (see page 28). The tax-credit measure is a statutory instrument, not a bill, so some argue it is open to scrutiny (the Tories only have themselves to blame for this doubt: they chose a statutory instrument to curb debate in the Commons). But the billions in play make it a money bill in all but name.

Every time the unelected Lords flex their muscles Britain is less democratic. Labour and the Liberal Democrats handily outnumber the Tories there, though Labour was pummelled in the May election, and the Liberal Democrats were almost wiped out. Peers almost never retire—even after earning criminal convictions—meaning the chamber takes a lifetime to overhaul. Unlike ministers of other religions, 26 Church of England bishops get a place, though only one in six Britons is Anglican. The bishops anointed their first woman only this year and still exclude "practising" homosexuals. Bad as the tax-credit plan is, it is hard to cheer its defeat by a chamber of losers, crooks and self-appointed holy men.

With Labour so weak in the Commons, an alternative check on the government is more valuable than ever. The Lords have defeated the government 19 times since May, often with good reason. But, to act as a brake, they need clarity and a mandate. That means a written constitution to codify their powers, and election of its members. The Commons resists Lords reform for fear of a rival chamber with the legitimacy to challenge it—and then proceeds to scream illegitimacy whenever the Lords blocks legislation. If the tax-credits debacle provokes a rethink, it will be long overdue. ■

Democracy in Myanmar

Still the generals' election

Myanmar's poll will be less rigged than previous ones, but military rule is far from over

ON NOVEMBER 8th Myanmar will hold a general election (see page 59). It will not be completely free and fair, but it will be competitive—the first in 25 years not to be boycotted by the main opposition party, led by Aung San Suu Kyi, who won the Nobel peace prize in 1991. For a country that has suffered six decades of military rule, albeit in recent years a mufti and slightly less thuggish form of it, this will be a remarkable step.

In 1990 Miss Suu Kyi's party, the National League for Democracy (NLD), won a landslide victory at the ballot box. It should have formed the government, but the generals ignored the result and kept her under house arrest (where she already was) for most of the ensuing two decades. Five years ago they concocted a sham election, which the NLD boycotted. Now the signs are more promising: Miss Suu Kyi is free and the opposition will certainly win again. The army will probably keep its word and accept the result.

This is happening because of two important changes. First, in 2011, a new reforming government led by a former general, Thein Sein, came to power. It set about loosening the shackles that the men in uniform had wrapped around Myanmar, freeing most political prisoners and lifting censorship. Second, Miss Suu Kyi responded by changing tactics and taking part in ▸▸

elections again. In 2012 she became a legislator after remarkably fair by-elections. The West rejoiced, and lifted almost all of the sanctions it had imposed on the old military regime.

But military rule is not yet over. The election is taking place on the army's terms. It will probably not stuff ballot boxes or falsify the results, but only because it does not have to. Under the constitution, foisted on Myanmar by a rigged referendum in 2008, one-quarter of MPs are directly appointed by the head of the armed forces. The votes of more than three-quarters of MPs are needed to change the constitution, which empowers the army to operate virtually as a state within a state—its tentacles reach into almost every aspect of life, from business to writing school textbooks. No matter how many millions of Burmese vote against the Union Solidarity and Development Party, which rules the country and is backed by the army, the army will remain the real power in Myanmar.

What is more, no matter how many votes Miss Suu Kyi's party receives, she cannot be president. The generals made sure of that when they wrote in their self-serving constitution that no one with a foreign husband or offspring may hold that office. (The late husband of Miss Suu Kyi was British, as are her children.) Legislators elect the president; were it not for the constitution, Miss Suu Kyi would be a shoo-in for the job if the NLD were to win by a landslide. Thus the election will neither help to bring about the constitutional change that most voters want—and which the country badly needs—nor will it give Myanmar the president that its people would choose.

Western naivety has not helped. Rich democracies were too quick to assume that Myanmar was safely on the road to pluralism, and lost bargaining power over the generals when they lifted most of their sanctions in 2012. With the end of Myanmar's isolation, foreign investment poured in, spurring economic growth. At the same time, however, political reform stalled. The army resisted further liberalisation because it had already got most of what it wanted from the West. The NLD collected millions of signatures in an effort to persuade the government to end the effective military veto on constitutional change. The generals said no.

No time to relax

Myanmar's citizens deserve better. The new legislature will assume its duties in March. The West should call for it to change the constitution so as to banish the army from politics. This should also help to secure a lasting peace between the central government and minority ethnic groups which have long chafed at repressive rule by the army.

It will not be easy. But a strong showing by the NLD will signal that voters want political change as well as the economic sort. Perhaps the army will bow to the will of the people it supposedly protects, and return to barracks. But the West would be unwise to wait indefinitely, or to keep granting favours to the army for fear that sulky generals will turn instead to China for support. The army may resent being lectured about democracy and human rights, but it would rather deal with the West than be in thrall to Myanmar's giant neighbour to the North. If the army refuses to bow out, America and the European Union should reimpose targeted sanctions. That would give the generals cause to reconsider. ■

Turkey's election

Sultan at bay

Turks should vote against the ruling Justice and Development party on November 1st

DO NOT underestimate the importance of Turkey to the West. In the cold war it was a NATO bulwark against the Soviet Union. Then it was a model of a thriving Muslim democracy on the edge of an oppressive and violently chaotic Arab world. More recently Turkey has admirably taken in 2m refugees fleeing fighting across the border in Syria.

But these days Turkey's reputation is tarnished. An election on November 1st takes place at a time of renewed war against Kurdish PKK guerrillas, suicide-bombings at home, assaults on a free media, the sidelining of independent prosecutors and judges, and a sense that Turkey has sometimes been worryingly indulgent towards the jihadists of Islamic State (IS).

The blame for much of this lies with the country's imperious president, Recep Tayyip Erdogan. The election he has engineered, the second in five months, is an attempt to entrench himself in power. Turks should rebuke him by voting for his opponents, and put him back in the ceremonial box he supposedly stepped into when he became president a year ago.

The signs are that many Turks are indeed tiring of the antics of their formidable but increasingly autocratic and intolerant president. In June the Justice and Development (AK) party that he co-founded 14 years ago lost its majority in a general election. The proper course would then have been for the party's leader, Ahmet Davutoglu, to form a coalition government, or to let other parties have a shot. Yet even though, as president, Mr Erdogan is meant to stand above the fray, he intervened to scupper all efforts at coalition-building. His plan was to force a second election that he hoped would not just restore AK's majority but might even win it the three-fifths of seats it needs if it is to propose constitutional change—and thereby create a presidential system in which he would have extra powers.

Worse still, to maximise AK's chances, Mr Erdogan has torpedoed the peace process with the country's Kurds in the hope that this will push down the vote for the pro-Kurdish People's Democratic Party (HDP). This is especially sad since, as prime minister, Mr Erdogan was a brave proponent of a peace settlement with the Kurds. Now the army is once again at war with Kurdish PKK fighters. Turkish warplanes have struck Kurdish strongholds in Syria and Iraq, even though Kurds have proved to be among the most effective opponents of both Syria's president, Bashar al-Assad, and IS. Inside Turkey a string of shootings and bombings, including a horrific double suicide-bombing in Ankara on October 10th, widely attributed to IS, which killed 102 people, have made it almost impossible for the HDP to hold election rallies around the country. Its members have also been kept off the airwaves, as media intimidation has ▸▸

Think-ing allowed

Dispatches

Britain's Benefits Experiment
Monday 8pm

been used to hobble opposition parties (see page 37).

Fortunately, most Turkish voters seem not to have been swayed by Mr Erdogan's cynical manoeuvring. Most opinion polls suggest that the HDP will once again get over the 10% threshold of the vote needed to win seats in the grand national assembly. That means there is likely to be another hung parliament. This time the president must not sabotage the task of forming a coalition government.

A steady and reliable government is especially vital just now because Turkey faces big challenges at home and abroad. The economy has slowed, inflation and unemployment have risen and the lira has tumbled. The country needs determined liberalisation to increase labour- and product-market flexibility and improve competitiveness. The breakdown of the Kurdish peace process and the rise in violence has cast a pall not just over the south-east of Turkey but also over the whole country's tourist industry.

Then there are the troubles in the region, most notably Syria. Mr Erdogan went out on a limb four years ago in demanding that Mr Assad had to go. He has belatedly allowed the Americans to use their Incirlik air base to bomb IS targets, yet his own air force has directed its attacks mostly against the Kurds. Turkey has taken in more Syrian refugees than other countries, but it has also become the main migrant route to Europe. A new government will have to reassess its approach to Syria and to the handling of refugees—and it should do this in co-operation with its European and NATO allies, not against them.

The advice of friends

Turkey's allies should not tone down their criticisms of Mr Erdogan. Some European Union leaders have shown worrying signs of doing this to persuade him to be more helpful in stemming the flow of refugees and other migrants to Europe. This year's European Commission annual assessment of Turkey, which was expected to be highly critical of the government's undemocratic habits, has been quietly postponed. After the election, any new government is likely to try both to reinvigorate Turkey's stalled EU accession talks and to win visa-free access to Europe for its citizens. The EU should make clear that progress on these will depend on moves to restore fuller democratic freedoms in Turkey.

Mr Erdogan and his AK government did much to reform Turkey and to improve its economy in the 2000s. But after over a decade in power, he is no longer good for his country. ■

Ending a war

Lessons from Colombia

Outsiders should not unpick a hard-won compromise between peace, truth and justice

FOR better and for worse, Colombia is an exception to the rule in Latin America. The third-most-populous country in the region (with 50m people) has seen steady economic growth by eschewing populism, hyperinflation and default. It can claim to be the region's oldest democracy. Yet its guerrilla wars have lasted half a century, killing more than 220,000 people and displacing 6.5m. Now, at last, the conflict is close to ending (see our special report in this issue). That matters not just for Colombia, but also for its neighbours and the world.

For the past three years the FARC, the biggest of the illegal armies, has been in peace talks with the government of Juan Manuel Santos. Last month produced a breakthrough: an outline accord on "transitional justice"—or the penalties that guerrilla commanders accused of crimes against humanity should face. Having thus agreed on the trickiest item of the six on the agenda, Mr Santos coaxed the FARC into accepting a six-month deadline to wrap up the talks.

The FARC's leaders would have to confess their crimes to a truth commission and submit to a special tribunal. If they do this, and disarm, they will be eligible for alternative sentences—up to eight years of community service in a facility that is not a prison but is not home, either. Army officers guilty of crimes will be given similar leniency, as will those who financed former right-wing paramilitaries.

Many Colombians, led by Álvaro Uribe, Mr Santos's predecessor, are outraged that FARC commanders who ordered kidnaps and bombings will not be jailed. They abhor the idea that for legal purposes the army will be bracketed with the FARC.

They are right: the deal is hard to stomach. But it is the best compromise on offer. The FARC will not receive the blanket amnesty granted to all previous Latin American guerrillas who disarmed; the sentences are longer than expected; and the guilty will have to confess all. This can help a nation heal, as South Africa's (much less rigorous) truth commission showed. To oppose this deal is to argue for prolonging the war. So long as a majority of Colombians support the deal, international lawyers should not try to unpick it.

A last push for peace

There are still many loose ends. The ELN, a smaller guerrilla group, is not making peace. Many FARC leaders seem far from becoming democrats. The government must act fast to organise international monitoring of the FARC's disarmament, to provide security in areas where the conflict has been most intense and to promote rural development so that ex-guerrillas can find jobs. Cutting the flow of drug money that funds the FARC is also important—though, as long as cocaine is illegal around the world, the trade will remain so profitable that this will be hard. Colombia must avoid what happened after civil wars in Central America in the 1980s and 1990s, where peace led to an explosion of violent crime. In all this it will need the understanding and support of the outside world.

Fifteen years ago many outsiders feared that Colombia would become a failed state. Instead the government under Mr Uribe drove the guerrillas back and persuaded the FARC that it could not win power by force. Crushing the 6,000 remaining FARC fighters would take decades more of bloodshed. Mr Santos was right to negotiate with them; Mr Uribe should support him. If Colombia is to make peace, its leading politicians must work together. ■

Letters

The bamboo ceiling

We enjoyed your briefing on discrimination against Asian-Americans, especially in academia ("The model minority is losing its patience", October 3rd). As immigrants from China, we are willing to put in the extra effort to overcome barriers. We are content with that and have been "quiescent", as you say. However, my wife and I feel bitter when looking at the future for our nine-year-old son. He is likely to experience more disappointments in life because of his Chinese heritage, despite being born in America. As far as university admissions are concerned, Asian-Americans are squeezed on two fronts: affirmative action that favours other minority groups, and admissions policies tailored to the descendants of alumni and big donors.

Compare two minority groups in America, Chinese and Jewish people. We have many Jewish friends, and sent our son to a pre-school run by the local Jewish community centre. There are many similarities between the two groups, and yet, during every presidential election we are struck by how differently they are treated. No candidate can ever do enough to praise Israel and Israelis, and at the same time bashing China and the Chinese. Carly Fiorina, for example, said the Chinese can't innovate: "They're not terribly imaginative. They're not entrepreneurial…That's why they're stealing our intellectual property."

HUI CAI
CYNTHIA JU
Denver

Your lament that Asians are underrepresented at the top is misleading because it doesn't control for age. Partners in law firms, elected legislators like your "Senator Kim", executives of big companies and other leaders in society are usually in their 50s and 60s. But the sharp rise of Asians as a percentage of the total population is a fairly recent phenomenon. According to Census Bureau, their relative numbers grew by more than 46% from 2000 to 2010. Like most immigrants, those new arrivals are mainly young people. Give them time.

DAVID BOOK
Monterey, California

One important reason why Asian-Americans are finding it harder to get into the Ivy League and other highly selective universities is the rise in international students, including from Asia. The share of international admissions has nearly doubled in selective colleges and universities in the past 20 years, and this trend has accelerated in recent years as universities seek greater international prestige.

PROFESSOR KARTHICK RAMAKRISHAN
School of Public Policy
University of California, Riverside

"Tiger ancestors" (October 3rd) reckoned that "the bloodiest single episode of mob justice" in America's history took place in Los Angeles in 1871, when 17 Chinese were lynched. In fact, the worst massacre of Chinese occurred in Rock Springs, Wyoming, in 1885, when 28 Chinese were murdered.

MERVIN BLOCK
New York

Science v malaria

The numbers you cited regarding the investment for researching malaria and other diseases suggest that funding is on the right track ("Breaking the fever", October 10th). Unfortunately, the recent trend behind the figures is a different one. According to Policy Cures, an organisation which tracks global investments in R&D on poverty-related diseases, the global funding in research into malaria dropped from $656m in 2009 to $549m in 2013.

This comes at a critical time. Many of the innovative products under development, novel vaccines and drugs in particular, are now ready to enter mid- to late-stage clinical development, in which the efficacy of these products will be tested in very expensive large-scale clinical trials in areas where disease is endemic.

The shortage in funding seriously delays and jeopardises these final stages of development.

ODILE LEROY
Executive director
STEFAN JUNGBLUTH
Head of business development
European Vaccine Initiative
Heidelberg, Germany

Christians in Iraq

One should not forget when describing the post-Bush harassment of Christians in Iraq that Saddam Hussein's long-serving foreign minister, Tariq Aziz, was a Christian ("Nour's list", October 17th).

Also, two of Hussein's top scientists, Rihab Rashid Taha al-Azzawi al-Tikriti and Huda Salih Mahdi Ammash, were women and could dress as they pleased. None of this is possible in the new and improved, liberated Iraq.

ANDRZEJ DERKOWSKI
Oakville, Ontario

Meanwhile in Canada

Stephen Harper's anti-Muslim tactics in the Canadian election were ineffective and counterproductive ("Veiled attack", October 10th). You only have to look at the failure of Mr Harper's Conservative Party to re-elect even a minority government and the stunning success of Justin Trudeau and the Liberal Party in achieving a majority government.

DAVID ALLMAN
Vancouver

Great-power politics

"Who rules the waves" (October 17th) correctly highlighted the shortcomings of Chinese naval strategy: the Chinese policy of increasing its military presence in the islands in the South China Sea is absurd. Control of the South China Sea is about control of the choke points around the sea—the Malacca, Luzon and Taiwan Straits.

The current Chinese military build-up will push those countries around the choke points to build up their military strength, thus entrenching their control. For example, the Philippines can outflank current Chinese manoeuvres by building up its military presence in the islands it possesses in the Luzon Strait. Any gains the Chinese make would be entirely phyrric if other countries can shut down the sea to Chinese vessels.

IVAN YUEN
Hong Kong

Wonkery

You described Angus Deaton's early work as an economist as "wonky" (Free exchange, October 17th). Are you sure you don't mean "wonkish"? For Mr Deaton's sake, one would hope so. Then again, given the lamentable record of policymakers in general, it does raise the question: are these words perhaps synonyms after all?

DAVID CHAPLIN
Cape Town

Media bias

Perhaps, if the media hadn't written off the three candidates in the Democratic primary race who "…mattered hardly at all", there would be more emphasis on actual debating (Lexington, October 17th).

Too often other candidates are cut off in favour of providing Hillary Clinton with a pulpit to further her campaign.

It will certainly be a one-horse race if the other runners are provided mules to ride on.

FRANCISCO SILVA
Oceanside, New York

Letters are welcome and should be addressed to the Editor at
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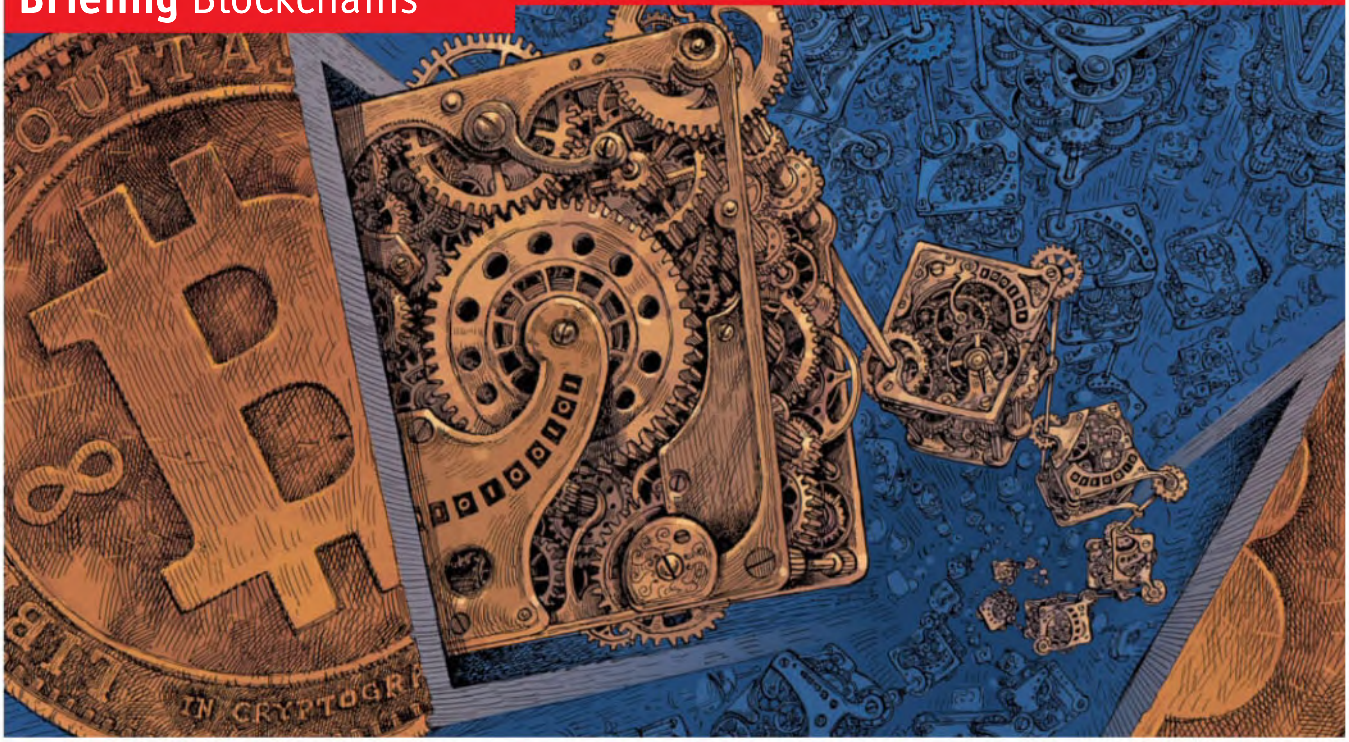


The great chain of being sure about things

The technology behind bitcoin lets people who do not know or trust each other build a dependable ledger. This has implications far beyond the cryptocurrency

WHEN the Honduran police came to evict her in 2009 Mariana Catalina Izaguirre had lived in her lowly house for three decades. Unlike many of her neighbours in Tegucigalpa, the country's capital, she even had an official title to the land on which it stood. But the records at the country's Property Institute showed another person registered as its owner, too—and that person convinced a judge to sign an eviction order. By the time the legal confusion was finally sorted out, Ms Izaguirre's house had been demolished.

It is the sort of thing that happens every day in places where land registries are badly kept, mismanaged and/or corrupt—which is to say across much of the world. This lack of secure property rights is an endemic source of insecurity and injustice. It also makes it harder to use a house or a piece of land as collateral, stymying investment and job creation.

Such problems seem worlds away from bitcoin, a currency based on clever cryptography which has a devoted following among mostly well-off, often anti-government and sometimes criminal geeks. But the cryptographic technology that underlies bitcoin, called the "blockchain", has applications well beyond cash and currency. It offers a way for people who do not know or trust each other to create a record of who owns what that will compel the assent of everyone concerned. It is a way of making and preserving truths.

That is why politicians seeking to clean up the Property Institute in Honduras have asked Factom, an American startup, to provide a prototype of a blockchain-based land registry. Interest in the idea has also been expressed in Greece, which has no proper land registry and where only 7% of the territory is adequately mapped.

A place in the past

Other applications for blockchain and similar "distributed ledgers" range from thwarting diamond thieves to streamlining stockmarkets: the NASDAQ exchange will soon start using a blockchain-based system to record trades in privately held companies. The Bank of England, not known for technological flights of fancy, seems electrified: distributed ledgers, it concluded in a research note late last year, are a "significant innovation" that could have "far-reaching implications" in the financial industry.

The politically minded see the blockchain reaching further than that. When co-operatives and left-wingers gathered for this year's OuiShare Fest in Paris to discuss ways that grass-roots organisations could undermine giant repositories of data like Facebook, the blockchain made it into almost every speech. Libertarians dream of a world where more and more state regulations are replaced with private contracts between individuals—contracts which blockchain-based programming would make self-enforcing.

The blockchain began life in the mind of Satoshi Nakamoto, the brilliant, pseudonymous and so far unidentified creator of bitcoin—a "purely peer-to-peer version of electronic cash", as he put it in a paper published in 2008. To work as cash, bitcoin had to be able to change hands without being diverted into the wrong account and to be incapable of being spent twice by the same person. To fulfil Mr Nakamoto's dream of a decentralised system the avoidance of such abuses had to be achieved without recourse to any trusted third party, such as the banks which stand behind conventional payment systems.

It is the blockchain that replaces this trusted third party. A database that contains the payment history of every bitcoin in circulation, the blockchain provides proof of who owns what at any given juncture. This distributed ledger is replicated on thousands of computers—bitcoin's "nodes"—around the world and is publicly available. But for all its openness it is also trustworthy and secure. This is guaranteed by the mixture of mathematical subtlety and computational brute force built into its "consensus mechanism"—the process by which the nodes agree on how to update the blockchain in the light of bitcoin transfers from one person to another.

Let us say that Alice wants to pay Bob for services rendered. Both have bitcoin "wallets"—software which accesses the ▸▸

blockchain rather as a browser accesses the web, but does not identify the user to the system. The transaction starts with Alice's wallet proposing that the blockchain be changed so as to show Alice's wallet a little emptier and Bob's a little fuller.

The network goes through a number of steps to confirm this change. As the proposal propagates over the network the various nodes check, by inspecting the ledger, whether Alice actually has the bitcoin she now wants to spend. If everything looks kosher, specialised nodes called miners will bundle Alice's proposal with other similarly reputable transactions to create a new block for the blockchain.

This entails repeatedly feeding the data through a cryptographic "hash" function which boils the block down into a string of digits of a given length (see diagram). Like a lot of cryptography, this hashing is a one-way street. It is easy to go from the data to their hash; impossible to go from the hash back to the data. But though the hash does not contain the data, it is still unique to them. Change what goes into the block in any way—alter a transaction by a single digit—and the hash would be different.

Running in the shadows

That hash is put, along with some other data, into the header of the proposed block. This header then becomes the basis for an exacting mathematical puzzle which involves using the hash function yet again. This puzzle can only be solved by trial and error. Across the network, miners grind through trillions and trillions of possibilities looking for the answer. When a miner finally comes up with a solution other nodes quickly check it (that's the one-way street again: solving is hard but checking is easy), and each node that confirms the solution updates the blockchain accordingly. The hash of the header becomes the new block's identifying string, and that block is now part of the ledger. Alice's payment to Bob, and all the other transactions the block contains, are confirmed.

This puzzle stage introduces three things that add hugely to bitcoin's security. One is chance. You cannot predict which miner will solve a puzzle, and so you cannot predict who will get to update the blockchain at any given time, except in so far as it has to be one of the hard working miners, not some random interloper. This makes cheating hard.

The second addition is history. Each new header contains a hash of the previous block's header, which in turn contains a hash of the header before that, and so on and so on all the way back to the beginning. It is this concatenation that makes the blocks into a chain. Starting from all the data in the ledger it is trivial to reproduce the header for the latest block. Make a change anywhere, though—even back in one of the earliest blocks—and that changed block's header will come out different. This means that so will the next block's, and all the subsequent ones. The ledger will no longer match the latest block's identifier, and will be rejected.

Is there a way round this? Imagine that Alice changes her mind about paying Bob and tries to rewrite history so that her bitcoin stays in her wallet. If she were a competent miner she could solve the requisite puzzle and produce a new version of the blockchain. But in the time it took her to do so, the rest of the network would have lengthened the original blockchain. And nodes always work on the longest version of the blockchain there is. This rule stops the occasions when two miners find the solution almost simultaneously from causing anything more than a temporary fork in the chain. It also stops cheating. To force the system to accept her new version Alice would need to lengthen it faster than the rest of the system was lengthening the original. Short of controlling more than half the computers—known in the jargon as a "51% attack"—that should not be possible.

Dreams are sometimes catching

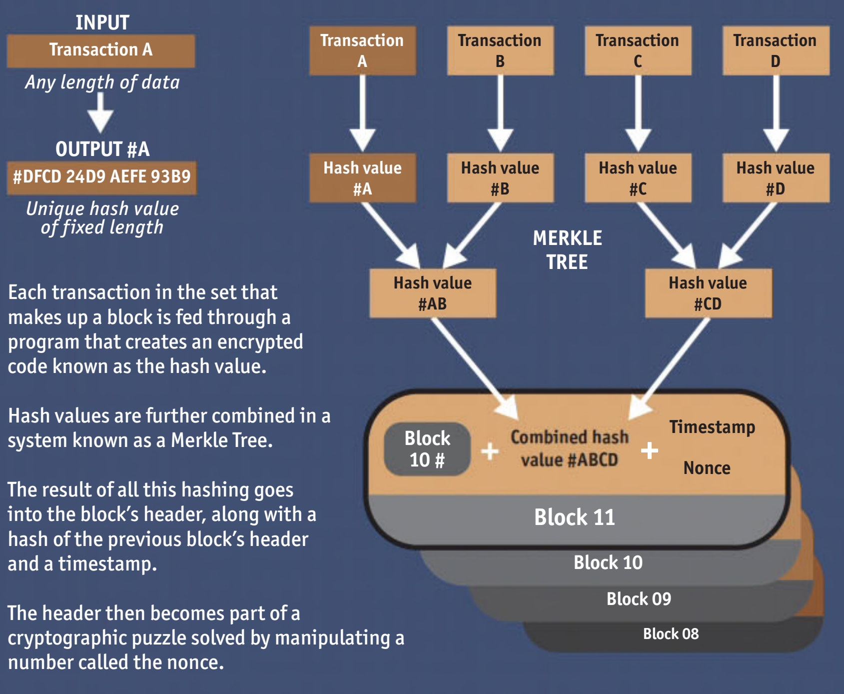
Leaving aside the difficulties of trying to subvert the network, there is a deeper question: why bother to be part of it at all? Because the third thing the puzzle-solving step adds is an incentive. Forging a new block creates new bitcoin. The winning miner earns 25 bitcoin, worth about $7,500 at current prices.

All this cleverness does not, in itself, make bitcoin a particularly attractive currency. Its value is unstable and unpredictable (see chart on next page), and the total amount in circulation is deliberately limited. But the blockchain mechanism works very well. According to blockchain.info, a website that tracks such things, on an average day more than 120,000 transactions are added to the blockchain, representing about $75m exchanged. There are now 380,000 blocks; the ledger weighs in at nearly 45 gigabytes.

Most of the data in the blockchain are about bitcoin. But they do not have to be. Mr Nakamoto has built what geeks call an "open platform"—a distributed system the workings of which are open to examination and elaboration. The paragon of such platforms is the internet itself; other examples include operating systems like Android or Windows. Applications that depend on basic features of the blockchain can thus be developed without asking anybody for permission or paying anyone for the privilege. "The internet finally has a public data base," says Chris Dixon of Andreessen Horowitz, a venture-capital firm which has financed several bitcoin start-ups, including Coinbase, which provides wallets, and 21, which makes bitcoin-mining hardware for the masses.

For now blockchain-based offerings fall in three buckets. The first takes advantage of the fact that any type of asset can be transferred using the blockchain. One of the startups betting on this idea is Colu. It has developed a mechanism to "dye" very

Making a hash of it



Each transaction in the set that makes up a block is fed through a program that creates an encrypted code known as the hash value.

Hash values are further combined in a system known as a Merkle Tree.

The result of all this hashing goes into the block's header, along with a hash of the previous block's header and a timestamp.

The header then becomes part of a cryptographic puzzle solved by manipulating a number called the nonce.

Once a solution is found the new block is added to the blockchain.

small bitcoin transactions (called "bitcoin dust") by adding extra data to them so that they can represent bonds, shares or units of precious metals.

Protecting land titles is an example of the second bucket: applications that use the blockchain as a truth machine. Bitcoin transactions can be combined with snippets of additional information which then also become embedded in the ledger. It can thus be a registry of anything worth tracking closely. Everledger uses the blockchain to protect luxury goods; for example it will stick on to the blockchain data about a stone's distinguishing attributes, providing unchallengeable proof of its identity should it be stolen. Onename stores personal information in a way that is meant to do away with the need for passwords; CoinSpark acts as a notary. Note, though, that for these applications, unlike for pure bitcoin transactions, a certain amount of trust is required; you have to believe the intermediary will store the data accurately.

It is the third bucket that contains the most ambitious applications: "smart contracts" that execute themselves automatically under the right circumstances. Bitcoin can be "programmed" so that it only becomes available under certain conditions. One use of this ability is to defer the payment miners get for solving a puzzle until 99 more blocks have been added—which provides another incentive to keep the blockchain in good shape.

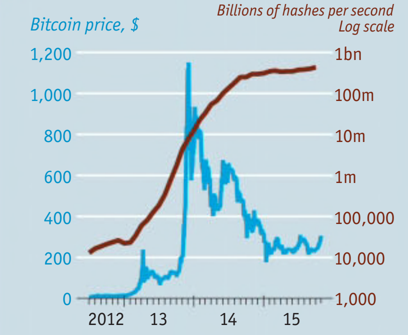
Lighthouse, a project started by Mike Hearn, one of bitcoin's leading programmers, is a decentralised crowdfunding service that uses these principles. If enough money is pledged to a project it all goes through; if the target is never reached, none does. Mr Hearn says his scheme will both be cheaper than non-bitcoin competitors and also more independent, as governments will be unable to pull the plug on a project they don't like.

Energy is contagious

The advent of distributed ledgers opens up an "entirely new quadrant of possibilities", in the words of Albert Wenger of USV, a New York venture firm that has invested in startups such as OpenBazaar, a middleman-free peer-to-peer marketplace. But for all that the blockchain is open and exciting, sceptics argue that its security may yet be fallible and its procedures may not scale. What works for bitcoin and a few niche applications may be unable to support thousands of different services with millions of users.

Though Mr Nakamoto's subtle design has so far proved impregnable, academic researchers have identified tactics that might allow a sneaky and well financed miner to compromise the block chain without direct control of 51% of it. And getting control of an appreciable fraction of the network's resources looks less unlikely than it used to. Once the purview of hobbyists, bitcoin mining is now dominated by large "pools", in which small miners share their efforts and rewards, and the operators of big data centres, many based in areas of China, such as Inner Mongolia, where electricity is cheap.

Bit player



Source: Blockchain.info

Another worry is the impact on the environment. With no other way to establish the bona fides of miners, the bitcoin architecture forces them to do a lot of hard computing; this "proof of work", without which there can be no reward, insures that all concerned have skin in the game. But it adds up to a lot of otherwise pointless computing. According to blockchain.info the network's miners are now trying 450 thousand trillion solutions per second. And every calculation takes energy.

Because miners keep details of their hardware secret, nobody really knows how much power the network consumes. If everyone were using the most efficient hardware, its annual electricity usage might be about two terawatt-hours—a bit more than the amount used by the 150,000 inhabitants of King's County in California's Central Valley. Make really pessimistic assumptions about the miners' efficiency, though, and you can get the figure up to 40 terawatt-hours, almost two-thirds of what the 10m people in Los Angeles County get through. That surely overstates the problem; still, the more widely people use bitcoin, the worse the waste could get.

Yet for all this profligacy bitcoin remains limited. Because Mr Nakamoto decided to cap the size of a block at one megabyte, or about 1,400 transactions, it can handle only around seven transactions per second, compared to the 1,736 a second Visa handles in America. Blocks could be made bigger; but bigger blocks would take longer to propagate through the network, worsening the risks of forking.

Earlier platforms have surmounted similar problems. When millions went online after the invention of the web browser in the 1990s pundits predicted the internet would grind to a standstill: *eppur si muove*. Similarly, the bitcoin system is not standing still. Specialised mining computers can be very energy efficient, and less energy-hungry alternatives to the proof-of-work mechanism have been proposed. Developers are also working on an add-on called "Lightning" which would handle large numbers of smaller transactions outside the blockchain. Faster connections will let bigger blocks propagate as quickly as small ones used to.

The problem is not so much a lack of fixes. It is that the network's "bitcoin improvement process" makes it hard to choose one. Change requires community-wide agreement, and these are not people to whom consensus comes easily. Consider the civil war being waged over the size of blocks. One camp frets that quickly increasing the block size will lead to further concentration in the mining industry and turn bitcoin into more of a conventional payment processor. The other side argues that the system could crash as early as next year if nothing is done, with transactions taking hours.

A break in the battle

Mr Hearn and Gavin Andresen, another bitcoin grandee, are leaders of the big-block camp. They have called on mining firms to install a new version of bitcoin which supports a much bigger block size. Some miners who do, though, appear to be suffering cyber-attacks. And in what seems a concerted effort to show the need for, or the dangers of, such an upgrade, the system is being driven to its limits by vast numbers of tiny transactions.

This has all given new momentum to efforts to build an alternative to the bitcoin blockchain, one that might be optimised for the storing of distributed ledgers rather than for the running of a cryptocurrency. MultiChain, a build-your-own-blockchain platform offered by Coin Sciences, another startup, demonstrates what is possible. As well as offering the wherewithal to build a public blockchain like bitcoin's, it can also be used to build private chains open only to vetted users. If all the users start off trusted the need for mining and proof-of-work is reduced or eliminated, and a currency attached to the ledger becomes an optional extra.

The first industry to adopt such sons of blockchain may well be the one whose failings originally inspired Mr Nakamoto: finance. In recent months there has been a rush of bankerly enthusiasm for private blockchains as a way of keeping tamper-proof ledgers. One of the reasons, irony of ironies, is that this technology born of anti-government libertarianism could make it easier for the banks to comply with regulatory requirements on knowing their customers and anti-money-laundering rules. But there is a deeper appeal.

Industrial historians point out that new powers often become available long before the processes that best use them are developed. When electric motors were first developed they were deployed like the big hulking steam engines that came before them. It took decades for manufacturers to see that lots of decentralised electric motors could reorganise every aspect of the way they made things. In its report on digital currencies, the Bank of England sees something similar afoot in the financial sector. Thanks to cheap computing financial firms have digitised their inner workings; but they have not yet changed their organisations to match. Payment systems are mostly still centralised: transfers are cleared through the central bank. When financial firms do business with each other, the hard work of synchronising their internal ledgers can take several days, which ties up capital and increases risk.

Distributed ledgers that settle transactions in minutes or seconds could go a long way to solving such problems and fulfilling the greater promise of digitised banking. They could also save banks a lot of money: according to Santander, a bank, by 2022 such ledgers could cut the industry's bills by up to $20 billion a year. Vendors still need to prove that they could deal with the far-higher-than-bitcoin transaction rates that would be involved; but big banks are already pushing for standards to shape the emerging technology. One of them, UBS, has proposed the creation of a standard "settlement coin". The first order of business for R3 CEV, a blockchain startup in which UBS has invested alongside Goldman Sachs, JPMorgan and 22 other banks, is to develop a standardised architecture for private ledgers.

The banks' problems are not unique. All sorts of companies and public bodies suffer from hard-to-maintain and often incompatible databases and the high transaction costs of getting them to talk to each other. This is the problem Ethereum, arguably the most ambitious distributed-ledger project, wants to solve. The brainchild of Vitalik Buterin, a 21-year-old Canadian programming prodigy, Ethereum's distributed ledger can deal with more data than bitcoin's can. And it comes with a programming language that allows users to write more sophisticated smart contracts, thus creating invoices that pay themselves when a shipment arrives or share certificates which automatically send their owners dividends if profits reach a certain level. Such cleverness, Mr Buterin hopes, will allow the formation of "decentralised autonomous organisations"—virtual companies that are basically just sets of rules running on Ethereum's blockchain.

One of the areas where such ideas could have radical effects is in the "internet of things"—a network of billions of previously mute everyday objects such as fridges, doorstops and lawn sprinklers. A recent report from IBM entitled "Device Democracy" argues that it would be impossible to keep track of and manage these billions of devices centrally, and unwise to to try; such attempts would make them vulnerable to hacking attacks and government surveillance. Distributed registers seem a good alternative.

The sort of programmability Ethereum offers does not just allow people's property to be tracked and registered. It allows it to be used in new sorts of ways. Thus a car-key embedded in the Ethereum blockchain could be sold or rented out in all manner of rule-based ways, enabling new peer-to-peer schemes for renting or sharing cars. Further out, some talk of using the technology to make by-then-self-driving cars self-owning, to boot. Such vehicles could stash away some of the digital money they make from renting out their keys to pay for fuel, repairs and parking spaces, all according to preprogrammed rules.

What would Rousseau have said?

Unsurprisingly, some think such schemes overly ambitious. Ethereum's first ("genesis") block was only mined in August and, though there is a little ecosystem of start-ups clustered around it, Mr Buterin admitted in a recent blog post that it is somewhat short of cash. But the details of which particular blockchains end up flourishing matter much less than the broad enthusiasm for distributed ledgers that is leading both start-ups and giant incumbents to examine their potential. Despite society's inexhaustible ability to laugh at accountants, the workings of ledgers really do matter.

Today's world is deeply dependent on double-entry book-keeping. Its standardised system of recording debits and credits is central to any attempt to understand a company's financial position. Whether modern capitalism absolutely required such book-keeping in order to develop, as Werner Sombart, a German sociologist, claimed in the early 20th century, is open to question. Though the system began among the merchants of renaissance Italy, which offers an interesting coincidence of timing, it spread round the world much more slowly than capitalism did, becoming widely used only in the late 19th century. But there is no question that the technique is of fundamental importance not just as a record of what a company does, but as a way of defining what one can be.

Ledgers that no longer need to be maintained by a company—or a government—may in time spur new changes in how companies and governments work, in what is expected of them and in what can be done without them. A realisation that systems without centralised record-keeping can be just as trustworthy as those that have them may bring radical change.

Such ideas can expect some eye-rolling—blockchains are still a novelty applicable only in a few niches, and the doubts as to how far they can spread and scale up may prove well founded. They can also expect resistance. Some of bitcoin's critics have always seen it as the latest techy attempt to spread a "Californian ideology" which promises salvation through technology-induced decentralisation while ignoring and obfuscating the realities of power—and happily concentrating vast wealth in the hands of an elite. The idea of making trust a matter of coding, rather than of democratic politics, legitimacy and accountability, is not necessarily an appealing or empowering one.

At the same time, a world with record-keeping mathematically immune to manipulation would have many benefits. Evicted Ms Izaguirre would be better off; so would many others in many other settings. If blockchains have a fundamental paradox, it is this: by offering a way of setting the past and present in cryptographic stone, they could make the future a very different place. ■

Also in this section

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Welfare

Credit crunch

A plan to cut tax credits is defeated, for now. Coming up with a face-saving alternative will be hard

GEORGE OSBORNE, the Conservative chancellor, is in a bind. What seemed like a piece of clever politics in his July budget partially unravelled on October 26th, when the House of Lords rejected his plan to lop £4.4 billion ($6.7 billion) off the bill for tax credits, income top-ups for the low-paid. After the vote, Mr Osborne emerged from the Treasury to report through gritted teeth that he would "listen" to criticism and find ways to soften the blow. He has no good options; barring a U-turn the policy will do damage to some of Britain's most vulnerable, and to his reputation.

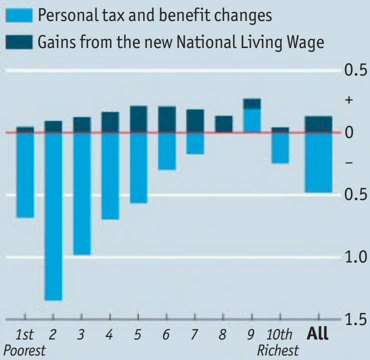
Back in July the government claimed the budget was a boon for "strivers", whom it has previously contrasted with non-working "skivers". Iain Duncan Smith, the work and pensions minister, pumped his fists with delight as Mr Osborne revealed a big rise in the minimum wage. But closer inspection revealed a harsher settlement. After the government failed to publish its usual distributional analysis, the Institute for Fiscal Studies (IFS), a think-tank, helpfully obliged. Its figures revealed huge losses for the poorest, inadequately offset by the minimum wage and other tax tweaks (see chart).

Tax credits are designed to bust poverty, while nudging people into work. The government supplements low wages, then gradually teases the benefits away as income rises. Mr Osborne had two options for reducing the system's cost: cutting the initial benefit payment; or increasing the rate at which it is yanked back.

In his summer budget, the chancellor pulled every lever he had. He announced a freeze on the generosity of tax-credit payments until 2020, and new rules to take them away more quickly. But whereas the freeze would creep in gradually, the faster withdrawals would wallop people all at once next April. The Resolution Foundation, a think-tank, estimated that 3.3m families would lose on average £1,100 a year, throwing 200,000 children into poverty. A single mother of two working 40 hours a week on the minimum wage would see her weekly income drop from £417 in March to £391 in April. The Lords balked, and pushed back this proposal.

Cost-benefit analysis

Impact of measures announced this parliament*
Britain, by income decile, 2019-20, £'000 per year



Source: IFS *Estimate

Back-pedalling, Mr Osborne has vowed to help those families affected. But for this delicate task he has only blunt instruments. A faster increase in the minimum wage might force employers to soften the blow of benefit cuts. But whereas tax credits and minimum wages have similar income-boosting effects, they have opposite effects on employers' eagerness to hire. The official independent forecaster already says the higher minimum wage will mean 4m fewer hours of work per week will be offered by 2020; raising it or bringing it forward would do more harm still.

An alternative would be to try to cushion the families through the tax system. But this would be both ineffective and very costly. Whereas income taxes and national-insurance contributions are designed to squeeze most from the rich, tax credits target poor families (43% of households receiving them have earnings below £10,000, meaning they already pay no income tax). The mismatch means that any tax cut that got close to compensating the tax-credit losers would also be a huge, expensive giveaway to the well-off.

Mr Osborne could delay the pain by phasing it in gradually or inflicting it only on new claimants. Wage growth in the meantime might make the cuts a fraction easier to bear. But it would make little difference in the end—and drawing out the cuts over two or three years would leave them dangerously fresh in voters' minds come the general election in 2020.

Nor would these sticking plasters solve a more fundamental problem with the proposal: its effect on incentives to work. ▸▸

By clawing back tax credits more quickly as income rises, the government risks encouraging shirking rather than working. Currently, families earning between £3,850 and £6,420 a year can keep every extra £1 they earn. The reform would claw back 48p of every extra £1. A lone parent earning above £11,000 and still receiving tax credits would face an effective tax rate of 80%.

The government is on a broader mission to simplify welfare, removing some of its perverse incentives. But the new plans undermine that aim. Under earlier proposals, a single mother of two would have been able to work for 22 hours on the minimum wage before her benefits started falling. With Mr Osborne's changes this would fall to ten hours. "There is a pretty big risk that because of these changes people are going to cut their hours," says Torsten Bell of the Resolution Foundation.

Pain with no gain

Are the cuts worth all this pain and distortion? Mr Osborne's motive for taking the axe to tax credits was that they had become too costly. In his budget speech he noted that they cost £1.1 billion in 1999 and will cost £30 billion this year. Although his figures are misleading (£1.1 billion covers only half a year's spending and ignores other benefits that tax credits gradually replaced), on a fair comparison real-terms spending has quadrupled since 1999. As a share of GDP, tax credits cost more than three times as much as America's Earned Income Tax Credit (EITC), which inspired them. In all, Britain spent 4.3% of GDP on family benefits in 2011, far more than the rich-country OECD average of 2.6%.

Yet it is not quite the mindless splurge the government makes out. Herwig Immervoll, an employment expert at the OECD, points out that spending in Britain is closely means-tested and therefore sensitive to the economic cycle: in 2011 tax credits cushioned the hit to wages from the recession. And tax credits have broader ambitions in mitigating child poverty than America's EITC. The IFS reckons that in 1997-2010 changes to Britain's tax and benefits system, of which tax credits were the centrepiece, kept 1.8m children out of poverty and raised the household income of the poorest half of children by 28%.

Moreover, Mr Osborne has £11.6 billion of fiscal wriggle-room to play with. Reining in the policy or, more sensibly, abandoning it altogether, would not be difficult. Even without the blocked reforms, the chancellor will have chiselled the cost of the system down from 1.8% of GDP in 2010–11 to 1.4% by 2020-21. Cynics suggest that the promise to cut £12 billion from the welfare bill was only included in the Conservative manifesto as a chip to be bargained away in coalition negotiations. In the absence of a coalition partner, the House of Lords might just have to do. ■

The House of Lords

Crisis? What crisis?

The tax-credit row has put reform of the upper house back on the agenda

WHEN Benjamin Disraeli was elevated to the House of Lords in 1876, he said: "I am dead: dead, but in the Elysian fields." The chamber has its Elysian touches, with a glittering throne overlooking red-leather benches. Their occupants may not be dead, but they are certainly old: Tory ex-ministers under Margaret Thatcher, former Labour MPs, Liberal grandees and, in a special section, a clutch of Church of England bishops clad in black, white and purple.

It seems a strange setting for a constitutional war. Yet that is what the upper house started on October 26th. At issue was a seemingly mundane statutory instrument containing the government's planned cuts to tax credits next April. Four motions were proposed: one to kill it, two to delay it until certain conditions were met and one to accept it with regret. In the end peers voted for the delaying motions. Yet, as the government swiftly pointed out, the effect was to block its plans.

The oddity was that little of the debate was about tax credits. Labour's Baroness Hollis tugged heartstrings by reading out letters from poor working people fearful of losing the handouts. The Archbishop of York, John Sentamu, made a strong moral case for not leaving people in the hands of loan sharks. Even Tory peers urged the chancellor, George Osborne, to soften his plans. As Lord Lawson, a former Tory chancellor, put it, "it is not just listening that is required. Change is required."

Lords a-voting

Yet what got the peers most excited was the constitutional question of whether they had a right to interfere. Before the debate, the government said that rejection by the unelected Lords would infringe the prerogative of the elected House of Commons over taxes and spending. The tax-credit cuts, worth £4.4 billion ($6.7 billion) to the exchequer, are clearly a budgetary matter. Conventions dating to the late 17th century or earlier provide that such matters should be decided by the lower house, which has voted for the cuts no fewer than three times. Lord Butler, a former cabinet secretary, firmly supported this line.

Yet many peers disagreed. They pointed out that a statutory instrument linked to a welfare act was not a money or finance bill, and thus not covered by the 1911 Parliament Act that stops the Lords rejecting such bills. They said the government could have put the changes in a finance bill, but had chosen the sneaky route of a statutory instrument precisely to avoid debate and amendment. And they claimed the Lords had every right to invite the government to think again, especially when many of its own backbench MPs had doubts. Mr Osborne is indeed thinking again.

Talk of a constitutional crisis akin to that of 1909-11 thus seems overblown. Yet the challenge to the elected government's powers is still serious. David Cameron is in the unique position for a Tory prime minister of not commanding a majority in the House of Lords. The Constitution Unit at University College London says that, since May, the government has been defeated 19 times in the upper house. It is no surprise that it should now be threatening to flood the Lords with more Tory peers or clip their wings in some other way.

Mr Cameron has responded to the latest defeats by setting up a review of the House of Lords to stop it blocking budgetary matters. Yet Britain's history is littered with long, painful and mostly failed attempts to reform the upper house. The reason why the Tories have lost their previous majority is that a 1999 reform threw out most (but not all) hereditary peers. But that reform kept the upper house as a very large yet still unelected body.

In 2011 Mr Cameron's coalition government tried to bring in a mostly elected House of Lords. But that measure failed in 2012 after a rebellion by Conservative backbenchers. This year's Tory manifesto declared that reform of the upper house was "not a priority". Yet the government's repeated defeats there, culminating in the latest, constitutionally questionable, rejection of its tax-credit cuts, have put the issue of Lords reform firmly back on the agenda. The nice irony in Mr Cameron's position is that he should have chosen to lead his review of the House of Lords an unelected hereditary peer, Lord Strathclyde. ■

Electoral reform

Cast out

An update of the electoral register could miss 2m voters off. Who benefits?

AMID the kerfuffle over the rejection of tax-credit reform by the House of Lords, another statutory instrument slipped through the chamber on October 27th, by just 11 votes. The motion was a seemingly humdrum bit of administration, swapping the responsibility for signing up to vote from households to individuals. Westminster's unelected members may have been picking their battles. But timing is important, and some now fear that damage to Britain's democracy may be on the horizon.

According to the Electoral Reform Society, a campaigning organisation, the forthcoming switchover will be the biggest change in electoral registration since women got the vote, and generally a good thing. Today's system is a relic of a time when democracy applied only to property owners, can sometimes be prone to voter fraud, and occasionally puts people on the ballot twice. Almost everyone agrees that it is time for a change.

The trouble comes in getting there. Although the government has already used paper records to move about 90% of people from one system to the other, officials must harass everyone else to re-register. In June the Electoral Commission, the official election watchdog, announced that some 1.9m people had fallen through the cracks. They are made up mostly of students (until last year universities could block-register student halls), people in big cities, and those who move frequently or live many to a house. In other words, they tend to be Labour voters. In Hackney, an inner-London borough, 23% of voters were lost around the time of the 2015 general election, compared with an average of 3.5% in south-east England.

The changeover was due to happen in December 2016: time enough for Labour to bombard its electorate with letters, e-mails and unexpected visits. But the Conservative government has decided to bring the plan forward by a year—the old list will now be wiped this December—in the kind of rushed job, the Electoral Reform Society has warned, that could be "hugely damaging to our democracy". The Electoral Commission, unusually, expressed its "disappointment" at the decision.

Labour is furious. Unless the missing 1.9m sign up sharpish it could face a disadvantage in several important elections due to take place next year: those of London's mayor, the Scottish Parliament and the Welsh National Assembly, as well as various elections of local police commissioners. And if the lost voters never get the memo, it will also hamper the party in elections to come.

Labour has another worry: a forthcoming constituency-boundary review. As part of a change that will see the number of MPs reduced from 650 to 600, constituency maps are due to be redrawn in order to make them fairer (at the moment they are thought to advantage Labour, though there is some debate about this). But the change will be based on a snapshot of the voting register in December, after the old electoral roll has been binned. The new boundaries will leave out those who have failed to sign up by that point, leaving them under-represented in Parliament.

It will be hard for the Tories to wriggle out of accusations that the move is rather ruthless. John Penrose, the minister for constitutional reform, has argued that it is important to eliminate fraud before

Free speech at university

Intolerance of intolerance

Students are ever quicker to label offensive material as hate speech

"JUST because you lop off your dick and then wear a dress doesn't make you a fucking woman," believes Germaine Greer, an Australian-born feminist and controversialist. Her views on transsexuals have persuaded more than 2,800 people to sign a petition calling for her to be banned from giving a talk (on a different subject) at Cardiff University next month. On October 26th Ms Greer indicated that she would cancel her appearance rather than be "screamed at and have things thrown at me".

It has been a busy term for student censors. Oxford's student union banned *No Offence*, a magazine featuring stories defending colonialism and other controversies, from being distributed at its freshers' fair. Manchester's union banned two journalists from taking part in a debate on free speech because of their own "transphobic" views. And the Cambridge Union, a debating society, held a members' referendum (successful, in the end) on its plans to allow Julian Assange of the whistle-blowing WikiLeaks site to speak via video link.

Greer on gender: not so germane

Such challenges to debate are now common. A free-speech index compiled in February by *Spiked*, an online magazine, found that 135 bans of various sorts had been imposed within university campuses in the previous three years: on songs with offensive lyrics; newspapers that print topless photos on page three; and speakers whose views on everything from abortion to Zionism were considered beyond the pale.

The most zealous censors are not the university authorities but students themselves. Many unions now operate "safe space" policies, imported from American universities, which aim to create environments in which no student feels threatened by ideas deemed harmful. The mere act of inviting Mr Assange, who is accused of rape in Sweden, to appear via video has taken a "visceral, physical toll" on victims of sexual violence in Cambridge, says Charlotte Chorley, the student union's women's officer.

Others say the complainants are merely offended, not harmed. "Offence is a natural part of a liberal society," argues Edgar Häner, an organiser of the Manchester event that was shut down. "Saying that freshers can't handle [our] material is patronising," says Lulie Tanett, a co-editor of *No Offence*.

The government is curbing speech on another front. New rules came into effect in September requiring universities that host speakers "with extremist views linked to terrorist groups" to ensure that they are challenged by others. If "in any doubt that the risk cannot be fully mitigated [universities] should exercise caution and not allow the event to proceed," official guidelines say. The original bill, watered down in the House of Lords, had proposed that universities ban all speakers with extremist views, on pain of contempt-of-court charges. The National Union of Students, perhaps surprisingly, is dead against the crackdown.

boundary lines are redrawn. Yet research by the Electoral Commission has found that fraud tends to be limited and localised, and that it is rooted out fairly smartly. A study of polling stations by the University of East Anglia found that only around 1% of poll workers had concerns about voter fraud, but that two-thirds of polling stations had turned away at least one voter who was not registered. In other words, missing real voters off the list seems to be a bigger problem than bogus ones slipping on to it.

The rushed-through changes will win the Tories few fans, but the next general election is still five years away, and those who are angriest about the changes may find they cannot express their frustration at the ballot box. Labour must find its missing voters before it is too late. ■

Scottish justice

A healthier brand of porridge

Scotland's prisons are becoming more progressive than English or Welsh ones

IN JULY Michael Gove outlined a plan for prisons in England and Wales: they would get more progressive. Education would flourish, governors would be given more control, and shining new jails would be built, displacing crumbling Victorian confections, with their "dark corners" and attendant dark deeds. A welcome aim, but also rather costly and complicated. Instead, the justice minister might look to Scotland's prison service which, despite its hotch-potch of old and new institutions, and limited spending, has been getting quietly more progressive for years.

Scotland is more reluctant to lock up minor offenders than the rest of Britain. It does not jail people for defaulting on fines less than £500 ($765); England and Wales still put people behind bars for failing to pay fines over unpaid television licences. And whereas Scottish courts used to hand out a lot of short sentences, in recent years they have used them less; in September Scottish ministers proposed doing away with short sentences altogether. This is sensible: in England and Wales around three-fifths of those who have been in jail for less than 12 months reoffend within a year of their release.

Instead, Scots often serve their time painting walls or shovelling leaves in the community, a sentence that is reckoned to lead to lower reoffending rates than jail. In 2009-13, as the number of people sentenced to community work fell by one-fifth in England, it increased by about one-tenth in Scotland. Richard Garside of the Centre for Crime and Justice Studies, a think-tank, points out that whereas English probation is run by the prison service, Scotland's is under the control of social workers. This demonstrates, he says, Scotland's "more holistic" approach to criminals.

Scotland is also a lighter touch with the light-fingered young. Since 2008 the number of juveniles in Scottish jails has almost halved: an entire building at Polmont young offenders' institution stands empty. Women are also getting softer treatment. Whereas a damning report in 2007 on the treatment of British female prisoners was largely ignored in England and Wales, Scotland seems to be following its recommendations. It is closing its large women's prison, Cornton Vale, and will replace it with a number of smaller, more rehabilitation-focused institutions, spread around the country so that inmates can be closer to their families.

All this may explain why the Scottish system's results have been improving faster than those of Her Majesty's Prison Service, its English and Welsh equivalent. In 2004-13 the rate of recidivism fell by 4.1 percentage points in Scotland, compared with 0.9 percentage points in England and Wales; for juveniles it fell by 7.6 percentage points in Scotland and rose by 3.8 percentage points in England and Wales. And despite the stereotypes ("Glaswegian" being practically a synonym for "violent", as far as many English people are concerned) Scottish prisoners seem to be getting gentler. In English and Welsh prisons serious assaults recently spiked to their highest level in ten years; in Scotland they have broadly been falling since 2004.

Scotland's progressive policies are not the result of a sweeping Govian vision, but have gradually come about through the nudges of Scotland's competing left-wing parties (each of which now takes full credit for them). Yet they are simple, cheap and seem to be working. The justice minister should take heed. ■

Small-business lending

Where it's due

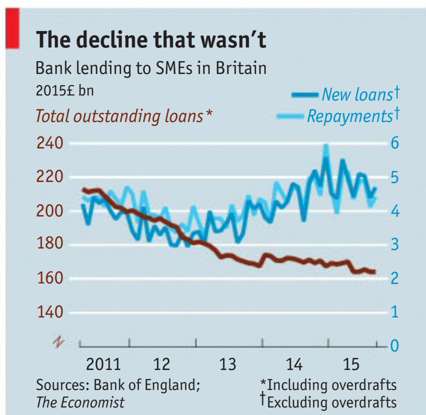
Britain's small firms are not as credit-starved as they may seem

IN THE depths of the financial crisis, barely a week went by without some politician bemoaning the lack of lending to small and medium-sized enterprises. As risk-averse banks cut the amount of credit they issued, SMEs struggled to find money to invest, thus constraining their productivity growth. In turn, this dragged down wages across the country: firms with fewer than 250 workers account for 60% of private-sector employment in Britain.

Seven years on from the crisis, at first glance things seem to be even worse. Data released on October 29th revealed that the outstanding stock of small-business loans in September was 20% lower in real (ie, inflation-adjusted) terms than it was four years earlier, when the Bank of England's records on small-business lending begin (see chart). The stock of overdrafts to SMEs has fallen even more rapidly, though overdrafts make up only one-tenth of the firms' total financing.

But dig deeper and the situation does not look quite so bad. The decline in the loan stock in recent years is largely because firms have been repaying loans faster than new ones are issued. New lending to SMEs has been rising: in September it was 60% higher than it was at its nadir three years before. Muted during the crisis, demand for credit has been increasing in recent months, according to the latest Bank of England surveys. That may be down to decent economic growth—last year Britain's economy grew faster than that of any other member of the G7—which makes businesspeople more optimistic about the future and thus more willing to invest.

Rising loan repayments suggest that SMEs are not struggling to obtain finance. Firms that repay debt early are likely to ▸▸




THE NEXT EMISSIONS SCANDAL?
Air quality around Heathrow is already at illegal levels, and a third runway with millions more car journeys is hardly going to improve things. Which means even if Heathrow got the go-ahead, it couldn't be built or operated lawfully. Airport expansion would remain indefinitely grounded, and that would be a scandal for Britain.
The air at Gatwick has never breached EU limits, and the construction and operation of a second runway won't change that. It's the only expansion option that's legal, so it's the only one that can actually happen. Britain, let's get building.
LONDON Gatwick
OBVIOUSLY.
gatwickobviously.com and @LGWobviously

have ample spare cash, which implies that their sales have been better than expected. Such firms are also unlikely to feel credit-constrained, argues Alan Clarke of Scotiabank. Businesspeople happy to repay a loan early probably feel confident about their chances of getting a new one if the need arises, he says. Indeed, surveys from the Bank of England, which made for unpleasant reading a few years ago, now show that SMES rarely struggle to get credit if they want it.

What lies behind the improvement in conditions? Healthier banks certainly help. So does the "funding-for-lending" scheme (FLS), which was launched by the Treasury and the Bank of England in 2012. The FLS offers cheap money to participating banks if they boost credit to the "real economy"—that is, firms devoted to making and doing tangible stuff, as opposed to fancy finance. Last year they were given extra incentives to lend to SMES at low rates. The scheme is now paying off, says Samuel Tombs of Pantheon Macroeconomics, a consultancy. Following the introduction of the new incentives to lend to small firms, the average interest rate on small-business loans has fallen rapidly.

The Bank of England figures do not tell the whole story. After a harrowing experience during the crisis, many small-business owners want to be shot of their bank. Instead they are raising cash in unusual places. With real house prices having increased by 12% since 2012, remortgaging a home can be one good source of credit, points out Neal Hudson of Savills, an estate agent.

Some SMES are also turning to the rapidly growing alternative-finance market, which includes things like peer-to-peer lending (platforms which match borrowers and lenders directly, via the internet). The British alternative-finance market is probably worth about £4 billion ($6 billion), according to a report by NESTA, a charity, and a researcher at Cambridge University. East London, which is stuffed with whizzy tech-firms that use this sort of unconventional financing, has seen the biggest drop in SME credit of any area in Britain since 2013.

All this means that small firms' financing needs are not as bad as headline data suggest. But things could change. The FLS is due to expire in January; small firms hope that George Osborne, the chancellor of the exchequer, will extend it (as he has done twice before) as part of the autumn statement, an annual mini-budget, which he will deliver on November 25th. Third time, though, may not be lucky: some believe that the FLS is for the chop. In addition, the Bank of England is likely to increase interest rates next year, even though GDP growth in the third quarter fell to 0.5%. All this could hit lending to small firms, just as it was getting going. ■

Mining

An industry exhumed

Britain's first new mine in nearly half a century makes a big bet on tungsten

MOST of Britain's mining industry was buried long ago. Yet on September 17th a small part of it was disinterred when the Drakelands pit, near the sleepy Devon village of Hemerdon, became the first new mine to open since 1969. Tungsten was discovered on the site in 1867, but until this year no extraction had taken place there since 1944, apart from an abortive pilot scheme that ran in the 1980s.

An Australian company, Wolf Minerals, has invested around £140m ($215m) in the site since obtaining a 40-year lease in 2007. It hopes to extract 3,500-5,000 tonnes of tungsten every year, which would make Drakelands one of the world's five biggest producers of the metal; the mine will also yield around 350 tonnes of tin a year. The site is believed to contain enough metal for 20 years of mining.

The price of tungsten, which is most commonly used in industrial machinery, doubled at the beginning of the decade but has tumbled back again in the past three years. Wolf Minerals sells its Devon tungsten in concentrate form for $14,500 per tonne; it expects its average cost will be about $12,500 per tonne once the mine has been running for a few years. Russell Clark, the firm's managing director, believes that tungsten prices will rebound, in part because mines in China and America are running low. If that does happen, "we'll be in the absolute box seat," he says.

The authorities in Devon, where wages are 13% below the national average, are glad to see the opening of the mine, which employs 200 people. Originally it had permission to operate for only five-and-a-half days a week, but the county council has recently agreed to let the pit run every day as part of a six-month trial.

Some in next-door Cornwall are drawing inspiration from the reopening of the Drakelands site. George Eustice, the MP for Camborne and Redruth, a former mining hub whose pits have all been shut since 1998, believes there is "a real prospect that tin mining could return". Tin's price surged at the turn of the century but has been falling for the past five years. Celeste Mining Corp, a Canadian firm, has written off its investment in South Crofty Mine, in west Cornwall. But Marine Minerals, a Cornish firm, has drawn up plans to begin a tin-extraction project in Hayle Harbour, on the county's north coast, in 2018.

Mike Proudfoot, Marine Minerals' chief executive, expects tin prices to bounce back in the coming years; he anticipates that other mines will open across Cornwall before the end of the decade. Mr Clark talks of "the beginning of a revival" in mining in the region. The tin and tungsten fever is indeed infectious—but international prices will have to rise before many more of the south-west's desolate mines can turn from picturesque to profitable.

From sunset to sunrise

Bagehot | The spectre of past glories

How Britain turned the ruins of its empire into a mighty entertainment imperium

WAS ever a cinematic hero less of his time than James Bond is today? "Spectre", the 24th film in the series, exudes nostalgia for when men were men, Britain was a superpower and political correctness had something to do with Erskine May's treatise on parliamentary procedure. It is terrific fun: a giant, boozy, explosion-filled convulsion of insecurity on behalf of the country that, as Dean Acheson put it, "has lost an empire and has not yet found a role". Britain may be a diminished power, but Daniel Craig's snarling spy has the world view of a snug-bar reactionary and the moral credo of an alcoholic sex tourist: James Bond as the geopolitical equivalent of a Napoleon complex.

The movie will make stinking quantities of money. For although the sun set long ago on the British Empire, that power's rain-sodden rump has in recent decades found a new source of clout: it stirs the global imagination like few other nations. "Skyfall", the previous Bond film, broke box-office records and took over $1 billion internationally. "The Lord of the Rings" is the world's second-best selling novel (pipped by "A Tale of Two Cities"). British musicians have topped global charts for six of the past seven years. Visiting Angkor Wat, Jim Carter, who plays the butler in "Downton Abbey", was mobbed by Chinese fans.

Dominic Sandbrook, a historian, recently published a study of the roots of this pre-eminence. In "The Great British Dream Factory" he enumerates everything from the role of the English language to that of the BBC (which has never carried commercials, forcing British ad men to become more creative than their foreign counterparts). Most intriguingly, he detects a common Victorian ancestry to the country's past and present mass-entertainment triumphs. Thanks to its early industrialisation, Britain has been urban and literate for longer than most: it has an unusually deep well of entertainment traditions encompassing *Punch* magazine, the music hall and the seaside pier. Thanks to the pomp and derring-do of its imperial zenith, it also possesses a rich stock of novelistic tropes and settings—the country house, the class system, the boarding school, the self-reliant adventurer—available to its creative types and recognised worldwide. The empire laid the cultural tracks on which Andrew Lloyd Webber, J.K. Rowling and Simon Cowell now run their trains.

There are two ways of looking at this. The first is to situate the roots of Britain's entertainment boom far in the past; in the Industrial Revolution and the colonisation of North America, India and parts of Africa. Yet Bagehot spies a more recent turning point: Britons successfully export their films, music and books to the world not thanks to the empire per se, but to the nature of its decline and their subsequent reaction.

Consider, for example, the country's happy relationship with its past. Most big European and East Asian nations went through a violent change of their establishment in the 20th century. America has its forward-looking frontier spirit. But Britain remains fascinated by and in most cases uncomplicatedly fond of its recent history and old order. Hence Bond, whom Mr Sandbrook describes as "presenting an only slightly modernised vision of Victorian gentlemanly values". Hence, too, traditionalist icons like Dr Who (with its nods to H.G. Wells), Harry Potter ("Tom Brown's Schooldays") and Damien Hirst (the Victorian neo-gothic).

The experience of decline is another explanation. Deprived of their colonial markets and facing new competitors, many British cities developed a post-industrial, high-unemployment grimness that functioned as a cultural Miracle-Gro. From their rich soil emerged the likes of "Billy Elliot", "The Full Monty", the Smiths and Oasis; all examples of a strutting defiance borne of its circumstances (it is hard to imagine another Noel Gallagher emerging in, say, Baden-Württemberg) yet also utterly marketable. Moreover, Britain has embraced its cultural achievements as substitutes for its old imperial glory: as early as 1964 the *Daily Express* ran a cartoon showing the Union Jack being lowered—Malta had just become independent—while an adjacent flag, adorned with the faces of the Beatles, continued to fly proudly. No individual embodies this shift like J. Arthur Rank, who built the post-war British film industry out of a fear that America's burgeoning cinematic exports would add to his country's humiliation.

If proud, Britons are also pragmatic. Here, too, Rank stands for many. In 1943 he wrote: "It is all very well to talk of being able to make good pictures here without bothering about American or world markets, but in all honesty the continued existence of British film production depends on overseas trade." Britain's post-war entertainers—generations of James Bond stars among them—have willingly tailored their output to a world audience. Mr Sandbrook cites the novelist Colin MacInnes grumbling about pop stars "speaking American at the recording session and English in the pub round the corner afterwards" and notes that the Beatles and Rolling Stones thrived by writing for an international market (unlike the Kinks, who droned on about Southend). The likes of One Direction and Adele perpetuate this universalist tradition, absorbing influences from and selling to other countries.

Britain's quantum of solace

Herein lies a lesson for policymakers. With its debates on Europe, nuclear deterrence, immigration and relations with China, Britain is going through a post-imperial identity crisis. Often this is portrayed as a choice between being a prim European nation, a muscular geopolitical pivot, a mercurial trading post or the 51st state of America. Yet Britain's cultural success illuminates an alternative to being a bigger Netherlands, a richer Turkey, a colder Singapore or a Puerto Rico on steroids. It suggests the country can forge a new role: post-imperial not just by chance but by choice; a curious hybrid of power and deference, protectionism and internationalism, self-confidence and curiosity. Britain has lost its empire. But its quest for a role may just prove a role in itself. ■

The British Museum

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Artwork adapted from José Guadalupe Posada (1852–1913), *The Great Pantheon of Love*. Engraving, c. 1910.

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Turkey's election

Voting to the sound of explosions

DIYARBAKIR AND ISTANBUL

In a country long admired for combining democracy and Islam, an election is marred by violence and recrimination

ELECTION campaigns in Turkey are sometimes exuberant affairs, with the streets decked out with bunting and resounding with jingles. But the mood was mostly subdued as voters prepared to cast their ballots on November 1st.

With every passing day since the previous poll in June, a country long seen as a model of Muslim democracy has grown more polarised. Political feuds and real bloodshed have become horribly intermingled, especially since the reopening in July of conflict between the state and the guerrillas of the Kurdistan Workers' Party (PKK). During the current electoral contest, a pro-Kurdish movement, the Peoples' Democratic Party (HDP) has denounced its terrible treatment by the ruling Islamist Justice and Development (AK) party. AK is in turn determined to recoup lost ground after losing its parliamentary majority because of the HDP's unexpectedly high score of 13% in June.

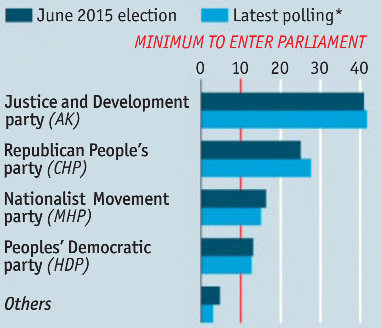
President Recep Tayyip Erdogan, whose ceremonial position is supposed to put him above politics, accuses the HDP of being a proxy for the PKK, which the HDP strongly denies. He has urged citizens to "teach the people who get backing from this terrorist organisation they lesson they need": an implied call to vote for AK, which has dominated Turkey since 2002.

It was Mr Erdogan who rolled the electoral dice a second time after the failure of coalition talks involving the four parties in parliament: AK, the HDP, the Republican People's Party (CHP), which speaks for Turkey's once dominant secular tradition and the right-wing jingoists of the National Action Party (MHP). But the HDP says the tables are tilted. They have reported 200 attacks on their offices. Since violence resumed, 22 mayors elected on an HDP ticket have been removed, and another 20 arrested. The authorities have been "creating psychological pressure and making people feel as if they are doing something illegal by attending our gatherings", says Ayse Acar Basaran, an HDP candidate.

Media access has certainly been skewed. In the first 25 days of October, Mr Erdogan appeared on the state-run TV channel for 29 hours, while coverage of his party ran for 30 hours, says the Supreme Council for Radio and Television. The CHP and MHP were on air for five hours and 70 minutes, respectively, while the pro-Kurdish HDP got a mere 18 minutes.

Stuck in a rut

Share of the Turkish vote, %



Sources: Press reports; jamesinturkey.com *October 26th

Apart from crimping its obvious rivals, the government is also cracking down on former friends. On October 28th police wielding water cannon and tear gas burst into a media company and silenced its broadcasts. This was part of a drive against firms linked to Fethullah Gulen, an American-based Islamic preacher who used to back Mr Erdogan but is now a biting critic. It followed the government's takeover, with a prosecutor's blessing, of the broadcaster's parent which also owns newspapers and mining and energy firms.

Oddly, this behaviour may not have affected voters' feelings that much; polls suggest an outcome not much different from last time. But in some parts of the country, the climate is so tense that there are questions over how fair the election will be. Antagonism between Kurds and ethnic Turks is soaring to levels not seen since the 1990s. Whenever television shows the funerals of Turkish soldiers or police killed in clashes with the PKK, anti-Kurdish sentiment surges; and the government seems proud of the fact that it is fighting the Kurds beyond the borders as well as domestically.

Ahmet Davutoglu, the prime minister, confirmed on October 26th that Turkish forces had hit Kurdish militias inside Syria, although those forces are the West's allies against the jihadists of Islamic State (IS). The Turkish government claims to be fighting a two-pronged war against Kurdish forces and IS. It has shown greater zeal in battling the Kurds, but this week it reported several domestic operations against IS. A shootout with suspected IS militants in the south-eastern city of Diyarbakir left two ▸▸

police officers and seven fighters dead. Security forces then said they had arrested 30 people in raids around Konya.

The Ankara prosecutor's office has blamed IS for an explosion in the capital on October 10th that killed 102 peace activists. (The government has made the weird charge that IS and the PKK colluded in the outrage.) Critics from the leftist and pro-Kurdish camp retort that whoever planted the bombs, people in their ideological corner were the main victims—as was the case with a bomb in July in the border town of Suruc, in which more than 30 young people died. There is evidence of a link between the two blasts: one of the perpetrators of the Ankara blast was a brother of a bomber involved in the Suruc one.

Besides violence, voters worry about bread-and-butter issues. AK boasts that the economy has grown a lot since it took power (though it has slowed of late). Turkey's hopes of joining the European Union rose again this month when Angela Merkel, Germany's chancellor, vowed to revive entry talks in return for help with refugees.

To ordinary Turks, whose life is getting harder, AK has promised to raise the minimum wage. It also offers a child bonus for mothers and support for students, young entrepreneurs and newly weds. Mr Davutoglu even made a bizarre pledge to help young people find spouses.

No election result will automatically bring stability. If AK reverts to single-party rule, it will face bitter opposition. If it fails to win a majority and teams up with the MHP, such a government would be furiously anti-Kurdish. A broad coalition of the AK and the CHP might pull the country from the brink. But that would require something unlikely: Mr Erdogan giving up dreams of an all-powerful presidency. Many Turks yearn to see an inclusive government; but the prospects for getting one are poor. ■

Erdogan expects compliance

Poland turns right

A conservative enigma

WARSAW

As the right savours victory, people wonder how far it will go

ONLY one thing is generally agreed about the result of Poland's election held on October 25th; for the victors, it was a triumph on a scale that nobody else has managed to achieve during the quarter-century since multi-party democracy was ushered in.

Jaroslaw Kaczynski, the veteran leader of Poland's right-wing Law and Justice party (PIS), is the architect of that success. His party came first with 37.6% of the vote, giving it 235 out of 460 seats in the lower chamber of parliament (the Sejm) and the first independent majority in post-communist Poland. The centrist Civic Platform (PO) party, in power since 2007, finished with 24.1% of the vote. As PIS savours its victory, people at home and abroad are wondering where its ideological heart lies.

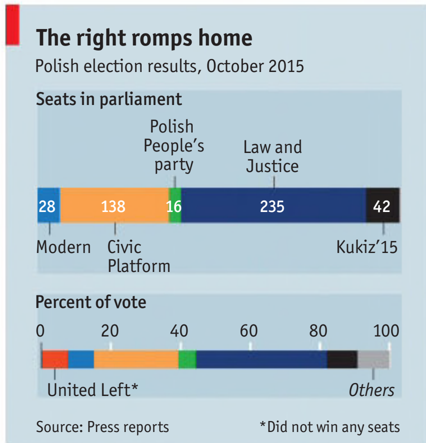
On the pessimistic side, liberals at home and abroad are warning of the "Orbanisation" of Poland; they fear the country might now follow the example of Viktor Orban, the Hungarian prime minister who is seen by critics as a curber of liberty and a xenophobic nationalist.

PIS politicians much prefer comparisons with the British Conservative Party, with which they are closely allied in the European Parliament. As is emphasised by Zdzislaw Krasnodebski, a PIS member of that assembly, the party considers itself much more moderate than France's National Front or even than the Christian Social Union which dominates Bavaria.

The PIS certainly takes a traditional line on social issues like gay marriage and abortion. But calling it "conservative" is misleading, argues Radosław Markowski, a political scientist at the Polish Academy of Sciences. Poland's new rulers are definitely not believers in small government, as many people point out.

On the contrary, Mr Kaczynski has been trying to carry out a "continuous revolution aiming to build a strong state, even at the expense of certain liberal and democratic procedures", in the words of Jan Kubik, director of the School of Slavonic and East European Studies at University College London.

Mr Kaczynski has a penchant for grand projects. As prime minister in 2006-07 he and his late twin brother Lech, who was president when he died in a plane crash in 2010, spoke of founding a "fourth republic", to replace what they saw as the morally corrupt third Polish republic, in existence since 1989. (A large photograph of Lech bearing the words "President of the Fourth Republic" hangs in the PIS's headquarters in Warsaw.) Jaroslaw Kaczynski, who holds a doctorate in legal studies, spoke in October of the need for a "reconstruction of the state".



Some people worry that PIS could try and change the constitution, strengthening the role of the president, as set out in a draft constitution which was drawn up by the party in 2010 (but recently disappeared mysteriously from the party's website). Such a presidential system would be a "catastrophe for Polish democracy", says Mr Markowski.

Comparisons with Hungary are not unfounded. Mr Kaczynski admires Mr Orban. When PIS lost the previous general election, 2011, Mr Kaczynski said by way of self-consolation that he was "deeply convinced that the day will come when we will have Budapest in Warsaw".

That day is nigh, Polish liberals now fear. PIS's opponents are in disarray after the election. In the defeated Civic Platform, Ewa Kopacz, the outgoing prime minister, may soon face a leadership contest. The centre-left Social Democrats did not even make it into parliament, after they failed to cross the 8% threshold for coalitions. Hope may lie in a new party: Nowoczesna (literally: "Modern"), an economically and socially liberal group led by Ryszard Petru, an economist who has worked at the World Bank, which got 7.6% of the vote.

Yet although power remains concentrated round Mr Kaczynski, Law and Justice is not a monolithic party. It won by reaching out to a variety of groups, from farmers to young urban voters, and from the Catholic right to more moderate voters who were simply tired of PO.

Some are reassured by the fact that Mr Kaczynski will not take the job of prime minister himself; he is giving that job to his party colleague Beata Szydlo, in keeping with a promise he made last summer. Yet critics wonder how long it will be before he finds a pretext to take over and start trying to build a stronger state with himself at the helm. ■

Portugal's doomed government

Short-termism

LISBON

After some messy manoeuvres, there is likely to be a left-wing coalition

ANTÓNIO COSTA, leader of Portugal's Socialist Party (PS), may soon be able to tell the curious story of how to lose a vote and yet still become prime minister. After the election on October 4th, far from winning a majority as he had hoped, his PS was not even the biggest party. That title went to the centre-right alliance led by Pedro Passos Coelho, the incumbent prime minister. Many expected Mr Costa to resign as party leader.

Yet within weeks, Mr Costa expects to become prime minister of an "anti-austerity" government. This is the result of a bold—and perhaps historic—compromise between his own moderate party and the far left. Before then, Mr Passos Coelho will be sworn in as prime minister, but his minority government seems doomed from the outset to last little more than a fortnight before losing a "motion of rejection".

The demolition of what Mr Costa calls Portugal's "Berlin Wall", a 40-year ideological divide within the left, has as much to do with his instinct for survival as with any new political vision. The former mayor of Lisbon fought a knives-out battle to become PS leader last year, accusing his predecessor of failing to capitalise on the hardships inflicted on ordinary Portuguese by four years of austerity under Mr Passos Coelho. After losing the election, Mr Costa rejected the humiliating option of backing the centre-right government in return for vague concessions and instead began trying to forge an alliance that had previously been seen as impossible: between the PS, the radical Left Bloc and the hardline Portuguese Communist Party.

Although no such coalition was offered to voters before the election, the 62% share taken by the three parties (and smaller opponents of Mr Passos Coelho) represents a vote for change and for an end to austerity, argues Mr Costa. Aníbal Cavaco Silva, Portugal's conservative president, is not convinced. Constitutional precedent must prevail, the president has ruled. So he has given Mr Passos Coelho, as leader of the largest political group, the first chance to form a government, even though the combined left is poised to bring it down almost immediately. More controversially, the president has uttered dire warnings against any government that relies on support from the two far-left parties, which favour debt restructuring and are opposed to the fiscal-compact treaty's rules.

In spite of Mr Costa's guarantee that any government that he forms would respect Portugal's euro-zone commitments, Mr Cavaco Silva says that he has not seen any evidence that it would be "stable, lasting or credible". He has a point. More than 70% of voters backed mainstream parties (including the PS) that strongly favour keeping Portugal in the euro. "People are weary of austerity," comments Paulo Baldaia, director of TSF radio. "But a large majority also want the books to balance."

Mr Cavaco Silva's high-handed approach and disparaging remarks about the anti-euro left may have closed more doors than they have opened. But that does not mean, as Eurosceptics outside Portugal have concluded, that he is bent on keeping the left-wing parties out of office. If Mr Costa succeeds in sealing a pact with the two far-left parties and bringing down Mr Passos Coelho's minority government, Mr Cavaco Silva's final reluctant act, after a decade in office, is likely to be to preside over a new experiment: a left-wing coalition government, with all the economic uncertainty that might bring. ■

The 2006 football World Cup

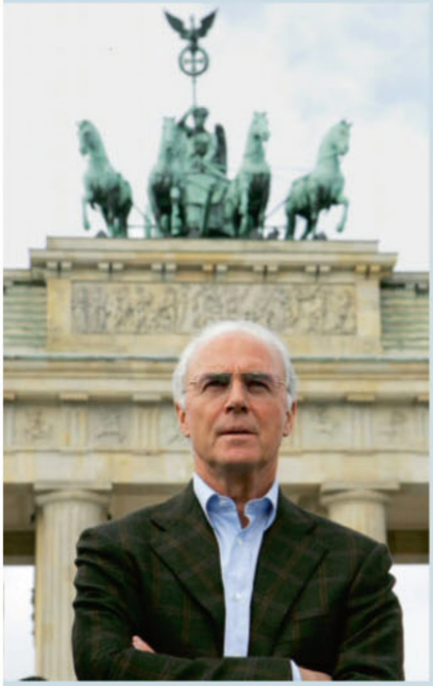
Fair play or foul?

BERLIN

Sweet memories of a contest turn sour

WHAT Pele is to Brazil, Franz Beckenbauer is to Germany. "The Kaiser", as Germans call him, so dominated German football in the 1970s that he created a new position for himself: "Libero", a free-ranging defender who planned attacks out of midfield. Mr Beckenbauer led his country to win the World Cup in 1974 as a player and in 1990 as coach. And as the boss of the relevant committee of the German Football Association (DFB), he helped Germany in 2000 to become host of the 2006 cup.

That tournament was a turning-point in modern Germany's self-image. Dubbed a "summer fairy tale", it was a month-long festival of good feelings. It was the first time since the second world war when Germans enthusiastically waved their flag without provoking bad reactions at home or abroad. Germans showed themselves to be fun, optimistic, tolerant and even (on the pitch) elegant.



Hard questions for a Kaiser

So they cringed on October 26th as they read a statement from Mr Beckenbauer about that happy tale; it was issued after his questioning by a law firm hired by the DFB. He had made a "mistake" all those years ago, he said, in agreeing to a complex and opaque tangle of financial flows between the DFB and FIFA, the sport's global governing body (which is under investigation in America for corruption involving other World Cups). But, Mr Beckenbauer averred, "no votes were bought" in 2000 when Germany beat South Africa to become the 2006 host country in the last round of voting.

Yet Mr Beckenbauer's denial won't put to rest allegations made by *Der Spiegel*, a German weekly, that a slush fund was indeed used for just that purpose. Wolfgang Niersbach, president of the DFB now and a member of Mr Beckenbauer's committee in 2000, had already denied bribery on October 22nd, but his nervous, confusing answers to follow-up questions at that press conference clarified nothing. Theo Zwanziger, his predecessor and rival, says there was a 2000 slush fund that had to be repaid in 2005.

Because some of the central figures in the events have died, the full truth may never come out. But for Germans, the suggestion of impropriety comes as the latest of several reputational blows. Scandals have in recent years dented two of their corporate bellwethers, Siemens and Deutsche Bank. Now the most iconic German brand of all, VW, is sullied after revelations that the carmaker cheated on emissions tests in America and other countries. Cheerful flag-wavers the Germans may have become. But many now fret about their traditional claims to be seen as reliable and conscientious.

Bavaria and migration

When migrants spoil the joke

PASSAU

As refugees stream in, some old inter-German rivalries resurface

BAVARIA has long taken pride in being different from other Teutonic places: warm, flamboyant and hostile to anybody who tries to incorporate the region into a bigger, centralised realm—from Charlemagne in the eighth century to Otto von Bismarck in the 19th. At certain times, including most of the past few decades, its idiosyncrasy was a harmless cultural joke; at others, it has had real political consequences. This week felt like a moment of transition from the former situation to the latter, as the migration crisis threatened to balloon out of control not just in the Balkans but in the continent's German-speaking centre.

Some hot Bavarian tempers started rising this week in the border town of Passau, a picturesque spot at the confluence of three rivers, where a hitherto orderly influx of refugees, entering from Austria, suddenly became almost unmanageable. As tents and reception centres overflowed, some newcomers from places like Syria and Afghanistan found themselves sleeping outdoors in icy temperatures: a situation that embarrassed and frustrated people on both sides of the border.

On the whole, people in Passau have been responding with generosity to the advent of migrants. Bakers work overtime to provide them with food, well-wishers have donated mountains of clothes, volunteer social workers have taken special care of the newcomers' children. But unhappiness grew in recent days when an important bridge had to be closed to bring refugees across, virtually paralysing traffic. Policemen, whether local or specially deployed, have been working 15-hour days; even well-intentioned locals wonder out loud how long the altruism can go on.

Horst Seehofer, who heads Bavaria's regional government, blames two parties. First, the irresponsible masters of neighbouring Austria, whose "behaviour [in funnelling refugees northwards] is hurting our neighbourly relations", and second, the federal government led by his notional political friend, Chancellor Angela Merkel, which should have put more pressure on the Austrians.

Mr Seehofer leads the Christian Social Union (CSU), the regionally dominant party which for decades has been yoked with Mrs Merkel's Christian Democratic Union (CDU) in a close political alliance. But there have always been differences of style between the two parties: the CSU a bit more conservative, close to its home region's Catholic roots, and given to plain speaking.

That contrast in outlooks goes back at least to the days of Franz Josef Strauss, the earthy character who before his death in 1988 was Bavaria's uncrowned king as premier for a decade and leader of the CSU for three decades. A staunch anti-communist, he was a more-or-less loyal coalition partner to Chancellor Helmut Kohl; but he used to declare, mischievously: "I don't mind who serves as chancellor under me."

Bavaria bristles

Mr Seehofer lacks Mr Strauss's larger-than-life personality but he has been appealing at least subliminally to the German south's old resentment of the country's northern masters. He deems Mrs Merkel wildly over-optimistic in her assessment of how many migrants the country can absorb. He is threatening to take the federal government to the constitutional court to challenge her policy, claiming that it violates legally binding border regulations.

More broadly, conservatively inclined Bavarians resent liberal Berliners telling them what to do when the largest share of migrants arrive in the south. When tens of thousands of refugees turned up one weekend in September at Munich's central station, they were met with flowers and gifts; since then the mood has somewhat soured. Local authorities are under huge strain. Parents grumble about school gyms being used as dormitories.

Bavaria is far from alone in such nervy reactions; Mrs Merkel faces plenty of criticism within the CDU of her generous stance towards newcomers. But when Mr Seehofer raises his voice, it evokes old inter-regional rivalries; and he has also brought up a more serious argument.

Allowing in an unlimited number of asylum-seekers, Mr Seehofer claims, will boost movements on the fringe of German politics, from the xenophobic anti-migrant protest movement known as Pegida, which holds weekly marches in Dresden, to the more cerebral Eurosceptics of the Alternative für Deutschland (AFD) party which was planning a protest meeting in Passau. The Bavarian leader's clear implication is that by taking a tougher stance against refugees, he is pre-empting the emergence of harder-line responses.

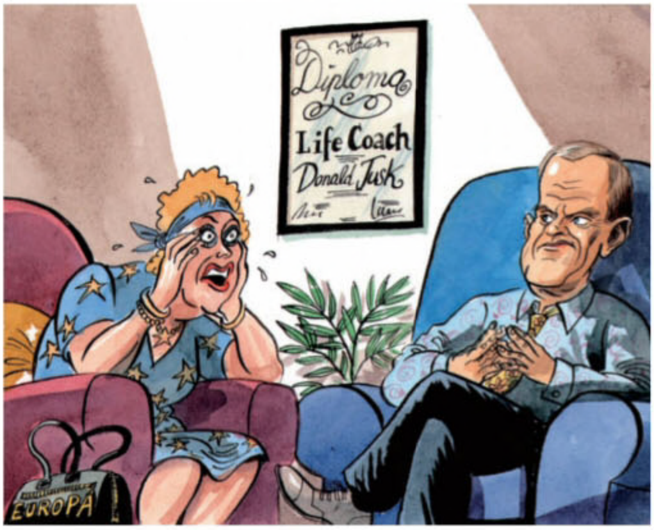
This argument chimes closely with something Mr Strauss used to say, in a tone somewhere between jest and seriousness. One of his most famous statements was that "to the right of me there is only the wall"—in other words, his sharp-tongued conservatism was as far right as one could go while still remaining respectable.

Mr Seehofer has issued a mysterious warning that if the federal authorities do not stem refugee numbers at the border with Austria by November 1st, his government will pursue "other courses of action". People wonder what he can mean. After all, Bavaria (which is bound by the constitution even though it has never ratified the document) has no power to close a border, nor is it entitled to a separate immigration policy. But it has a mind of its own. ■

Less welcome than they were

Charlemagne | A task for Tusk

Poland's former prime minister desperately seeks to ensure that Europe's centre can hold



MOVING to Brussels, says Donald Tusk, the president of the European Council, was like reaching "paradise". True, that had more to do with the abundance of Flemish masterpieces in local museums than the delights of coaxing compromise from the European Union's 28 disputatious leaders. Mr Tusk has the unenviable task of managing the European response to an endless series of crises without any real power of his own. Yet almost a year into the job he has found ways to manage, and sometimes to surpass, its limitations. As he speaks in his Brussels office, you get the sense that he might even be enjoying himself.

Few Eurocrats' eyebrows remained unraised when Mr Tusk won his appointment. Poland, the country he had run for seven years, had barely a decade's experience of EU membership and remained outside the euro, the union's signature project. Mr Tusk's abrasive style, honed in the rough-and-tumble of Poland's young democratic politics, seemed an ill fit with the consensual methods preferred in Brussels. He worked to improve his English but, some sniff, still cannot speak French.

Mr Tusk has not swayed all his critics, though their numbers are dwindling. Europe's crisis-manager-in-chief has weightier problems on his mind. He returns repeatedly to a single theme: the need to shore up Europe's liberal values against the threat from populism. This is hardly an original thought in a continent afflicted by Marine Le Pen and Viktor Orban, but Mr Tusk has his own take on it. The liberal centre must be "tough and determined", he said recently in the Netherlands, "not to become more like the right-wing populists, but to protect Europe against them."

Thus, for example, his mantra that the EU must regain control of the borders through which hundreds of thousands of refugees and other migrants have flowed this year. He has called for an end to the policy of "open doors and windows", a remark some saw as a jab at Angela Merkel, the German chancellor. If voters cannot be assured that Europe's frontiers are secure, fears Mr Tusk, then they will turn to nastier leaders. (He mentions Poland, where nationalists have just ejected Civic Platform, the centre-right party Mr Tusk founded and led to two election victories.) That will make it hard, if not impossible, to pursue the more liberal policies, such as sharing out asylum-seekers across Europe, that Mr Tusk says he backs. He notes the paradox: to preserve its openness, Europe must countenance a degree of closure.

Mr Tusk is no gentler when he discusses Britain's position in the EU. In early November David Cameron, the prime minister, will send Mr Tusk a letter outlining his requests for a "renegotiation" of Britain's membership. It will fall to Mr Tusk to seek the common ground between what Mr Cameron needs and what his 27 counterparts can accept, particularly on Britain's demands to reduce welfare payments to EU immigrants (Mr Cameron's foot-dragging could postpone serious talks until next spring, possibly pushing Britain's promised in/out referendum into 2017). Mr Tusk says that his role is clear: to help Mr Cameron keep Britain in the EU. But he worries that the process could encourage other countries to demand their own opt-outs and exemptions. For Britain to be a "role model" for everyone, he warns, would mean "the end of the EU".

Beyond the EU's borders, the limits of his power are becoming clearer. With fighting raging in Ukraine, Mr Tusk took office vowing a tough line on Russia. His opinions have not changed, but he now accepts that the EU can do little for Crimea or the Donbas. While Germany and France have taken the political lead in talking to Russia about Ukraine, the challenge for the EU, says Mr Tusk, is internal: to defy Vladimir Putin's attempts to foster division in Europe. So far the EU has held the line on sanctions (which require unanimous backing, and must soon be renewed). Passing this test, which Mr Tusk describes as Europe's first big challenge since 1989, bodes well for future crises, he says.

Perhaps the new job has mellowed the president: his happiness now rests on that of the leaders whose meetings he oversees. At a euro-zone summit Mr Tusk chaired in July, for example, it took 17 hours to find a deal that kept Greece inside the currency. This is a drastic change from his time in Poland, when, he acknowledges, he had "very limited" tolerance for political wrangling. Still, unlike the many Eurocrats who seem to have spent their whole lives in the EU's unlovely bureaucratic buildings, Mr Tusk retains a whiff of the outsider. His approach has not been to everyone's taste: he has pricked the egos of ambassadors, for example, by declining to meet them as often as his predecessor did. But most admit that he is warming to his role.

Avoiding "no more Europe"

Mr Tusk describes himself as an "obsessive pro-European" rather than a federalist. That distinction might once have been difficult to parse. Not today: the EU's problems, from the integrity of its single currency to the security of its borders, cut to the heart of national sovereignty—but they also lead irresistibly to the logic of co-operation, if not its practice.

The creation of Mr Tusk's job in the prelapsarian Lisbon treaty of 2007 was for some the first step towards a "president of Europe". That the task should now fall to one who accepts the primacy of national governments is no surprise. Mr Tusk, never having succumbed to the dream of a federal Europe, does not regret its demise. He accepts German leadership, with the caveat that "not everything that is good for Germany is good for Europe." Instead, he has set himself a humbler task: to ensure that Europe's stream of crises does not entirely wash away the old order.

Unlike the sermonisers of yore, who preached More Europe and predicted the end times for nation-states, Mr Tusk is more like a life coach, gently urging Europe's anxious leaders to find the courage to face up to hard but unavoidable challenges. Others may build Europe; he will try to keep it from falling apart. ■

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The federal budget

Cleaning the barn

WASHINGTON, DC

A budget deal keeps the incoming Speaker out of the mire—for now

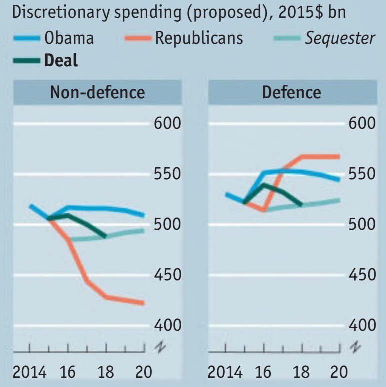
AMERICAN budget showdowns usually follow a familiar pattern. Confrontational rhetoric blazes in the run-up to a deadline to avert some crisis—either a government shutdown, or a default on debt—with Democrats and Republicans each blaming the other's intransigence for a lack of progress. Then, at the last minute, a narrow agreement is reached to avoid disaster—at least, for a few months. This drama played out as recently as September. It was a surprise, then, when on October 26th President Barack Obama and John Boehner, the outgoing Speaker of the House, struck a deal to suspend the debt ceiling, a limit on government borrowing, a full week before the deadline. Still more surprising, the deal was wide-ranging, covering not just the debt ceiling but also spending limits for 2016 and 2017—numbers which did not have to be settled until December, at the earliest.

That the debt ceiling was suspended was not itself a shock; the alternative was catastrophe. The government was poised to exhaust its funds—and its accounting manoeuvres—on November 3rd. That would have led to a chaotic default on its obligations, either to bondholders or to welfare recipients. Markets never really doubted that Congress would come to its senses. It has turned back from the cliff-edge several times in the past five years.

A budget deal was also necessary before the new year to stop dramatic spending cuts. In 2011, after an earlier showdown, Congress planned almost a decade of deep and indiscriminate cuts—the so-called "sequester"—which could be averted only by passing a more palatable plan to bring down America's federal deficit. (In 2015, borrowing is likely to be a tolerable 2.5% of GDP, though it faces upward pressure in future from an ageing population.) The sequester was designed to be so painful that it would force a long-term deal, but no agreement was reached. A sticking-plaster bill in 2013, devised by Paul Ryan, now the incoming Speaker, and Patty Murray, a Democratic senator, blunted the sequester for two years. But the cuts were to make a

Neatly done for now

Discretionary spending (proposed), 2015$ bn



Sources: Congress; White House; CBO; *The Economist*

sharp comeback in 2016. Mr Obama decried the prospect of further "mindless austerity", while hawks lamented a real-terms cut of 1.5% in the defence budget.

The early timing of the deal sprang from the Republicans' tumultuous internal politics. Mr Boehner, having abandoned his long battle with his party's truculent right-wingers and announced his resignation in September, wanted to "clear the barn" for his successor. This agreement, like several of Mr Boehner's deals before it, was slammed by the party's right-wing. Ted Cruz, a firebrand candidate for president, described it as "a slap in the face to conservatives". Mr Ryan, who would certainly have struck a similar bargain himself, has been spared this revolt early in his tenure. As it was, he muttered from the sidelines that the secretive goings-on behind such deals "stink".

There may be something to conservative complaints. The deal looks like a win for Mr Obama. If passed by the Senate—which looked likely as *The Economist* went to press—it will spare the president further battles with Congress over the debt ceiling, which has been lifted until March 2017. That may reflect a desire on the part of Mr Boehner to keep his party from embarrassment in a presidential election year; in the past, voters have tended to blame Congress, not the White House, for gridlock.

More significant, the budgets agreed for 2016 and 2017 are closer to Mr Obama's proposal than that of Congress (see charts). Spending will be $50 billion higher in 2016, and $30 billion higher in 2017, than the sequester allowed. That relief is spread equally between defence and non-defence spending, with defence getting a further boost from an off-budget war fund. Republicans, by contrast, wanted to keep the sequester in place for 2016 and then cut non-defence spending dramatically. Democrats ▸▸

will also rejoice at a rescue of the Social Security disability fund, and the avoidance of steep premium increases for some recipients of Medicare (federal health insurance for over-65s).

The deal's revenue-raising parts are mostly unconvincing. Deeper cuts are promised in future by extending the life of parts of the sequester by one more year, to 2025. Mr Ryan's deal in 2013 pulled off a similar trick; budget hawks complain that such postponements could go on indefinitely. The deal also authorises the sale of 58m barrels of oil from the strategic petroleum reserve, a fuel stockpile, between 2018 and 2025. Reducing these reserves—a relic of the 1970s oil shortage—makes sense, now that there is plenty of shale oil around. But the sales will flatter the deficit numbers, as they cannot go on for ever.

One aspect of the agreement is sure to please conservatives: the repeal of part of the Affordable Care Act, better known as Obamacare, which Congress spends much of its time trying to gut. Firms with more than 200 employees who offer health insurance to at least one worker will no longer automatically have to enrol new staff into a plan, too. The Congressional Budget Office reckons this saves about $8 billion over a decade, mainly because what workers do not receive in health insurance, they will instead get in wages, which are taxable. In the context of the new spending, though, this is a tweak.

The deal is a relief. But it is yet another stopgap, for both Mr Ryan and the public finances. The incoming Speaker cannot be spared from toxic congressional politics for ever, especially if a Democrat is elected president in 2016. And America's real fiscal problem is swelling entitlement spending as the population ages in the coming decades. The deal does little about that. Sooner or later, Mr Ryan will need to get his hands dirty. ■

Politics in Kentucky

The outsider

BEREA, LEXINGTON AND LOUISVILLE, KENTUCKY

A governor's race encapsulates the advantages and drawbacks of political novices

SELF-MADE businessman, army veteran, father of nine: on paper Matt Bevin, the Republican candidate in the election for governor of Kentucky on November 3rd, looks ideal. In the flesh, too, he has strengths, telling rousing stories about his impoverished childhood (albeit in New Hampshire) where, at the age of six, he sold packets of seeds for a quarter to pay for summer camp. In this cantankerous age, and in his pitch, Mr Bevin's main asset is what he has not done: held political office. By contrast Jack Conway, his Democratic opponent, has served two terms as the state's attorney-general and—as one insider observes of his sometimes turgid remarks—may know too much about government. Where Mr Bevin lists the firms he has revitalised, Mr Conway tallies his legislative successes. At a Republican pep talk in the town of Berea on October 26th, a supporter pertinently asked Mr Bevin: "Can I put your bumper-ticker across from the [Donald] Trump sticker on my truck?"

Yet quick and witty as he is on the stump, Mr Bevin can be less personable with adversaries and critics, including some in his party. That he hasn't held office is not for want of trying: he rashly challenged Mitch McConnell, the Senate majority leader, in a bitter if lopsided primary fight last year. Mr Bevin describes the campaign against him then as "$20m of blowtorch to the face", much of which is now being recycled by the Democrats. In remarks he says were misconstrued, he seemed to slight Rand Paul, Kentucky's other senator (whom Mr Conway challenged in 2010), by praising Ben Carson, a rival for the Republican presidential nomination. He has seemed inconsistent on other issues, too, "flipp[ing] around like a bass on the end of a fishing line", Mr Conway told a union audience in Louisville on October 27th. Mr Bevin denies reports that he shouted at a receptionist at the Democrats' HQ, but his hostility to Mr Conway can seem intemperate. In their final televised debate, Mr Conway praised Mr Bevin's adoption of four Ethiopian children; Mr Bevin couldn't think of anything nice to say about Mr Conway.

And, while he acknowledges that politics is "a whole other culture", like other entrepreneur-insurgents Mr Bevin seems to place too much faith in the methods and blessings of business. These shortcomings threaten to neutralise his novelty value and his other main advantage: the toxicity of Barack Obama and all his works. As a result, of the three governor's races this year, Kentucky's is the most competitive. In Mississippi, the token Democratic contender is a truck driver who may partly have won the party's desultory primary because his name appeared first on the ballot. Meanwhile, in Louisiana's non-partisan "jungle" primary, Senator David Vitter (as expected) saw off two fellow Republicans and the ghost of a prostitution scandal to claim a spot in the run-off on November 21st.

Kentucky's race is also the most revealing. For the Republicans, Mr Bevin represents their only prospect of gaining a governor. For the Democrats, retaining the governorship would help to demonstrate that they can compete in the south (Kentucky's House of Representatives is the sole southern legislative chamber they control). At the same time the race will show whether some voters, at least, remain able to make different, discerning choices in state and federal elections—a phenomenon that has waned as American politics has become rancorously polarised. And it is usefully testing the electoral viability of maverick outsiders.

Kentucky is a rural, religious place. Mr Conway has faced criticism for declining,

Bevin tries his softer side

as attorney-general, to appeal against a court ruling overturning the state's ban on same-sex marriage—a prudent decision, it turned out, since the incumbent governor, Steve Beshear, appealed anyway and lost. Mr Conway's best day in the campaign, reckons Al Cross of the University of Kentucky, was when Kim Davis, a local county clerk dramatically if briefly jailed for defying a judge over gay marriage, was released. Moreover, along with the usual gripes against Mr Obama, Kentuckians, especially in the Appalachian east, are cross about the impact of environmental rules on coal-mining (even if, in truth, market forces are a bigger factor in its travails). All this implies that, in this election, they will emulate Ms Davis's recent defection from the Democrats to the Republicans.

But Kentucky is also a poor state; and for all their distaste for the president, its voters have been among the leading beneficiaries of Obamacare, with one of the country's sharpest declines in the proportion of uninsured citizens. (Explaining that discrepancy, Mr Conway says that "We like our Democrats Kentucky-fried," ie, conservative and industry-friendly.) Mr Bevin thinks the state's health-care arrangements are too generous and unaffordable. He would revise them, getting more people to contribute to the cost of care. For him more jobs—secured by cutting regulation—are the solution to most ills.

Mr Beshear, the savvy outgoing governor, navigated these cross-currents to win two terms. Mr Conway is a less tactile politician. Still, if Mr Bevin scares enough Democrats to the polls—and if his spikiness keeps enough Republicans at home—this particular outsider will stay out. ■

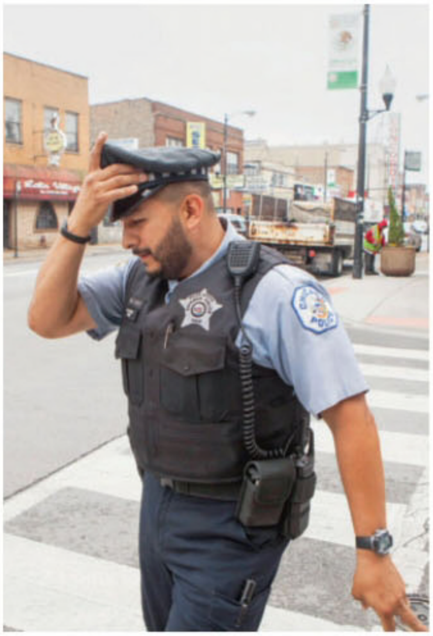
Policing

Paralysed by YouTube

CHICAGO

Police chiefs at their annual gathering feel besieged and frustrated

A WALK around the many stands in one of the halls of McCormick Place, a gigantic convention centre in Chicago, during the annual conference of the International Association of Chiefs of Police (IACP), showed how the debate on policing has changed in America. The Peerless Handcuff Company was still hawking its wares, as was Peacekeeper, which sells batons and lets prospective customers bash "Numb John XT", a dummy, to try them out. But the buzz, helped by a cohort of forceful public-relations executives, was around vendors of body cameras, data collection and information-sharing technologies with snazzy names such as Vievu, BodyWorn or SceneDoc.



Are you filming me?

Cops in America have had a tough year. Videos of perceived or real police brutality have gone viral at regular intervals, causing loud public outcry and leading to demands that all police officers should wear body cameras. These troubles are not going away. Violent crime is on the rise in nearly all big cities, and the level of trust between police and the public, and minority communities in particular, is at an all-time low. In Milwaukee, a genteel mid-western town, 104 people have been murdered in the first eight months of the year, more than the 86 who died in the whole of 2014. St Louis reported a 60% rise in killings over the same period. And in Chicago six people were killed and 28 wounded over just the weekend before the conference.

Hence heated discussions there about the reasons for the sudden increase in violent crime and the tense relationship between the police and civilians. In a speech on October 26th James Comey, the boss of the FBI, said he had no conclusive answer. But "something has changed in policing", he said. Officers feel besieged by videos of arrests and other procedures proliferating on YouTube, a video-sharing website. Cops get taunted by youths holding up their iPhones. Sometimes they just don't want to get out of their cars any more to ask a group of young men why they are standing around on a dark street corner at one in the morning. It feels too risky.

Mr Comey seemed to be saying that police officers cannot do their job properly if they are under constant scrutiny. This implies that they sometimes need to act in ways that seem brutal or unfair in order to be effective. Similar views have been heard from Chicago's mayor, Rahm Emanuel, who said recently that worries about being filmed had prompted police in Chicago and across the country to become "fetal" and shy away from tangling with suspects. Some crime experts disagree. "It's overly simplistic to blame YouTube," says Brett Goldstein, a former officer who now teaches at the University of Chicago. He thinks that just as no-one could find a good reason for the decrease in crime—over the past 25 years crime rates have fallen almost by half—there is now no one reason to explain its rise. Crime rates are driven by all kinds of trends and events, from shifting gang dynamics and the spread of cheap heroin to a sudden change in the weather.

Barack Obama, the first president in more than 20 years to speak at the conference, also indirectly cast doubt on a link between viral videos and the rise of violent crime. He rejected the divisive notion of "us v them", communities against the police. He also promised to ensure proper funding for policing, to continue his fight for reform of the criminal-justice system—in particular striving to reduce the high rate of incarceration—and to back officers' demands for universal background checks on gun-buyers. But he also warned that law enforcement was not always done fairly, and that racial bias existed in the system. Before he had a motorcade, he said, he was sometimes pulled over by police on the road for no apparent reason. And he rejected as a "false choice" any trade-off between fairness and effective policing.

Mr Obama started his speech by mentioning Randolph Holder, a New York policeman recently killed while in pursuit of a gunman. Mr Holder was black, a dedicated member of the New York Police Department (NYPD), which has had a tougher year than many other forces. In December last year a deranged man shot and killed two officers, as they sat in their car eating lunch, in apparent revenge for the death of Eric Garner, a black man who died while being arrested with a chokehold.

Morale among the NYPD's rank and file was already low. In an internal survey of the department in 2014, around 70% of respondents said that fear of being sued held them back from intervening to curb criminal activity on the streets. Many of the 35,000-strong force said they felt ill-prepared and undervalued. Since then New York has unveiled a community-policing plan, improved officer training and revised their Bible, the Patrol Guide, to say what they may do as well as what they may not.

Police chiefs left Chicago buoyed by the president's thanks. Mr Obama affirmed that officers risk their lives in the line of duty, and that Mr Holder "ran toward danger because he was a cop". But alongside that, chiefs will have to convey to their underlings the need to rebuild trust with minority groups. As Mr Obama said, the impression that some police are racially biased "does not come out of nowhere". ■

The value of university

Where's best?

PHILADELPHIA AND LOS ANGELES

New federal data reveal which colleges do most for their graduates' pay-packets. They are not the ones you might expect

AS THE deadline looms on November 1st for the first round of college applications, America's annual admissions hysteria is reaching its peak. It is the first big financial decision young people make, and arguably the most important. The Pew Research Centre finds that employed college graduates aged 25-32 earn 63% more than those with only high-school degrees. But such returns come with ever-greater financial risk: since 1978, tuition fees have risen three times as fast as inflation.

College is still thought to be the best investment in America. But that view is based on broad averages, which obscure the differences among the country's 7,800 higher-education institutions. Sadly for economists, students are not assigned to colleges randomly, which makes it difficult to determine which schools are worth the cost. Are Harvard graduates rich because they went to Harvard, or would such bright young things have succeeded regardless of where they studied?

This information void has severe consequences. American colleges are churning out more degrees than ever, but their graduates do not seem to have the skills employers want. Since July 2009, growth in job openings has greatly outpaced the increase in new hires, suggesting that firms are struggling to find the right workers. And real hourly wages for recent graduates have actually fallen since 2000, showing that higher education in America today is no cure-all for the pressures of globalisation and automation.

For individuals, uncertainty about the value of specific colleges can be ruinous. Some for-profit institutions spend as much as $100m a year on advertising. Lured by vague claims that are impossible to refute, students at underperforming universities finance their tuition with pricey government loans which, even if they go bust, they still have to pay back.

Barack Obama has tried to crack down on bottom-feeding colleges. In 2013 he unveiled plans to create national ratings and to withhold public funds from institutions that flunked. Universities protested at the reduction of their mission to a single number—as one official told college presidents, "It's like rating a blender." The rankings project now appears dormant. However, on September 12th the Department of Education unveiled a "scorecard" website with the data it would have used to produce the ratings, compiled by matching student-loan files to subsequent tax returns.

The new longitudinal numbers have serious flaws. They list salaries only for ten years after students enter college—too short a span to capture a lifelong earnings trajectory, yet too far in the past to give an accurate picture of universities in 2015. They cover only students who got federal financial aid, excluding those from most well-off families. And they do not distinguish people who choose not to work from those who cannot find a job. Yet they still offer precious data for students who want to know which college to go to, and why.

Get thee to a pharmacy

For readers used to rankings dominated by Harvard, Yale and Princeton, sorting the scorecard by median earnings of employed graduates a decade after enrolment may cause mild disorientation. Three institutions are $20,000 a year above the rest of the pack, and few people have heard of them. That is because they train pharmacists: the Massachusetts, St Louis and Albany Colleges of Pharmacy. Many other colleges with unexpectedly high alumni salaries, like the University of the Pacific in California, also offer pharmacy degrees.

The list

Earnings of American college graduates*, $'000

Ranked by performance beyond expectations

	Earnings expected	Earnings median†	Performance over/under
Highest			
Washington & Lee (VA)	55.3	77.6	22.3
Babson (MA)	66.6	85.5	18.9
Villanova (PA)	60.2	73.7	13.5
Harvard (MA)	74.0	87.2	13.2
Otis Col. Art & Design (CA)	28.9	42.0	13.1
Lehigh (PA)	64.6	76.8	12.2
Texas A & M Int. (TX)	33.6	45.2	11.6
Bentley (MA)	63.6	74.9	11.4
Cal. State - Bakersfield (CA)	37.0	48.1	11.1
Penn State - Schuylkill (PA)	36.4	47.5	11.0
Lowest			
Swarthmore (PA)	58.4	49.4	9.0
Wheaton (IL)	51.7	42.6	9.1
Ohio State (OH)	51.9	42.6	9.3
Yale (CT)	75.8	66.0	9.8
Rice (TX)	69.7	59.9	9.8
American Inst. of Bus. (IA)	47.3	37.2	10.1
Johnson & Wales (RI)	45.5	35.1	10.4
Earlham (IN)	43.0	32.3	10.7
St John's (MD)	48.3	34.3	14.0
Cooper Union (NY)	69.7	53.7	16.0

Sources: US Dept. of Education; *The Economist*

*Students from 1,308 colleges, who applied for federal aid; excluding vocational colleges †2011

Interactive: See the full rankings and methodology at Economist.com/collegevalue

The scorecard's age limit stacks the deck in the pharmacists' favour: whereas 28-year-old surgeons are poorly paid hospital residents, 28-year-old pharmacists are near their peak earning potential. Nonetheless, filling prescriptions behind a drug-store counter is perhaps the safest route to the upper middle class in America today. Pharmacy schools take nearly all comers—MCPHS, in Boston, accepted 89% of applicants last year—and offer nearly guaranteed six-figure wages within a few years.

Another lucrative, little-known group are the maritime colleges, which train engineers for careers in the navy, shipping and energy. They combine rigorous maths with a militaristic lifestyle and hands-on machine work: at SUNY Maritime in New York, "cadets" spend at least 50 days each summer on a freight ship. The college accepts two-thirds of candidates, yet its alumni on the scorecard earned higher salaries than those of Caltech, which admits just 9%.

After excluding trade and vocational colleges like these, two vaunted names, MIT and Harvard, rise to the top of the earnings rankings. Yet most students who get into such places end up well-paid no matter what. Two economists, Alan Krueger and Stacy Dale, have found that graduates of selective universities do not out-earn those who were accepted by the same colleges but chose a "lesser" institution. To measure a university's economic value, you need to compare the salaries of its graduates with the wages they might have earned had they studied elsewhere.

That figure cannot be known for sure, but the scorecard makes it possible to produce an estimate. *The Economist* has built a model that, for each of 1,308 colleges, predicts the median earnings in 2011 of employed former students who applied for federal loans in 2001, based on the characteristics of each institution and its intake. The model both identifies the attributes shared by universities that produce lots of rich graduates, and predicts alumni wages for each college. Actual earnings can then be assessed against this benchmark.

The best predictor of the salaries a college's graduates will earn is previous academic achievement, as measured by results on the SAT aptitude test. The exam is scaled from 400-1,600, but aggregate scores for colleges range from around 700 to 1,500, because they are averages of hundreds of individual marks. All else being equal, workers who attended an institution with average scores of 1,210, the 90th percentile among colleges, make $11,700 more per year than those from universities in the 10th percentile (920). However, most of the rewards accrue only to tip-top performers. The gap in alumni earnings between colleges in the 99th percentile of SAT scores (1,415) and the 99.9th (1,485) is $4,600 a year, as big as the gap between the ▸▸

first percentile (800) and the 20th (962).

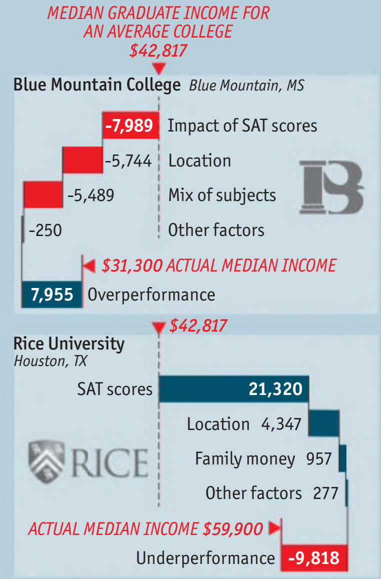
The next-most-important factor is the field of study. For all the hype over STEM (science, technology, engineering and maths), only colleges packed with engineers and computer scientists tend to have unusually rich graduates. Alumni of institutions with lots of majors in maths or physical sciences, and few engineers, do not tend to outperform financially. But universities that are strong in engineering provide similar economic returns to those of pharmacy or maritime colleges. Although many are selective, a handful, such as Capitol Technology University outside Washington, DC, accept a majority of applicants while still delivering top-decile salaries.

The other field of study that boosts salaries is business. Although it is no guarantee of wealth, the more business students a university has, the more money its alumni make. Two Boston-area business colleges stand out: median earnings at Babson, which requires undergraduates to start a company, trailed only MIT and Harvard among non-vocational places, while Bentley boasted the best mark among colleges with SAT scores below 1,150. For students who want a broader curriculum, Villanova, which accepts half its applicants, has mandatory courses on professional development, close ties to big accounting firms and top-tier graduate salaries. "Jobs are what you get for your money at Villanova," says Patrick Maggitti, the provost.

As for subjects to avoid, aggregate results from colleges do not back up warnings about studying the humanities. Graduates from colleges with lots of majors in English (such as SUNY-Albany in New York) or history (like Hampden-Sydney, in Virginia) do not earn anomalously low salaries. However, religious and art schools dominate the bottom rungs of the earnings table. Although a handful offer good value—the Otis College of Art and Design in Los Angeles, for example, feeds graduates to toy companies, fashion brands and film studios—borrowing money to attend Bible or art institutions is usually a bad idea.

The same caveat applies to elite liberal-arts colleges (LACs), known for their focus on teaching undergraduates, whose alumni make less money than those of similarly highly rated research universities. This pattern may not stem from employer bias against graduates of LACs, but rather from the aversion of those graduates to Wall Street: the *Princeton Review*'s top-20 lists for political leftism and "reefer madness", a who's-who of economic underperformers, are filled with LACs. At Warren Wilson College in North Carolina, for example, students run a farm and garden, and flock to majors in environmental science and creative writing; its median earnings are just $25,500. Then again, even students who were set on Goldman Sachs at 18 might opt for the Peace Corps after spending four years absorbing the works of Karl Marx and Bob Marley at a LAC.

A tale of two colleges
2001-11, $



Sources: US Department of Education; *The Economist*

You might expect graduating students to migrate towards the best job opportunities. However, the data show that where undergraduates study matters as much as what they study. Both the state a college sits in, and its nearest city, are relevant: the former reflects the area to which alumni can easily move, and the latter the strength of a university's ties with local employers. The importance of place is hard to overstate: moving a college from rural Mississippi to San Francisco would increase its graduates' expected earnings by $14,800.

Demography makes up most of the remainder of the model. Predictably, colleges with more men and students with rich parents tend to have higher alumni wages. Less intuitively, Catholic colleges do better than average, and Protestant ones worse—a reversal of Max Weber's thesis about the "Protestant ethic" underlying the "spirit of capitalism". And in a reflection of America's rainbow future, graduates of diverse research universities—those with an even split of higher- (white and Asian-American) and lower-earning racial groups—tend to outperform both black colleges and lily-white ones. Mixing with many races appears to be good for the wallet.

Just give me the damn rankings

Together, these factors explain the vast majority of the gaps between colleges' alumni earnings. However, outliers remain where graduate salaries diverge from expectations. Ordering institutions by how well they transform their "raw material" (students and site) into "finished products" (workers), the top performer is Washington & Lee (W&L), whose median earnings of $77,600 exceed the model's forecast by $22,000. It is perhaps the country's least left-wing LAC: the Lee in its name is the Confederate general, and it flew the Confederate flag until last year. It has America's highest share of male students in fraternities, and ranks near the bottom in receiving federal Pell grants, given to children from poor families. W&L organises regular trips to New York from its home in rural Virginia, so that students can be interviewed at banks and professional firms. No other college combines the intimate academic setting and broad curriculum of a LAC with a potent old-boy network.

Among selective universities, the median salary of Harvard graduates ($87,200) beats the model's already lofty expectation by $13,000 a year, and the University of Pennsylvania outperforms it by $10,000. However, elite colleges with merely above-average earnings pepper the bottom of the rankings. The most surprising is Yale, which comes third in the popular *US News* rankings but seventh from the bottom by this measure. Yale's students are statistically identical to their Harvard counterparts. Yet its alumni made "just" $66,000 a year—$4,000 less than those of Lafayette College in Easton, Pennsylvania. Another laggard is Pomona, a LAC in Los Angeles ranked by *Forbes* as America's best college.

Harvard students may well be more career-driven than cerebral Yalies. And acquisitive applicants might pass over Pomona—whose president, David Oxtoby, says its students focus "on changing the world, affecting people's lives, and having a fulfilling career [more than] on being compensated for that work"—for its sister colleges, which focus on STEM (Harvey Mudd) and economics (Claremont McKenna). Still, gaps this big are hard to explain away.

Perhaps the most useful piece of data in the scorecard, however, is the list of institutions that lift disadvantaged students into the middle class. Many of them funnel graduates into union-friendly public-sector jobs. For example, Texas A&M International University sits on the Mexican border in Laredo, America's third-poorest metropolitan area. Its students are 90% Hispanic, and have bottom-tier SAT scores. Nonetheless, its listed median earnings are $45,000 a year—slightly above the national average, and precisely equal to the current first-year salary for teachers in the local school district, a frequent employer of the college's graduates. Another outperformer is Pennsylvania State University's Schuylkill campus, which accepts 81% of applicants. Its administration-of-justice programme offers internships with state police and feeds job candidates to the FBI.

The moral? State governments could make few better investments than expanding these overperforming public universities. That would put even more of their students on the path to upward mobility. ■

Lexington | A city that wants more refugees

Hardscrabble Baltimore finds that kindness brings its own rewards

IN COMMON with colleagues across the rich world, the mayor of Baltimore, Stephanie Rawlings-Blake, worries about refugees sent to her city by federal officials—a quota that this year, for the first time, may include hundreds of Syrians. Less typically, a big anxiety for Ms Rawlings-Blake is that too few refugees will settle in her home town.

Baltimore, a once-thriving port and factory town, has lost a third of its population since 1950, dropping to about 622,000 souls. Like other north-eastern cities, it has grappled with economic decline, shrinking tax rolls and the toxic legacy of race laws which corralled black residents in districts blighted by bad schools and crime. Urban-renewal projects have brought tourists and professionals back to some districts after decades of white flight. But one of Ms Rawlings-Blake's favourite projects—to attract 10,000 new families to Baltimore—remains a far-off dream.

For more than a decade, Maryland's largest city has been used as an entry point for refugees, with federal agencies led by the State Department sending 700-800 there each recent year from such troubled places as Nepal, Iraq and Eritrea. About two-thirds moved on after a few years, guided by networks of relatives and compatriots who built lives in other places. The mayor wants more to stay put. In September she joined 17 other mayors in commending President Barack Obama for his decision to admit at least 10,000 Syrian refugees next year (up from fewer than 2,000 this year), and urged him to accept still more. She makes clear that welcoming outsiders is more than a question of charity. Refugees are an exceptionally "resilient" bunch. "They want a better life for them and their children, and they are willing to work for it," the mayor says.

In 2014 Ms Rawlings-Blake set up a Mayor's Office of Immigrant and Multicultural Affairs, with the clout to rescue incomers from bureaucratic mazes: for instance, by telling city agencies that refugees may have good reasons to lack a birth certificate. The city offers refugees special help with job training. This year the International Rescue Committee (IRC), a charity paid by the government to help refugees settle in 26 American cities, launched a scheme to help clients buy homes in Baltimore.

Adote Akwei, a human-rights activist from Togo who sought asylum in 2005, was one of the IRC's first homebuyers. Mr Akwei is a human dynamo. After years driving a taxi he is writing children's books, working for a programme that teaches immigrants about recycling rubbish, and setting up a community group to improve relations between black Americans and African incomers. He has a patent pending on a new school-crossing sign (it boasts lights and a buzzer). To find his new home—which lies on a quiet street in the gritty Frankford neighbourhood—Mr Akwei took free bus tours laid on by City Hall, designed to show would-be residents overlooked corners of Baltimore. The city offered a grant towards his deposit, as it does to all qualifying incomers who promise to stay for at least five years. After Mr Akwei showed a record of saving money, the IRC, with funding from business and charitable foundations, offered a separate grant towards his transaction costs, as well as financial-literacy lessons.

In all, Mr Akwei received $16,000 to help buy his house, for which he paid $155,000. But cash is not the main lure for refugees who reach America. The great gift is the immediate right to work, followed by a legal pathway to permanent residency and eventually citizenship. Actual welfare payments are small: a single adult refugee coming to Baltimore may receive $1,125 from the federal government on arrival, then short-term state benefits of $288 a month. Those benefits, which include temporary health insurance, mostly stop after eight months. Refugees are even asked to repay loans covering their travel to America.

The message is "hammered home" that refugees must find jobs and pay their bills, says Ruben Chandrasekar, head of the IRC's Baltimore office. Few need telling. Refugees "know what it is like to lose a home", so rent is the first bill they pay, he notes. They "penny pinch" to build up savings. Much talent goes to waste: refugees with advanced degrees work as car-park attendants or wheelchair-pushers at Baltimore airport. But still the city has much to offer. Houses are cheaper than in Washington, an hour to the south. Unlike many suburbs, the city offers public transport and a diverse population. Such diversity is an economic boon as well as a comfort, providing niche markets for small businesses. Baltimore is now home to Nepalese grocery shops and to a car service that takes Darfuri refugees to work.

Silencing the scaremongers

This is not to paint America as a paradise for asylum-seekers. The country has accepted just 70,000 refugees annually in recent years. To put that in perspective, 1.5m refugees may reach Germany this year. Nor is America's welcome uniform. If many Europeans fret about sharing generous welfare systems, lots of Americans fear infiltration by terrorists. Some conservative states, such as South Carolina, have seen angry public meetings about Syrian refugees in towns that have received none.

A trophy for scaremongering goes to Donald Trump, the businessman and Republican presidential candidate. If elected, he promises to expel all Syrian refugees in case Islamic extremists lurk in their midst, suggesting that asylum-seekers may be "the greatest Trojan horse of all time". In fact, refugees are screened by several intelligence and security agencies for 18 months or more. David Miliband, a former British foreign secretary who heads the IRC, jokes that securing refugee status is the most arduous route to America that does not involve swimming the Atlantic.

Baltimore and other post-industrial cities cannot absorb every would-be refugee. Yet such hardscrabble places show that welcoming outsiders is not just a question of kindness. Done right, offering a haven can be an act of enlightened self-interest. ■

The Economist

SPECIAL REPORT
COLOMBIA
October 31st 2015

Halfway to success

The promise of peace

Colombia is close to a historic peace agreement that will transform its prospects. But to realise its full potential, it will need to make big changes, argues Michael Reid

LIKE MUCH ELSE in the Colombia of President Juan Manuel Santos, the ceremony on September 23rd started late, by an hour and 37 minutes. But it was worth waiting for. Negotiators from the government and the FARC guerrillas unveiled an agreement on the thorniest issue they had had to resolve: transitional justice, or what sort of penalties the perpetrators of crimes against humanity in Colombia's long armed conflict should face.

This breakthrough has opened the way to a swift conclusion of the peace talks in Cuba that began three years ago. Shortly before the ceremony in Havana Mr Santos had his first official meeting with Rodrigo Londoño, better known to Colombians as "Timochenko", the FARC's top commander (this report will use the guerrillas' *noms de guerre*). The two pledged to sign a final agreement within six months, and the FARC undertook to start disarming within 60 days after that. Despite some subsequent bickering, these deadlines look plausible.

Mr Santos (pictured above, left) was visibly uncomfortable when Raúl Castro, Cuba's president, encouraged him to shake hands with Timochenko in front of the cameras. Colombians see the FARC as narco-terrorists who bomb, kidnap and extort. Mr Santos knows that many of his countrymen will be angered by an agreement that will allow most FARC commanders to escape going to jail. But he also knows that peace represents a huge prize for Colombia. And because the FARC will be held to account for their crimes in the country's own courts, the agreement will offer a potential model for other conflict-ridden countries.

Colombia's armed conflict has been remarkably bloody, complicated and long-running. According to the National Centre for Historical Memory, a public body set up by Mr Santos in 2011, between 1958 and 2012 around 220,000 people died as a result of the clash between guerrillas, right-wing paramilitary groups and security forces. Of these about 80% were civilians. The conflict also facilitated a surge in criminal violence (see chart, next page). And violence, or the fear of it, dislodged some

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ACKNOWLEDGMENTS
Besides those mentioned in the text, and some who prefer to remain anonymous, the author would like to express particular thanks for their help to Luis Fernando Andrade, Álvaro Balcázar and Antonio Celia, as well as to Héctor Abad Faciolince, Carlos Enrique Cavalier, Fernando Cepeda, Javier Ciurlizza, Juan Fernando Cristo, Ivan Duque, Carlos Lozano, Alfonso Gómez Méndez, Maria Claudia Lacouture, Rodrigo Pardo, Jorge Restrepo, Enrique Santos Calderón, Miguel Silva, Rodrigo Uprimny and José Dario Uribe.

A list of sources is at **Economist.com/specialreports**

An audio interview with the author is at **Economist.com/audiovideo/specialreports**

6m Colombians from their homes, mainly in the countryside.

Over and above the saving in human life, Mr Santos has said that peace, together with his infrastructure programme, could add more than two percentage points a year to his country's economic growth rate from 2018. In 2014 the economy grew by 4.6%. In a more cautious assessment last year Francisco Rodríguez, an economist at Bank of America, put the boost to growth at only 0.3 percentage points. Whatever the precise figure, peace should help Colombia realise its considerable potential in many fields. So the stakes in Havana could hardly be higher.

The breakthrough in September followed a near-collapse in the talks earlier in the year. In April a FARC column broke a unilateral ceasefire, ambushing an army platoon, killing 11 soldiers and setting off two months of tit-for-tat attacks. That, and the lack of progress with the talks, prompted Humberto de la Calle, the government's chief negotiator, to warn the FARC in July that "one day they could well find that we are not at the table."

This served to concentrate the FARC leaders' minds, but the attack undermined public confidence in the president and the talks. At the start of the negotiations in October 2012 the president had said he hoped for an agreement "within months". In a national poll published in May Mr Santos's approval rating fell to 29%, and 69% of respondents expressed doubt that the negotiations would succeed.

In some ways Colombians' pessimism is surprising. Much of the country has already benefited from a steep reduction in violence and crime in the past 15 years. The FARC's unilateral ceasefire, resumed in July—and matched by government "de-escalation"—has brought down conflict-related violence to the lowest level since 1975, according to CERAC, a think-tank in Bogotá.

It does not help that the economy has slowed sharply after a dozen years when incomes rose by 7% annually in dollar terms, the peso has depreciated steeply and the fall in the oil price has knocked a big hole in government revenues.

Exceptional violence

With almost 50m people, Colombia is Latin America's third most populous country, after Brazil and Mexico. In many ways it is exceptional. It claims to be Latin America's oldest democracy, with just one four-year military dictatorship in the 20th century. Geography put strong barriers in the way of its development: the Andes split into three chains there, with two long valleys between them; the country's Pacific coast is one of the wettest places on Earth; to the south-east, almost half the total area is made up of the *llanos* (remote tropical lowlands) and a corner of the Amazon rainforest. The state has never been able to control or integrate such difficult territory and its people developed a deep mistrust of strong government.

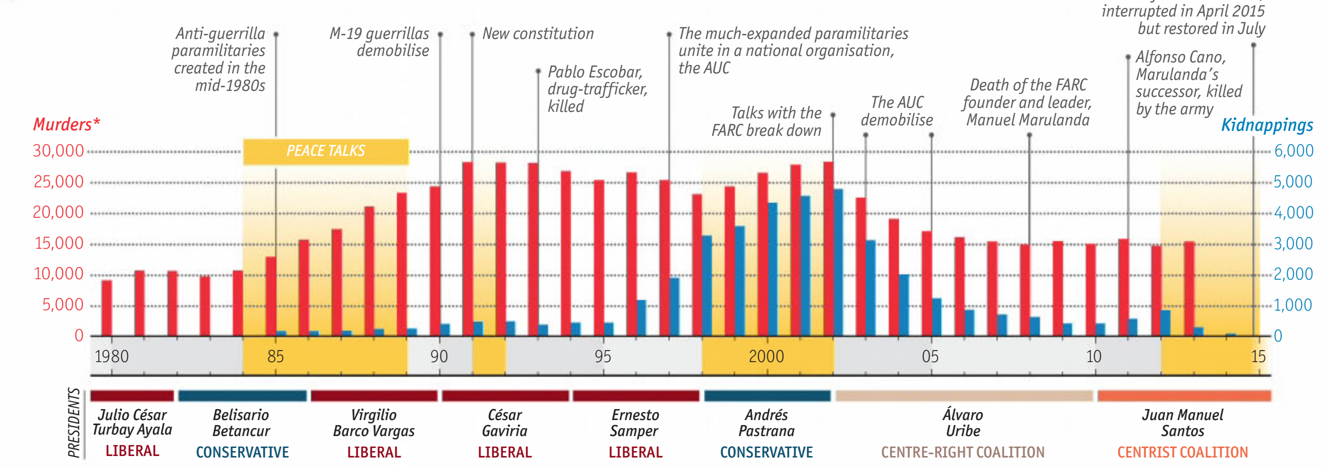
A reverence for the rule of law went hand in hand with lawlessness, unequal land ownership and a tradition of political violence and guerrilla warfare. For a century this pitted Liberal against Conservative politicians until they agreed to share power in 1956. The Cuban revolution and the cold war bred guerrilla movements of the left. The FARC was founded in 1964 by the Colombian Communist Party and the remnants of Liberal peasant guerrillas, to be followed a year later by the smaller National Liberation Army (ELN).

Colombia is exceptional, too, for its avoidance of populism. Its elites have favoured responsible economic policies. In the 50 years to 1995 the economy grew at a steady average of almost 5% a year, avoiding the Latin American ills of hyperinflation and debt default. A new constitution in 1991 dismantled power-sharing, deepened democracy and strengthened the courts.

Although several smaller guerrilla outfits made peace, the FARC and the ELN did not. They had taken to organised crime such as drug trafficking, kidnaps and extortion in the 1980s, and beleaguered landowners had responded by sponsoring right-wing paramilitary vigilante groups, with the complicity of some army officers. By the late 1990s Colombia was on the verge of becoming a failed state, with the world's highest murder rate and ten kidnappings a day. The government's writ extended to only half the country. The FARC had about 20,000 fighters and the ELN another 5,000. They attacked villages, engaged in urban terrorism, sowed landmines and recruited child soldiers. Their paramilitary foes massacred whole villages thought to sympathise with the guerrillas. The economy plunged into a deep recession, contracting by 4.5% in 1999. Several banks failed and unemployment climbed to over 20%.

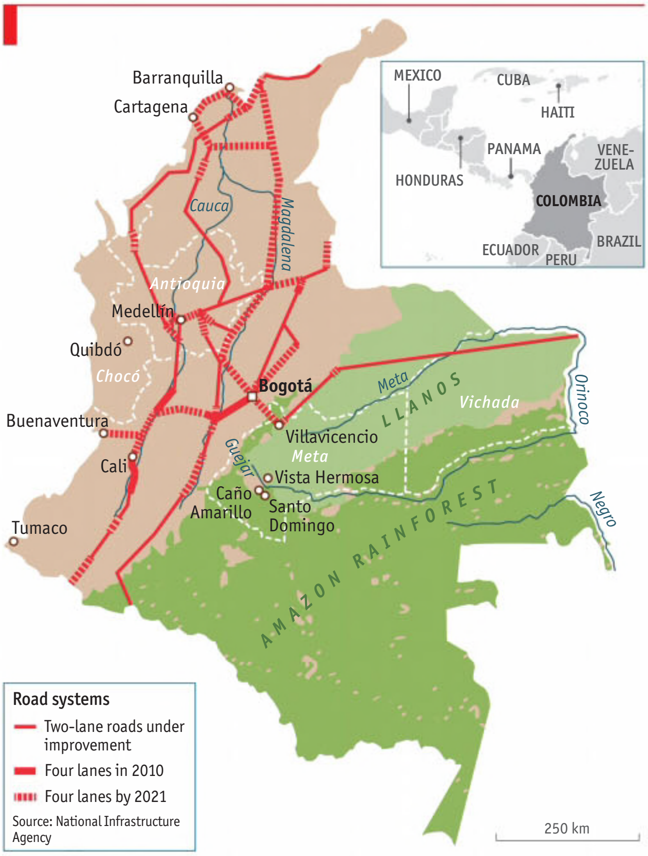
In desperation, Colombians broke with their traditions of self-reliance, anti-militarism and moderate, consensual politics. Andrés Pastrana, who was president from 1998 to 2002, sought outside help. As part of a project called Plan Colombia, the United States provided the country with $1.2 billion in 2000 and then around half that amount each year until 2006, mainly in

The flow and ebb of violence



Sources: UNODC; Registro Único de Víctimas; *The Economist*

*Excludes civilian deaths related to the armed conflict



military aid. The money was more than matched by a big increase in the government's own defence spending. In 2002 Colombians elected Álvaro Uribe, a cattle rancher from Antioquia. His father had been murdered by the FARC. An austere, intense figure, he campaigned on a platform of "democratic security". He increased the security forces by half and took the war to the FARC, killing several top commanders. At the same time he persuaded the paramilitaries to demobilise.

Mr Uribe's conquest of the FARC transformed Colombia, reducing the guerrillas from a deadly threat to the state to a tactical irritant. But there were stains on his record. His obsessive insistence on killing rebel fighters prompted some army units to murder civilians and pass them off as combatants killed in battle. Several of Mr Uribe's aides and allies had links to the paramilitaries, and his government spied on senior judges and political opponents. He brought in a constitutional change so he could secure a second term, but his attempt to abolish terms limits and run again in 2010 was struck down by the Constitutional Court.

Mr Santos, who had been Mr Uribe's defence minister, got his predecessor's reluctant backing, but the two quickly fell out. Whereas Mr Santos is cool, patrician and managerial, Mr Uribe is volatile, a consummate politician who has a rapport with ordinary Colombians. Largely because of Mr Uribe's opposition, Mr Santos only narrowly won a second term last year.

This special report will celebrate Colombia's transformation over the past 15 years. But the job is only half done. To achieve lasting peace, the country needs to bring security, the rule of law and public services to rural areas, reform the justice system and restore political consensus. It must also open up the economy and internationalise a deeply introverted country. But first it must clinch the deal with the FARC. ■

The road to peace

This time is different

A peace process that could become an example to the world

COLOMBIANS HAVE HAD good reason to be sceptical about the peace talks. The FARC have negotiated with governments on three previous occasions, and each time the outcome has been a bitter disappointment. In the first attempt, in 1984, the guerrillas declared a ceasefire and launched a legal political party, the Unión Patriótica (UP), but it turned out that they planned to use the truce to build a large army and political base. In the event some 1,500 UP members, many of them innocent idealists, were murdered by paramilitaries. The next set of talks, in 1991-92, got nowhere. Mr Pastrana tried again in 1999-2002, but once again the FARC used a ceasefire to build up their forces.

Even before the breakthrough in September, there were two sets of reasons to believe that this time would be different. First, the FARC's leaders now admit that their 50-year dream of taking power by force is over. That is partly because of Mr Uribe's military build-up, but also because conditions in the region have changed. Venezuela's regime, which has offered them sanctuary and helped them buy arms, is deeply unpopular and its hold on power is uncertain. Mr Castro's government sees diplomatic benefits in helping to broker peace.

The FARC have also noted that across Latin America former guerrillas have won power through elections. That message has been reinforced by Bernard Aronson, a former diplomat whom Barack Obama appointed in February as the United States' representative for the Colombian peace process. "Once they disarm, take responsibility for their crimes, accept justice and become a legal political entity, the United States has no ideological opposition to them," he says.

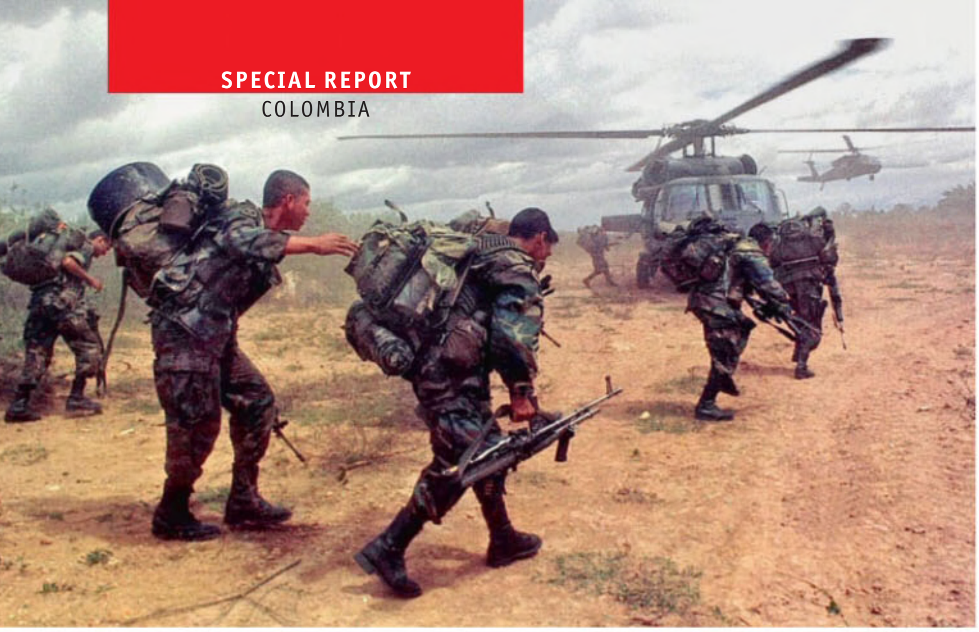
Second, Mr Santos is determined to avoid repeating the mistakes of earlier talks. The sole aim of the current negotiations is a "final agreement for the end of the conflict". The agenda contains just six tightly defined points. Meanwhile the president has refused to declare a ceasefire. That has entailed risks, but it was "the shortest and most effective route", Mr Santos insists.

Meet the teams

The government's negotiating team commands respect. Humberto de la Calle is a former vice-president and a shrewd and moderate Liberal politician. Sergio Jaramillo, Mr Santos's peace commissioner, is a cerebral strategist. Other members include General Jorge Mora, a former army commander who is trusted in the barracks, and General Óscar Naranjo, who was an outstanding police commander.

Across the table sits Iván Márquez, the FARC's number two, an ideologue said to possess a certain personal charm (the FARC declined to be interviewed for this report). Most of the guerrillas' senior leaders now rotate in and out of the talks; Timochenko lives mainly in Venezuela, but has been to Havana three times.

Until September the two sides had reached agreement on only three of the six agenda items. First came an accord on rural development, including measures to broaden access to land and to issue legal title to all rural properties. This, says Mr Santos, is "what the countryside needs; we have to do this with or without the FARC." Next was an agreement on political participation and security guarantees for the opposition.



Soon the army may have better things to do

Then, in May 2014, the two sides agreed to a joint effort to tackle drug-trafficking and a voluntary, community-based programme for substituting coca with legal alternatives, backed up by manual eradication. That was more or less Mr Santos's policy anyway; earlier this year his government decided to halt the aerial spraying of coca with glyphosate after the World Health Organisation classified the weedkiller as a probable carcinogen.

After that the talks got bogged down for more than a year over the most difficult issues: whether the FARC's leaders will face punishment of some kind, and on what terms they will give up their weapons and become a legal political party. Many Colombians believed that the negotiations were in essence about the guerrillas' surrender, but the FARC do not see it that way. They present themselves as undefeated rebels pitted against an unjust oligarchy in the cause of social justice. Mr Márquez has pointed out that previous insurgents in Colombia were granted amnesties.

But two things have changed. The first is that international law no longer accepts blanket amnesties for crimes against humanity (which are now held to include acts such as murder, kidnapping, rape and the forced recruitment of children, not just by governments but by insurgents with de facto authority). Such crimes must now be dealt with under a process that lawyers call "transitional justice". The general idea is that the rank and file are amnestied but the leaders face trial and sentence.

That principle was applied, albeit clumsily, in the demobilisation of the paramilitaries: more than 100 of their leaders were jailed for up to eight years. Several of them continued to run drug businesses from prison, so Mr Uribe summarily extradited several of them to the United States, where they were wanted for drug-trafficking. They are now serving life sentences in maximum-security prisons.

The second constraint on the government is that public opinion has hardened against the FARC because of their terrorist bombings and kidnappings. Hostages were treated appallingly,

A nation of victims

Coming to terms with the legacy of violence

LOOK WESTWARDS FROM the public library at San Javier metro station in Medellín, built by Sergio Fajardo, a former mayor of the city, and you will see two green tarpaulins spread high on the mountainside opposite. They mark La Escombrera, a rubbish dump used by the paramilitaries and the army in the early 2000s to dispose of bodies as they expelled the FARC and the ELN from Comuna 13, one of the city's poorest neighbourhoods. When the paramilitaries demobilised and confessed to their crimes, they said that up to 300 bodies were buried there.

Aníbal Gaviria, the current mayor, is paying for a five-month dig by forensic anthropologists at one of La Escombrera's three sites. "I think it's important that the state should show it's not in agreement with what happened there," he explains. Rosa Cadavid, a nun who leads an NGO that has pressed for the dig, says that "the first priority is to find loved ones, to know the truth, why they took them, what happened to them." For the women she supports, the excavation offers some comfort, but their torment will stay with them. Rubella Tejada, who lived in Comuna 13, lost a son in 2001, seized from their house by hooded men. Ten years later another son was taken off a bus and murdered. Sister Cadavid's group is providing her with psychiatric help.

Colombia is a nation of victims. Mr Gaviria himself lost a brother who was kidnapped and killed by the FARC; Alan Jara, the governor of Meta, was kidnapped by the guerrillas and held for eight years. Mr Santos's government recognises the plight of the victims and has made a great effort to put them at the heart of the peace process.

The country's victims' programme is the world's largest by far. Some 7.5m people—around a sixth of the population—have registered with the Victims Unit, a government agency with 800 staff and another 3,000 under contract. The unit says it has provided reparations for around 500,000 people so far, in the form of cash, rehousing and/or psychological support.

Almost 6.5m of the victims were forced out of their homes. The trickiest part of the reparations is the restitution of land seized by paramilitaries or guerrillas. Peace will make that task easier. The government has secured 2,000 judicial rulings for land restitution; all told, some 60,000 families have returned to their land, according to Iris Marín of the Victims Unit. But there is a big backlog, and some activists calling for land restitution have been killed. Most of those who were driven out will never return. A survey of 27,000 displaced families found that 78% wanted to stay where they were.

Many women were subjected to sexual violence. Matilde Cardoso, a smartly dressed 38-year-old Afro-Colombian, owns a small furniture shop in the Caribbean city of Barranquilla. Some 19 years ago, when she was living with her parents on their small farm, she was raped by four guerrillas. That night the family packed what they could and fled to Barranquilla. The government paid her 18.5m pesos (now around $6,000) in compensation, which she used to set up her shop, but it is not doing well, so she is planning to return to hairdressing. Her eldest daughter, conceived in the rape, is preparing to study medicine. Ms Cardoso supports the peace process: "Violence begets violence," she says.

sometimes spending years chained to trees. In a poll in August, more than 90% of respondents wanted the FARC's leaders to go to jail. Mr Uribe leads a vocal opposition to the peace process. A government supporter laments that "Colombians don't believe Mr Santos even when he's telling the truth yet believe Mr Uribe when he's lying."

A subcommittee of lawyers named by both sides eventually thrashed out the outline agreement on transitional justice in August and September. A "special jurisdiction for peace" will investigate, try and sentence the "most serious and representative crimes" committed during the conflict. The special tribunal will include a minority of foreign judges. Those who confess to their crimes and collaborate with a truth commission will benefit from light sentences: five to eight years of community work with "effective restrictions on liberty", but not jail. Those who do not confess will face up to 20 years in jail. Similar procedures will apply to military officers who have committed war crimes, as well as to those who financed the illegal armies.

Mr Uribe, who declined to be interviewed for this report, denounced the agreement as too lenient. He also objected to the armed forces being judged on the same basis as the FARC. Marta Lucía Ramírez, a Conservative leader, would have liked Mr Santos to have continued fighting the FARC for another two years in order to extract tougher terms. That might have worked. But continuing the conflict would have cost lives and destruction.

José Miguel Vivanco of Human Rights Watch, a New York-based advocacy group, argues that the International Criminal Court (ICC) will not be satisfied with an arrangement that allows those responsible for the worst abuses to avoid prison. The ICC, stung by criticism that its only targets so far have been African, is watching Colombia closely. But many lawyers say that under international law transitional justice does not have to involve prison. The outline agreement does hold the FARC to account in what promises to be a thorough and rigorous process of law, and the alternative sentences are longer than many expected.

The agreement also links justice with disarmament. Only those who have given up their arms will be eligible for alternative penalties. The FARC now have only around 6,000 armed troops (plus a similar number in civilian militias). A government negotiator says that the troops must place their weapons in sealed containers under international supervision. The government accepts that it must provide security guarantees to the guerrillas, who will remember the fate of the UP.

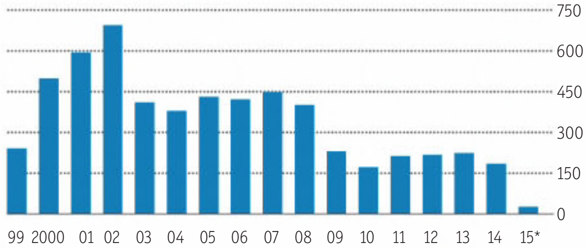
The FARC also want guarantees that they will not end up in American jails like the paramilitaries (as well as one of their own leaders), and that the government will shelve around 70 extradition requests from the United States, for drug-trafficking and other crimes. "We're not going to give extradition up," insists Mr Aronson. But then he adds: "It's up to the Colombian government whether it honours these requests or not. Colombia is a very close ally and partner. The United States would not want to be an obstacle to a final peace process."

"The countdown to peace has begun," says Mr de la Calle. But Luis Carlos

Get a job and a life

Settling down

Newly displaced people, '000



Source: Registro Único de Víctimas

*To September 1st

Villegas, the defence minister, cautions that a government ceasefire "can only happen when we have negotiated the details of demobilisation and cantonment" of the FARC. There are still plenty of other loose ends to be tied up. Important points, such as who chooses the judges for the special tribunal and what "effective restrictions on liberty" will mean in practice, have yet to be agreed on. Meanwhile the ELN, with its 1,500 fighters, has spent more than a year in talks about talks but shows little desire to give up its lucrative business of extortion.

Next, the peace agreement needs to be written into law. In September the government sent a constitutional amendment to Congress that would give a special committee of the legislature and the president temporary powers to do this. This should be approved by next June. Mr Santos may be unpopular in the country, but he retains a disciplined majority in Congress.

In many ways this peace process could become an example to the world. Unlike many African countries, Colombia has made a great effort over the past decade to try to punish those responsible for violence, first the paramilitaries, then politicians linked to them and army officers guilty of crimes, and now the FARC. It is also going out of its way to recognise and compensate the victims (see box, previous page).

Mr Santos has long promised that Colombians will have the chance to approve or reject any final deal. His government has not yet decided whether this will be done through a referendum or in some other way. Provided the deal is linked to a credible disarmament process and the loose ends are tied up, the people will probably support it, but meeting those conditions will require continued firmness from Mr Santos. Polls show that since the nadir reached in May 2015 support for the peace process has been rising again.

Officials often say that the task of building peace in Colombia will begin the day after an agreement to end the conflict is signed. "These negotiations are extraordinarily difficult, but not remotely as difficult as implementation will be," warns Mr Jaramillo. Building peace will mean tackling some of Colombia's deep-rooted problems, starting with the divide between a modern, mainly urban country and an archaic, poor, conflict-ridden mainly rural one. ■

The urban-rural divide

A tale of three countries

Security and development are crucial to achieving peace on the ground

THE HOME OF Ruta N is a striking five-storey L-shaped building clad in copper-coloured concrete panels that project like wind-filled sails. Just across the road from the campus of the University of Antioquia and next to Hewlett-Packard's business-process outsourcing centre for Latin America, Ruta N aims to turn Medellín, Colombia's second city, into a hub of technological innovation. Its 104 staff are trying to do three things: work with schools to boost the teaching of science and technology; conduct applied research in fields such as nanotechnology and advanced materials; and create an innovation ecosystem linking universities, startups and the private sector. In the past year alone Ruta N has helped generate 1,800 jobs, says Juan Camilo Quintero, the project's managing director.

The idea is to boost both the supply of highly skilled workers and the demand for them. Financed by profits from Medellín's municipally owned utilities company, Ruta N is an indication of how far Medellín, and Colombia, have come in the past two or three decades.

A generation ago Medellín was the world's most violent city, with 386 murders per 100,000 people in 1991. Today that figure is down to 18, which the mayor, Aníbal Gaviria, describes as "still very high". To drive it down further, he has worked with the police and prosecutors to create well-equipped specialist task forces to investigate murders. Mr Gaviria is building on the work of Sergio Fajardo, a mathematician who served as mayor in 2003-07 and began the task of turning Medellín around. He invested in urban projects designed to bridge the city's socio-economic divide, such as cable cars connecting shantytowns to the metro and to new public libraries in poorer areas. As governor of Antioquia, Colombia's most populous department, he has tried to do the same thing there.

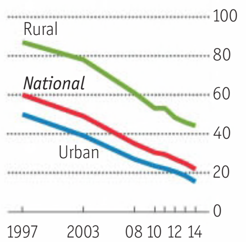
The task, he says, is to tackle violence and inequality. Then he breaks into English: "The violent ones take away our ability to dream." Governors have relatively small budgets, so Mr Fajardo has concentrated on helping mayors draw up security and development plans. His flagship project involves building "education parks" in each municipality: emblematic buildings designed as teachers' centres but also meant to mobilise communities to improve the quality of schooling.

The problem is that much of Colombia lacks Medellín's and Antioquia's resources and leadership. Income distribution for the country as a whole is among the most unequal in Latin America, behind only Haiti and Honduras. When Mr Santos's government recently carried out the first agricultural census for 45 years, it found that two-thirds of all farms have less than 5 hectares (12.4 acres) and together occupy less than 5% of all agricultural and grazing land.

Head for the city

Multidimensional* poverty rate

%



Source: DANE

*A measure of education, health and living standards

Still, the proportion of people living in poverty (defined as income per head of $4 a day or less in purchasing-power-parity terms) fell from almost 50% in 2002 to 29.5% in 2014, and incomes of the poorest 40% have grown faster than average, according to the World Bank. Many more children now benefit from education, though Colombia still hovers near the bottom of the OECD's PISA rankings that test children in 65 economies for reading, maths and science.

Under the 1991 constitution the government must guarantee universal health care, and only half the population are able to contribute; the government has to pay for the other half. Alejandro Gaviria, the health minister, says that for the bulk of the population the Colombian scheme provides the best health care in Latin America, but he accepts that regional inequalities remain.

There are "three Colombias", argues Simon Gaviria (no relation of the health minister or the mayor of Medellín), the head of the National Planning Department. One, in the main cities, is a sophisticated place with rapid economic growth and first-world social indicators. A second has seen social improvements but lacks good jobs. A third, made up of 3m people, lacks even basic services. Not coincidentally, this third Colombia is where the conflict has persisted.

Take the Pacific coast, home to 1m people, 90% of whom are Afro-Colombians. In Quibdó, the capital of Chocó department, "you might think you're in Haiti," says Paula Moreno, a former culture minister who now heads Manos Visibles, an NGO working to reduce poverty and violence. Unemployment in the city is 70%. Last year the army occupied Buenaventura, Colombia's main Pacific port, but criminal gangs still exercise a murderous grip on parts of the city. The FARC runs Tumaco, farther south.

Reclaiming paradise

Vista Hermosa, a small farming town in the department of Meta, in the *llanos*, shows how difficult it can be to join the "first Colombia". For several decades after it was founded in the late 1940s by rural dwellers fleeing political violence in central Colombia, this was FARC territory. Along with the FARC came coca and cocaine. By the start of the 21st century the area around Vista Hermosa was growing a quarter of Colombia's coca crop.

In 2004 Mr Uribe deployed a joint task-force named Omega, made up of 18,000 crack troops, to retake the area from the FARC. In their wake came a plan conceived by Mr Jaramillo, then Mr Santos's deputy at the defence ministry, meant to win the trust of the population and consolidate security gains by expanding the presence of the state and paying out aid money quickly. It spent $250m in four years, mainly on extending the paved highway from Villavicencio to Vista Hermosa but also on things like electrification, drinking water and sewerage.

The dirt road from Vista Hermosa to the village of Santo Domingo hugs the Serranía de la Macarena, a majestic and geologically ancient outcrop of the Andes. Waterfalls score the sierra's near-vertical slopes. At its foot, kingfishers flash above streams, hoatzins, hawks and parrots flit between copse and field and iguanas sun themselves by the road.

Nearly all the coca has gone now. In the villages concrete halls moulder, the ghosts of the discotheques, brothels and supermarkets that catered to the drugs industry. The small farmers in Santo Domingo and the nearby hamlet of Caño Amarillo now produce milk. Each has a community depot with stainless-steel tanks provided by Alquería, a Bogotá-based dairy company.

"There's been change, but it's been a slow process," says Gilberto Olaya, a local councillor in Santo Domingo. "People are starting to buy two or three more cows." He thinks the future lies in commercial crops as well as more intensive cattle-rearing. But three things are still missing.

In Santo Domingo the FARC still levy taxes on everything from cows to beer

The first is better roads. The 38km (24 mile) journey from Santo Domingo to Vista Hermosa takes more than two hours along a rutted track that fords several rivers. Mr Santos's government has embarked on an ambitious infrastructure programme, but it is confined to the main national routes. Meta has only 500km of paved roads and 7,000km of unpaved ones, according to Alan Jara, its governor.

Second, security, though much improved, still needs to get better. The police do not patrol outside the town. In Santo Domingo the FARC still levy taxes on everything from cows to beer. But since the peace talks began, the guerrillas "know they can't impose themselves as they did in the past", says Mr Olaya.

Task-force Omega made mistakes at the start of its operations. "The idea was that we were all guerrillas," says Rosa Arnaldo, Mr Olaya's wife. Tito Garzón, a community leader in Vista Hermosa who was a UP member in the 1980s, thinks that "Colombia has a good future, but only if the law is applied to everyone equally." He was recently cleared after an imprisonment that looked like score-settling.

Third, if farmers are not to go back to coca, they need credit and technical advice. "We tried planting yucca but the credit came too late to buy fertilisers," says Mr Olaya.

The main lesson from Vista Hermosa is that swift action is vital. "People have the illusion that with peace everything will be sorted," says Mr Jara. "There have to be immediate results." That is echoed by Fabrizio Hochschild, the UN's representative in Colombia. International experience shows, he says, that "immediate action in the first year after the signing of a peace agreement can make the difference between success and failure." In some ways, Colombia is quite well prepared. Programmes for compensating victims and restituting land are already up and running. But there is confusion over who will be in charge of a rapid-reaction plan and how it will be implemented.

The curse of the Bacrims

The first priority will be security, which was neglected after Colombia's paramilitary demobilisation. The chiefs were jailed, but the mid-level commanders were spared and turned to drug-trafficking and other criminal rackets. These Bacrims (criminal bands) now have some 5,000-6,000 members, according to Mr Villegas, the defence minister. One fear is that renegade FARC units will reinforce them. The illegal economy in Colombia, though proportionately smaller than it was, remains substantial; the local value of drug production is about $240m a year. Illegal mining, chiefly of gold, and extortion add further revenue streams.

Most urgently, the government will have to provide security for the FARC as they demobilise. Emergency teams of prosecutors and judges will also be needed "to rule on who owns what" in conflict areas, says Mr Villegas. In the longer term Colombia will need fewer troops (currently 270,000) and more police (200,000 at present).

Local political and state institutions will also need to be strengthened. In conflict areas these suffer "chronic deficiencies" such as corruption and lack of technical competence, democratic accountability and budget resources, as the UN stated in a report last year. On the Pacific coast the government decided to start more or less from scratch. It is setting up a $400m fund with money from the World Bank and Inter-American Development Bank to install drinking water and sewerage in the coast's four main cities. National ministries will control a committee disbursing the money. "We're not going to hand over the resources via mayors and governors," says Luis Gilberto Murillo, the director of Mr Santos's Pacific Plan. Similarly, the government in Bogotá has appointed health and education managers in each of those cities.

The rural economy will need more attention too. Since Mr Uribe's security push the violence has been concentrated largely outside the cities. The guerrillas and their civilian followers need to be offered legal economic opportunities. A large proportion of the poor are in rural areas, notes Ana María Ibáñez, an economist at the University of the Andes in Bogotá. As is his wont, Mr Santos set up a commission to consider what to do with the countryside. Its head, José Antonio Ocampo, a former finance and agriculture minister, says the state agricultural agencies need a complete revamp to be able to expand credit and technical help to small farmers. Together with changes to social policies, this could close the rural-urban development gap within 20 years.

The government's promise to the FARC to set up a fund to distribute land to the landless and to small farmers is a political necessity, but it could end up swallowing too much of the money available for rural development. The most controversial issue is large-scale agribusiness, which can play a crucial role in helping Colombia diversify its economy, as it must. ■

The economy and business

Time to branch out

An economic slowdown highlights the need for structural change

ON ONE SIDE of Via 40 in Barranquilla, a freewheeling industrial city on the Caribbean coast, flows the broad, muddy Magdalena river. On the other stands a line of factories. In the temperature-controlled bowels of the anonymous building that houses Procaps, a pharmaceutical company, women are hand-checking a stream of paracetamol capsules for the tiniest fault.

Founded and owned by Ruben Minsky, whose father fled from Poland to Barranquilla to escape Hitler, Procaps is a multinational. Half its sales of around $500m last year were outside Colombia, as are several of its factories. A third of its business comes from contract manufacturing of pills for the big pharma companies, but it also makes generics, its own over-the-counter medicines and injectable drugs for sale to hospitals. It is a knowledge business, making or customising its own machines, investing 3.5% of its sales in research and development and holding 24

The road to riches

patents (with 16 pending) worldwide.

Not far away, in a sprawling industrial complex, is Tecnoglass, which makes aluminium, glass and sealed windows. Reversing the typical Latin American pattern, Tecnoglass imports a commodity—plain glass—from the United States, adds knowledge and value to it in the form of environmentally efficient coatings and exports finished windows back to the American market. Business is booming: the firm expects its sales of $197m last year to more than double by 2016. Founded by a Lebanese immigrant family, in 2014 it floated 12% of its shares on the NASDAQ exchange for around $52m.

"We're strategically located to serve the US market, with Latin American costs in a labour-intensive industry," says Rodolfo Espinosa, one of the company's managers. The free-trade agreement (FTA) between Colombia and the United States that came into effect in 2012 "is a blessing for us", he adds. "With no more red tape, we get to Florida quicker than our competitors in Texas."

But most of the impressive growth in Colombia's economy over the past decade has been due to a combination of commodity exports (mainly oil and coal), construction and domestic consumption. Colombia is far from being a petro-state; its output of 1m barrels per day last year made it only the world's 19th-biggest oil producer, and its proven reserves are small. But the plunge in the oil price has nevertheless hit its export earnings and its government revenues hard. The current-account deficit climbed to 7% of GDP in the first quarter of this year. Investors took fright; the peso lost 38% of its value against the dollar in the 12 months to July, much the same as the Brazilian real over that period. The central bank now expects the economy to expand by only 2.8% this year and 3% in 2016; ANIF, a private-sector think-tank, forecasts 2.5% this year and 2% next.

Visible progress, pending problems

Sources: Departamento Administrativo Nacional de Estadística (DANE); Thomson Reuters; IMF

The peso had been overvalued for several years, so the depreciation was "a blessing in disguise", says Mauricio Cárdenas, the finance minister. The economy was suffering from "incipient Dutch disease", in which commodity exports strengthen the currency, making non-commodity businesses uncompetitive. Colombia's macroeconomic management has been much more responsible than Brazil's, but the authorities face two big challenges. The first is that a weaker peso has pushed up inflation, which reached 5.4% in the year to September, well above the central bank's target of 3%. That prompted the bank to raise its benchmark interest rate on September 25th, from 4.5% to 4.75%. Higher inflation could increase the national minimum wage by as much as 6%, meaning that the central bank "will have to work very hard" to get inflation back on target, says Roberto Steiner, an economist at Fedesarrollo, a think-tank.

Second, oil was providing the government with around a fifth of its revenues, and its plummeting price means a fiscal shortfall of 1.7% of GDP. This comes at an awkward time. Total tax revenues last year added up to only around 17% of GDP, well below the Latin American average. Many economists had been arguing that Colombia needed to raise another three points of GDP in tax to cover deficits in pensions and health care, fund infrastructure and pay for peace-related investments.

The private sector is cross with Mr Santos because in his two previous tax reforms he raised both corporate taxes and a wealth tax that, oddly, is paid by firms as well as individuals. The effective tax rate on bigger firms is 53% of income, according to Sergio Clavijo of ANIF. And revenue is highly concentrated: 60% of the total comes from just 3,556 taxpayers.

Intelligent austerity

Mr Cárdenas describes his response as "intelligent austerity". He has cut spending (mainly on public investment) by around 1% of GDP and hopes to raise revenue worth 0.5% of GDP from a crackdown on tax evasion. He says the rules allow for some increase in the fiscal deficit (which this year will be 2.4% of GDP). Mr Santos has pledged a reform of the tax structure that would raise an extra 2% of GDP by 2018. The government accepts that business taxes are too high. Most tax experts think the shortfall can be met only by raising personal income tax and value-added tax and eliminating exemptions. The political risk for Mr

Santos is that Colombians will think they are being made to pay higher taxes to satisfy the FARC.

Successive governments have been slow to tackle the structural factors that make many Colombian businesses uncompetitive. One is a rigid labour market. Mr Santos's tax reform did reduce payroll taxes, from 60% to 47% of salaries, which seems to have encouraged an increase in formal employment. But the informal economy still accounts for around half of all jobs. Unemployment has been falling steadily but ticked up to 9.1% in August, a sign of the slowdown in the economy. The biggest bottleneck is the lack of transport infrastructure.

Connecting the dots

It is 8.30am on a Sunday morning, and 150 metres inside a mountain in the eastern *cordillera* of the Andes a machine is preparing to inject cement into the roof of Tunnel number 2 of 18 in a 29km stage of the new highway from Bogotá to Villavicencio and the *llanos*. The existing two-lane road is a slow and dangerous crawl of oil tankers, cattle trucks, pick-ups and cars even at this time of the week. Work to add another carriageway began in 2010, but it is extraordinarily difficult and costly. The eastern *cordillera* is geologically the youngest and most unstable part of the Andes. The road drops by more than 2,000 metres in just 90km, in the narrow gorge of the river Negro. But by 2021 and at a cost of $3 billion, the whole road should be a motorway, cutting an hour from the journey time.

The highway to the *llanos* is part of a vast infrastructure programme—the biggest in Latin America—that is at last getting under way. Last year the government tendered projects worth $5 billion, up from $2.6 billion in 2010; if all goes to plan, by 2018 the annual figure is due to reach $9.9 billion. Mr Santos spent the whole of his first term preparing the legal and financial ground. The programme requires the government to contribute almost $1 billion a year over the next 20 years. Mr Santos may well be remembered for roads and railways as well as peace.

The problem is that they may not be coming along fast enough. Industry grew up around the cities of the interior. Taking a container from Bogotá or Medellín to the Caribbean ports costs around $2,000, or twice as much as exporters in Peru or Chile have to pay, says Mr Clavijo. The depreciation has so far reduced imports rather than boosted exports. When the peso was strong, Colombian companies withdrew from markets in Europe and Asia, says Bruce MacMaster of ANDI, the industrialists' lobby. They are now trying to rebuild relationships with customers, but it takes time.

Others blame ANDI and farm lobbies for their protectionism. Colombia has some 60 trade agreements, but it is less open than it looks. When César Gaviria was president in 1990-94 he slashed tariffs and other protectionist barriers, opened up the economy and privatised the ports. Those ports are now highly efficient, but a 16-fold increase in customs regulations has slowed them down, he explains. "Colombian industry faces expensive inputs because of the complexity of importing, which increases the cost of both imports and exports."

That view is echoed by David Bojanini, the chief executive of Grupo Sura, a big financial conglomerate. "We want the country to be much more international, we're against protectionism," he says. Based in Medellín, Sura is one of three closely linked companies known as the Grupo Empresarial Antioqueño which have been going for more than 80 years but have branched out abroad in the past couple of decades. The others are Nutresa, a big food company with factories in several countries in the Americas, with sales of $3.4 billion in 2013 (of which $1.4 billion were abroad); and Argos, a conglomerate of cement, electricity and infrastructure businesses, which generates 60% of its $2.9 billion sales in dollars; it is the third-biggest maker of ready-mixed concrete in the United States.

Colombia needs to generate more such internationally competitive businesses from scratch. One promising possibility is tourism, which is already benefiting from the improved security situation. In 2014 the country received 4.2m visitors from abroad, more than twice as many as in 2010. Colombia lacks an iconic destination such as Peru's Machu Picchu, but it makes up for that in diversity of landscape and wildlife.

Perhaps the biggest opportunity that peace could bring is in agribusiness. The *llanos* have the potential to become Colombia's *cerrado*, the home of Brazil's agricultural miracle. The Altillanura, a low tableland in Meta and Vichada, has at least 10m hectares that could be used for growing crops such as soya, maize, rice and palm. This would more than double the country's land under cultivation. Some left-wingers think land in the Altillanura should be given to the landless, but three previous land reforms in Colombia failed to establish thriving small-scale farming. The Altillanura is better suited to large-scale commercial farms. Heavy capital investment is needed to make its poor, acidic soils fertile, and the region's remoteness adds to costs.

In the past ten years or so commercial farming has arrived in the *llanos*, but it faces a legal obstacle. Under a 1994 law drawn up by Mr Ocampo, all vacant land was to be used for family farming. In the *llanos* that was defined as up to 1,700 hectares, but investors have recently assembled larger holdings, which are now being declared illegal. Land transactions in the whole region have been suspended.

Congress is debating a bill that allows long-term rental contracts for large holdings in the *llanos*. But as one local farmer puts it, "if you're going to take the trouble to invest in improving land, you have to own it." A better solution would be a land tax. Among other things, it would encourage ranchers to become more efficient. As things stand, 40m hectares of land across the country are devoted to extensive cattle-raising, with each cow grazing more than a hectare. Taxing land might free up some for small farmers in central Colombia while still giving large-scale agribusiness its head in the *llanos*. ■

The future

Halfway to success

Colombia needs to climb out of its shell

MORE THAN 20 YEARS after his death, Pablo Escobar has become an object of fascination. "Narcos", a new series from Netflix, is just one of a crop of films, books and television shows about Colombia's most notorious drug-trafficker, the cause of so much violence in Medellín in the 1980s and 90s.

Escobar was a ruthless mass murderer. For anyone who lived through those days, the attention he is receiving is distasteful. But if he can now be seen as a mere historical curiosity, that may be an indication of how far Colombia has moved on. Outsiders have often fastened on the country's failures. But over the past quarter-century it has been surprisingly successful in tackling some of its biggest problems. Escobar and his like were taken down; their successors today are "unknown", notes Mr Gaviria, Medellín's mayor. "They don't last more than three or four years and can't consolidate their power."

Colombia's response to the drug mafias was to reform and strengthen a national police force that, along with Chile's, is widely regarded as the most professional in Latin America. The 1991 constitution gave new powers to the courts, as well as promoting more inclusive politics and heralding social advances, such as the provision of universal health care.

Progress has not always been linear. Ten years ago Bogotá was a beacon of successful urban management, but under three mediocre mayors from the left it has become more congested and less efficient. Too often local politics is financed by corrupt ties to construction companies. Yet other cities, such as Barranquilla, are rising.

The judiciary, too, has achieved some successes. The removal of parliamentary immunity by the 1991 constitution, combined with powerful new legal instruments that allow the seizure of illegally obtained assets, has curbed the infiltration of politics by drug money. The courts jailed 32 national legislators and five regional governors for their links with the paramilitaries. And in a demonstration of political independence, the Constitutional Court blocked Mr Uribe's re-election bid.

Judging the judges

But the judiciary has itself become politicised and tainted by corruption, despite—or perhaps because of—a proliferation of busybodies: as well as its *fiscal* (attorney-general), Colombia has a *procurador* (inspector-general), an auditor-general and an ombudsman. All are chosen by the higher courts. The office of the *fiscal* has become an empire with 29,000 staff. Instead of dedicating themselves to applying the law, both Eduardo Montealegre, the *fiscal*, and Alejandro Ordoñez, the *procurador*, offer almost daily opinions on political issues.

Aside from such flaws, though, Colombia's political system and its institutions have proved capable of meeting many of the challenges posed by the crises of the 1980s and 90s. Above all, the state was able to extend its writ over a much bigger swathe of the national territory, offering greater security and opening the road to peace. The bitter rivalry between Mr Uribe and Mr Santos could yet derail peace, but that looks less likely now. Still, a government in which many ministers harbour presidential ambitions will become increasingly distracted as the 2018 election approaches. The hatred and mistrust left by 50 years of conflict will not dissipate quickly, even if Colombians come to accept Mr Santos's compromise between peace and justice.

Can Uribe (left) and Santos make peace too?

Another unknown concerns the FARC's entry into politics. Notwithstanding its recent electoral success in Bogotá, the left in Colombia has been extraordinarily weak politically because part of it embraced violence. That, along with the effect of the conflict itself, helps explain the country's yawning socio-economic inequalities. Despite its deep unpopularity, the FARC will doubtless get to govern some municipalities. The question is whether it will come to terms with democracy and the modern world.

Colombia was forced to engage with the world when it found itself at the centre of the international illegal-drug business. Plan Colombia was one result. It has since signed trade agreements with Europe as well as the United States, and it recently formed the Pacific Alliance with Chile, Mexico and Peru, countries united by a commitment to free trade and free-market economies.

But most Colombian politicians and businesses remain introverted, and the country is still diplomatically isolated in its region and beyond. It failed to join the Asia-Pacific Co-operation Forum before that body closed its doors to new members; thus it is not part of the Trans-Pacific Partnership trade deal. And it has yet to take full advantage of such trade deals as it has struck.

Admittedly, Colombia has been unlucky with its immediate neighbours. Ecuador has erected protectionist barriers to its exports. Under the *chavista* regime, Venezuela has harboured guerrillas, served as a conduit for drug exports and shut down what was once a big market for Colombian manufacturers. In August Venezuela's president, Nicolás Maduro, closed the border and summarily expelled 1,000 Colombians, causing another 20,000 to flee. He accused them of smuggling, a business boosted by Venezuela's price and exchange controls, and, without evidence, of being "paramilitaries". Yet Venezuela also played a part in getting the FARC to the table, and Colombia has benefited from the flight of Venezuelan talent and capital.

The recent border fracas with Venezuela highlighted Colombia's isolation: it narrowly failed to win the 18 votes needed for a debate on the expulsions at the Organisation of the American States. Colombia's lack of a professional diplomatic service comes at a high price. The country's problems and achievements are little understood even in its own region, which offered scant solidarity, let alone help, in the struggle with illegal armies.

Colombia will need the world's support for whatever peace deal it strikes. It will also need the world's help to monitor the FARC's disarmament, and aid for rural development. But it must do its bit, too. For example, it will never become properly developed and safe until its middle classes learn to pay taxes.

But Colombia, too, has something to offer the world. It already provides security advice in Central America. With luck, it should soon be able to provide lessons on how to end seemingly intractable conflicts. ■

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Argentina's elections (1)

A big surprise

BUENOS AIRES

The first round of voting shakes up the presidential race

HOURS before the official results began to circulate on October 25th, campaign workers for Daniel Scioli, the front-runner in Argentina's presidential election, handed out orange T-shirts, baseball caps and pens emblazoned in capital letters with the legend "president". Pollsters were not sure whether Mr Scioli, who is running as the heir of the Peronist president, Cristina Fernández de Kirchner, would win outright in the first round or move on to a run-off against Mauricio Macri, the mayor of Buenos Aires. No one doubted that he would be well ahead.

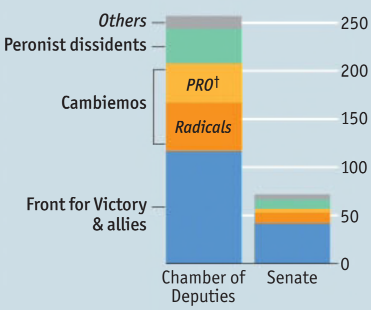
The results are therefore a shock. With 97% of the votes counted, Mr Scioli, the candidate of the Peronist Front for Victory (FPV), has 36.9% of the vote, which puts him barely in front of Mr Macri, who has 34.3%. There will be a run-off on November 22nd. Mr Macri, who is campaigning under the banner of Cambiemos (Let's Change), an alliance of non-Peronist parties that promises to break with the divisive populism of Ms Fernández, now seems to have a good chance of winning.

If he does, he will set a different tone for the country. Unlike Ms Fernández and her late husband, Néstor Kirchner, who preceded her as president, Mr Macri favours markets instead of state controls, is friendly to the outside world and an advocate of strong institutions rather than obedient ones. Mr Macri would undo much of the Kirchners' legacy, though he has promised to keep parts of it (see next story). He would be the first president since Argentina returned to democracy in 1983 who is neither a Peronist nor a member of the movement's less successful rival, the Radical Party. The financial markets cheered that prospect. The stockmarket rose by 4.4% on news of the first-round results and the peso strengthened in the unofficial "blue-dollar" market.

Although Mr Scioli is nominally ahead, the vote looks like a repudiation of his thesis that voters just want judicious modifications to Ms Fernández's policies. Her expansion of welfare and defiance of foreign creditors were popular, but she also pushed up inflation even as the economy started to stall. The middle class is tiring of restrictions on buying dollars. A survey conducted before the election by Management and Fit, a consultancy, found that a quarter of Argentines want the next president to continue Ms Fernández's interventionism, a third want limited changes to her approach and 40% want a radical overhaul. Voters may be eager for more change than Mr Scioli is proposing.

An ill-matched pair

Argentina's next Congress, seats*



Source: *La Nación*

*Results as of October 28th 2015

†Mauricio Macri's party

The setback to his candidacy is even bigger than it looks. Part of his pitch to voters had been that as a Peronist he represents Argentina's dominant political force and would therefore guarantee stable government. "The governors are with me, the presidents of the regions are with me, the mayors are with me and the legislators are with me," he told *The Economist* before the election.

That is less true than he thought. The parties that make up Cambiemos gained 29 seats in the lower house of Congress, while the FPV lost 26 (see chart). If united, the parties arrayed against the FPV and its allies can now outvote them in the lower house, though the FPV retains its ample majority in the Senate.

Cambiemos won the governorship of the Province of Buenos Aires, home to nearly 40% of the population, which had been in Peronist hands for 28 years and in Mr Scioli's for the past eight. That may have less to do with him than with his party's candidate, Aníbal Fernández, who was backed by the president (but is not related to her). His candidacy revived rumours (which he denies) that he had been involved in a drug-trafficking ring. Two-thirds of voters surveyed said they would never back him. Even so, the loss of the governorship, the second-most powerful elected office in the country, is a blow to Mr Scioli. Now, "whoever wins the presidency could have a governability problem," says Joaquín Morales Solá, a columnist at *La Nación*, a newspaper.

Much now depends on who can win ▸▸

over the supporters of the third-placed candidate, Sergio Massa, a Peronist congressman who won 21.3% of the vote. Mr Massa had been Ms Fernández's cabinet chief but struck out on his own before the legislative elections in 2013 and began criticising his old boss. He has been the law-and-order candidate, calling for a crackdown on drug trafficking and harsher penalties for corrupt public officials. On economic policy he advocates a middle way between the "gradualism" proposed by Mr Scioli and the more comprehensive changes espoused by Mr Macri.

Indications are that Mr Massa will support Mr Macri, even if he does not make a formal endorsement. The first-round results show that people "don't want continuity", he said in a television interview.

Mr Scioli must now distance himself from Ms Fernández without alienating Argentines who benefit from her government's lavish spending and cheer her pugnacious attitude toward foreign creditors. If he gets the balance wrong, he may find himself stuck with a lot of useless orange merchandise. ■

Argentina's elections (2)

Macri-economics

BUENOS AIRES

A profile of a possible president

MAURICIO MACRI'S path to politics was an unusual one. On a winter's night in 1991, as he was walking through his posh neighbourhood in Buenos Aires, he was attacked by three men. The assailants—corrupt police officers, perhaps—punched him in the face, bound his hands with wire and shoved him into a coffin in the back of a Volkswagen van. Mr Macri was held for two weeks before his father, a prominent Argentine businessman, paid a $6m ransom.

Mr Macri says that this trauma led him to a career in public service. He gained fame by running Boca Juniors, a football team, for a dozen years until 2007, was elected to Congress and is now mayor of Buenos Aires, Argentina's richest and most populous city. He stands a good chance of winning Argentina's presidential election in November.

His success does not come from personal magnetism. He rarely smiles when cameras are not present. In meetings he comes across as aloof, even apathetic. His speeches lack zest and originality. Perhaps realising he will never inspire a cult of personality, he opted to be a consensus-forger and team-builder. The party he founded and leads, Republican Proposal (PRO), started out on the right but has become more inclusive. It is non-Peronist—the political current to which his presidential rival, Daniel Scioli, belongs—but is not anti-Peronist; many ex-Peronists work alongside the party's conservative founders.

As mayor, Mr Macri improved infrastructure, especially transport, and developed poor neighbourhoods that his predecessors had ignored. Colleagues say he encouraged them to innovate. Banco Ciudad, the municipal bank, began hiring on merit rather than connections, says Federico Sturzenegger, a PRO congressman who ran the bank.

To secure the presidency, Mr Macri will need to change the perception that he is a cold-hearted capitalist, born to privilege. "He seems to favour businesses over people, whereas I want a more inclusive government," says Mariel García, who works at a corner shop in Palermo, a leafy neighbourhood in Buenos Aires.

While promising change, Mr Macri assures voters that it will not be too abrupt. He would end exchange controls and allow the peso to float, but has promised not to undo the nationalisation of pension funds or of YPF, an oil giant. He would leave generous welfare programmes untouched. Voters want a president who will fix the economy without leaving anyone behind. Mr Macri may be the one to convince them.

Guatemala's new president

No joke

The election of a comedian is a gamble

JIMMY MORALES'S previous political campaign ended in disappointment. In 2011 he finished third in a race to become mayor of Mixco, winning just 13,000 votes in a town of 700,000 people. His latest attempt was more successful: on October 25th he was elected Guatemala's president, trouncing his rival, Sandra Torres, in a run-off with nearly 70% of the vote.

Until recently, Mr Morales (pictured) was known as a television comedian, not a politician. Alongside his brother Sammy, he was the star of "Moralejas" ("Cautionary Tales"), a weekly show lampooning Guatemalan stereotypes. In one episode Mr Morales played Neto, a country bumpkin who inadvertently becomes president. In another sketch, he and Sammy tell of crossing the United States border dressed as a cow, but turning themselves in to escape an amorous bull. "I've made you laugh for 20 years," he recalled during his real-life campaign. "I promise that if I'm president, I won't make you cry."

Guatemalans have reasons to be upset. In April details emerged of a racket at the customs agency, in which officials received kickbacks in exchange for reducing import duties for companies. The scandal triggered months of demonstrations against the government, which culminated in September in the resignation and arrest of the president, Otto Pérez Molina. Guatemala also suffers high rates of malnutrition and crime, and its schools are lousy.

Mr Morales, who proclaimed himself to be "neither corrupt, nor a thief", owes his election to revulsion against the political elite. When rivals taunted him for his inexperience he replied that his lack of political connections made him the right person to tackle corruption. He promised to extend from two years to six the mandate of the International Commission Against Impunity in Guatemala, a United Nations-backed investigative team that uncovered the customs scandal, and said he would retain the attorney-general, Thelma Aldana, who has led the prosecution of the ex-president. Mr Morales also pledged to provide more funding for the justice ministry, make government spending more transparent and audit government agencies.

Beyond that, his plans are vague. His manifesto was a scant six pages long. In place of a programme, he offered voters folksy charm. He began stump speeches with a booming, "How are you doing, Guatemala?" and rode a Vespa to his final rally.

A "Christian nationalist", he opposes abortion, same-sex marriage and the legalisation of narcotics, as do many Guatemalans. Some of his other ideas are just ▸▸

Did you hear the one about the frisky bull?

wacky: he wants to give a smartphone to every child and to outfit teachers with GPS trackers to ensure they turn up to work. Mr Morales has promised to cut red tape and taxes, though lower rates seem less urgent than an overhaul of how taxes are collected. (Often, they are not.) As a share of GDP, revenues from tax are among the lowest in the world.

The composition of his cabinet will suggest what kind of president he intends to be. Will he hire technocrats with the expertise he lacks, or surround himself with cronies? He is said to be sounding out four main groups: evangelical churches, big business, academics from the University of San Carlos (whose ex-chancellor, Jafeth Cabrera, will be the new vice-president) and former members of the army.

Mr Morales's ties to the military, which committed atrocities during a decades-long civil war that ended in 1996, worry some Guatemalans. His party, the National Convergence Front (FCN), was formed in 2008 by former officers. Retired generals could soon be pulling the government's strings, says Anita Isaacs, professor of Latin American politics at Haverford College in Pennsylvania. The president-elect denies that the military has had any influence on his campaign.

However he formulates his policies, he will have trouble pushing them through Congress, where the FCN won just 11 of 158 seats. That will force him to seek support from other parties, which may be less keen than he is on stamping out corruption. His honeymoon with voters will be short. "They will demand results from the first month," says Eduardo Stein, a former vice-president. Protest groups have organised a demonstration for January 14th, the day Mr Morales takes office. If the comedian-turned-president fails to clean up government, laughter will quickly turn to tears. ■

Bello | Bringing up better babies

Government programmes may be harming rather than helping the youngest Latin Americans

JORGE, who is eight, lives with his mother in a crowded, semi-finished house of mud and cement in Canto Grande, a former shantytown on Lima's eastern outskirts. When he was smaller, he and his mother were beaten by his father, from whom they are now separated. Though she didn't finish secondary school, Jorge's mother tries to help him with his homework. But Jorge has learning difficulties, finds it hard to make friends and avoids eye contact when he talks. Meanwhile, across Peru's capital, in the prosperous district of Miraflores, the Humpty Dumpty private nursery offers 32 hours of training in "early stimulation" for parents of babies for around $100. Many of the children will doubtless go on to top private schools and lucrative careers.

Inequality starts at birth. Much research from around the world finds that children who are poorly nourished and poorly parented in their earliest years will suffer the consequences for the rest of their lives. They will learn less at school and be less productive as adults. So investing in early childhood makes sense on grounds both of fairness and economic efficiency, argues a new study* published by the Inter-American Development Bank (IDB).

Yet public spending in the region is skewed away from the very young. Latin American governments spend just 0.4% of GDP on children under six, compared with 1.6% on those aged six to 12, according to the IDB. They typically spend more than seven times as much per person on over-65s as on under-sixes. What is worse, the quality of some of the public services directed at young children is so "dismal", especially in day care (ie, day nurseries), that "they may harm—rather than help—the children who use them," the IDB concludes.

On the bright side, the region's youngest are healthier than they used to be. Over the past 50 years infant mortality fell by 75% or more in 15 of the 17 countries for which there are data. Whereas it took the United States half a century (from 1935 to 1985) to cut infant mortality among African-Americans from 80 to 25 per 1,000 live births, Peru managed the same reduction for its Amerindian population in less than 15 years, from 1995 to 2008. Latin American babies are better fed than in the past, or than those in other developing countries.

The region has been much less good at nurturing the mental and emotional development of its young children, especially those born to poorer and less educated mothers. Governments have expanded day care, mainly with the laudable aim of helping mothers to work outside the home. Brazil and Chile have doubled the proportion of children in day care in the past decade, while in Ecuador it has increased sixfold. Much of the provision is in big new centres, with up to 300 infants. But staff are too few, ill-trained and poorly paid. In Colombia, for example, such centres, which cost $1m each, are no better for children than the very basic community care they replace although their running costs are more than four times higher, according to Norbert Schady, a co-editor and author of the IDB report.

Latin America is also trying to expand pre-primary education, which should help children to learn more when they get to school. Again, quality can vary widely. Ecuador recently allowed researchers from the IDB to assign randomly 15,000 kindergarten pupils to different teachers and track their progress in language and cognitive skills. They found some teachers were twice as effective as others in the same pre-school, says Mr Schady.

Some of the best child-development schemes are the simplest. In a pioneering study in Jamaica, cash-strapped mothers received weekly visits from health workers who gave them basic parenting lessons and encouraged them to play with their babies. Two decades later their children had higher IQs, were better educated, less violent and on average earned 25% more than a control group whose mothers did not receive the visits.

What all this means is that governments need to rethink how they try to help their youngest citizens, especially as public money is tighter now that economic growth has slowed. They will get a much better return from home visits, pre-school and childminders than from big, expensive day-care centres. Above all, they need to focus on quality, through better staff training and supervision. Since such investments are invisible and their benefits will only be felt years later, this may be unattractive to politicians. But future generations of Latin Americans may thank them.

*The Early Years: Child Well-Being and the Role of Public Policy. Edited by Samuel Berlinski and Norbert Schady.

Iraq

One step back, two steps forward

Also in this section

America and Iran are competing to show which is the stronger ally in the fight against Islamic State. That should be good news for Iraq

SYRIA gets the lion's share of the world's attention, but in Iraq, after months of stalemate, the battle against Islamic State (IS) is at last hotting up. On October 7th the Iraqi army, local police and some tribal fighters, supported by both coalition and Iraqi air strikes, launched a big push to encircle and eventually retake Ramadi, the capital city of mainly Sunni Anbar province west of Baghdad which fell to IS in May. As *The Economist* went to press, the effort to cut Ramadi off appeared nearly complete, with the 10,000-strong Iraqi force in control of the critical Albu Farraj bridge over the Euphrates and preparing to take on the 1,000 or so IS fighters still left inside the city.

On October 15th around 5,000 Iraqi soldiers and armed national police working alongside 10,000 Iranian-supported Shia militia fighters (known as Hashid al-Shabi or Popular Mobilisation Units), with some help from coalition air strikes, began an assault to recapture the Baiji oil refinery. After months of inconclusive fighting, victory was declared on October 24th. The refinery, once the country's biggest, is damaged beyond repair. But since it sits halfway between Baghdad and IS-occupied Mosul in the north, holding it and the nearby town is strategically vital. Control of the road south will make it harder for IS to threaten Tikrit, retaken by the government in April, or to funnel reinforcements into Anbar.

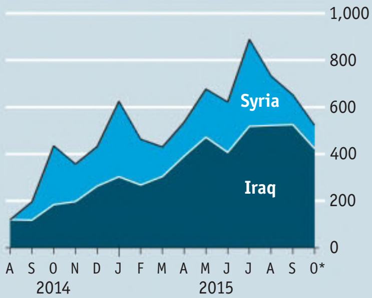
These twin offensives came after several months of drift. The delay was caused by the intense summer heat and the time it is taking to reconstitute the Iraqi army after two of its divisions collapsed 18 months ago when IS rampaged through northern and western Iraq, seizing Mosul, the country's second city (with a population of nearly 2m), and coming close to Baghdad.

The new push involves new tactics: big simultaneous attacks in places nearly 250km apart will stretch IS. And the deliberate division of labour between the Hashid al-Shabi militias and the government-controlled Iraqi Security Forces (ISF) may be even more significant.

Since late May, the Iranian-backed militias have been concentrating their efforts on Salahuddin province, north of Baghdad, in a more or less independent operation that keeps them away from Anbar to the west, where the prime minister, Haider al-Abadi, under pressure from the Americans, is trying to limit their role. Some Sunni tribes have linked up with the Hashid al-Shabi there, but too often when Shia fighters drive IS out of Sunni areas, their main interest is in carrying out reprisals against locals suspected of collaboration.

Hard pounding

Number of air strikes by US-led coalition forces



Sources: Airwars; Combined Joint Task Force–Operation Inherent Resolve

*To October 27th

The Americans are keen to chalk up a military success that owes nothing to Iran, and have consequently been upping the tempo of air sorties in Anbar. (The Pentagon claims about 150 in the past three weeks, mostly around Ramadi.) The Americans are also supplying armoured bulldozers to carve a path through booby-trapped defences.

In a separate operation on October 22nd American special forces joined with Kurdish *peshmerga* units in a daring raid to help free 69 prisoners held by IS near the northern town of Hawija. The Pentagon said that the mission, which cost the life of an American soldier, was a response to intelligence received by the Kurds that the captives were about to be murdered. America's defence secretary, Ashton Carter, in testimony to Congress this week, suggested that Barack Obama's "no boots on the ground" promise was under revision. He said that American forces "won't hold back from supporting capable part- ▸▸

ners in opportunistic attacks against IS…or conducting such missions directly, whether by strikes from the air or direct action on the ground".

The stakes have become much higher since the unwelcome arrival of the Russians in Baghdad last month to establish a military intelligence "co-ordination cell" with Iran and Syria. Such is the concern in Washington about what Russia may be up to in Syria that America's most senior officer, Marine General Joe Dunford, was dispatched to Iraq on October 20th. In meetings with Mr Abadi and the defence minister, Khaled al-Obeidi, he warned that America could not continue its present level of military support if the Russians start carrying out air strikes of their own.

Remember who your friends are

It was a reminder to the Abadi government that the American-led coalition is the essential ally against IS. But to show Iraqis that he is wise to prefer an alliance with the Americans, what Mr Abadi most needs is a speedy and conclusive victory in Ramadi. Patrick Martin of the Institute for the Study of War, a Washington-based think-tank, notes that the more the Iranian proxy militias succeed in Baiji without an ISF breakthrough in Ramadi "the more pressure there is on Abadi".

General Dunford appears to have been heeded. Yet many Iraqis are still disappointed about the level of America's commitment. When Mr Obama declared just over a year ago that his strategy was to "degrade and ultimately destroy" IS, the expectation in Baghdad was that he would attack the so-called caliphate far more energetically than he has.

Mr Obama accepted that it would take time "to eradicate the cancer" of IS. But he was wrong about much else, in particular his assertion that IS "is a terrorist organisation, pure and simple". That IS is spectacularly brutal is not in doubt, but it also holds territory, administers it and is prepared to defend it. About 10m people live in the areas IS controls, the vast majority of them in the relatively populous towns of the Sunni-majority parts of Iraq. Although IS rules by fear, it also attempts to provide basic administration and rudimentary services, which some may find preferable to the malign neglect of the previous Shia-dominated government in Baghdad.

Militarily, although IS uses terrorist tactics, such as suicide bombs, these are only one aspect of its formidable combat power. Mr Obama misjudged the nature of an adaptable enemy and the environment in which it operates.

The initial objective of halting the advance of IS and pushing it out of mainly Shia areas, such as Samarra, Karbala and the outskirts of Baghdad, was fairly swiftly achieved. The increasingly autonomous territory controlled by the Kurdish Regional Government, based in Erbil, looks secure too. Its *peshmerga* fighters have established strong defensive lines that extend across most of the multi-ethnic, oil-rich province of Kirkuk. The liberation of Jurf al-Sakhar and Tikrit also showed that Sunni towns could be retaken from IS, albeit at huge cost to the inhabitants.

But since those early gains, which saw IS lose about 15% of the territory it had captured earlier in the year, an uneasy stalemate ensued. This was interrupted by the shocking loss of Ramadi in May, which scuppered over-optimistic plans, drawn up by American military advisers and the government in Baghdad, for an assault on IS in Mosul later this year.

There are now signs that the Iraqi forces are improving after their earlier woeful performance. But the government in Baghdad remains over-reliant on the Hashid al-Shabi, over which it exercises only patchy control and which have little inclination to work with Iraqi Sunnis. Attempts to create a national guard based on Sunni tribal militias in Anbar, something the Americans have been urging in the hope of establishing a second "Sunni Awakening", have collapsed. For this, blame lies with Shia power-brokers, close to the Iranians, who are undermining the efforts of the well-meaning Mr Abadi to be more inclusive. Unless the Sunni tribes can be organised into an effective fighting force, the prospect of freeing all of Anbar province from the grip of IS will remain remote.

Too soft on Iran

America has not only failed to push Baghdad to engage constructively with the Anbari tribes. Some say it has also ceded too much sway to Iran, which has provided military assistance more rapidly and wholeheartedly than the coalition. Many people suspect that Mr Obama was reluctant to push back hard against Iranian influence in Iraq for fear of derailing his nuclear negotiations with Tehran.

That may now be changing, if only gradually. Yet without a less risk-averse American train-and-assist mission to improve Iraq's security forces and a much more aggressive air campaign, there is still a danger that people will accept the status quo. That implies accepting that Iraq has no future as a unitary state—an outcome that would suit both Iran and IS.

There are about 3,500 American military trainers in Iraq but, under Mr Obama's orders, they have been largely confined to their own bases. Among critics of America's tentative strategy for defeating IS, Anthony Cordesman of the Centre for Strategic and International Studies in Washington observes: "Generating or rebuilding forces in the rear is not enough and is an almost certain recipe for failure. New or weak forces need forward deployed teams of advisers to help them actually fight."

The Iraqis are also frustrated by restrictive rules of engagement laid down by the White House aimed at minimising the risk to civilians. Ahmed Ali, an analyst based in Iraqi Kurdistan, argues that "the current rules have…hampered ground forces from being more effective". Mr Martin says it is vital to have American forward air controllers to direct strikes on IS targets. Mr Cordesman describes the air campaign so far as "weak". A more aggressive one could boost Iraqi morale, destroy key IS units in Iraq and Syria and give Iraqi forces time to rebuild their strength, he argues. This may at last be happening. General Dunford said this week he was now open to embedding American troops with Iraqi combat forces to help provide them with intelligence and to direct air strikes and artillery fire.

Doubts will linger about whether Mr Obama has the will to succeed in Iraq. But something is shifting and it is not too late. A less cautious coalition effort would also bolster Mr Abadi, who needs all the help he can get (see next article). Convincing Iraq's Sunnis that Baghdad genuinely cares about their fate and wants them to remain part of Iraq is the only way to defeat IS in the long term. Iraq is still a mess, but unlike Syria, it is not yet beyond salvation. ■

Iraq's troubled politics

Uneasy lies the head

BAGHDAD

Iraq's prime minister has been in power barely a year, but is floundering

AT ANY time, Haider al-Abadi would have made an unusual Middle Eastern leader. But his appointment in August 2014 as prime minister and head of the armed forces just two months after Mosul, Iraq's second city, had fallen to the fearsome new armies of Islamic State (IS) seemed especially perverse. He had held no previous military post, and in his youth had dodged the draft. As a British exile, he fixed lifts for the BBC. But while Iraqis seemed content to leave the battle against IS to others, particularly the Iranian-backed Shia militias, they looked to him to right Iraq's woefully corrupt state, which is divvied up between sectarian and Kurdish political blocs.

Fifteen months into the job, he has made many of the right noises. In contrast to his megalomaniac predecessor, Nuri al-Maliki, he goes walkabout, brushing aside his few guards so that people can take selfies with him. He handed the plane Iran gave Mr Maliki to the state airline. "We've started blowing some big fish out of the water," he promised. And his political reform plans, unveiled in September, initially went down very well. Throughout the summer, hundreds of thousands of protesters had taken to Iraq's streets, demanding that he dismiss a cabinet selected by the political blocs who treat ministries like cash machines, handing contracts to their chums and pocketing salaries for legions of ghost workers. "The parties haven't come to build the state," says Baghdad's governor, whose religious Shia party, Sadr, looked to garner public support by backing the protests. "They've come to build themselves and their bank accounts."

The country's Shia ayatollahs, many based in the city of Najaf, joined the chorus. Mr Abadi should strike the corrupt with an "iron fist", said the Grand Ayatollah, Ali al-Sistani. The West applauded when Mr Abadi produced his reforms, hoping they heralded a more technocratic government. The collapse of the oil price further strengthened the case for reform, to curb the country's budget deficit.

But Mr Abadi has squandered his opportunity with half-steps and tokenism. He took to Facebook to announce the opening to traffic of the Green Zone, the chunk of central Baghdad the Americans turned into a government enclave in 2003 and which has bunged up the capital ever since. But he only opened a single one-way road, disrupted by so many checkpoints that the old routes are still faster.

He cut his cabinet from 33 to 22, but all bar four of the old-timers got new government titles. He gave three vice-presidents, Mr Maliki included, 48 hours to leave their official residences in the Green Zone; but did nothing when they stayed. On October 18th his prosecutor said that the trade minister would stand trial for corruption. But Mr Abadi has kept him on. Rather than cut the bloated public sector, he has added half a million to the payroll in the name of the war effort. His advisers despair.

Of course, change is not easy. The youth and sports minister, from another Shia religious faction, ISCI, decries the cumulative $900 billion of government money spent since the Americans gave the factions ministries in 2003, including $75 billion on an electricity system that is still plagued by blackouts. But he bridles at the suggestion that he might start by culling his 8,000 employees, too many of whom, when they show up, slouch at empty desks.

And Mr Abadi's hand is weak. As a member of the Islamic Dawa Party, he owes his job to the party system, but remains a bit-part player in it. The former prime minister, Mr Maliki, remains Dawa's head, and his loyalists are now threatening to withdraw their support for Mr Abadi if he does not do their bidding. "If he'd have touched the party system, we'd probably have shot him," says a middle-ranking Dawa hand. Many resent the system which has seen the factions turn Baghdad's prime property into compounds and distribute the oil wealth to militias. But livelihoods depend on it, and many more fear what would happen should it crash. When Mr Abadi halved the monthly expenses MPs get for their security teams, parliament overruled him.

Unable to sack non-existent workers, Mr Abadi instead is seeking to cut salaries. Senior civil servants and policemen have seen their wages and expenses sharply pruned. Many lower-tier staff are months in arrears. Struggling to pay his rent, an official in the prime minister's office complained that he has had to move back with his parents.

The circle of malcontents is growing. "There's a strong Baghdad undercurrent trying to bring him down," says Mowaffak al-Rubaie, a former national security adviser still close to Mr Abadi. Dawa is considering replacing its own man, perhaps with Mr Maliki, or Ali al-Adib (another Dawa stalwart) or Hadi al-Amiri (a militia chief who is leading the current attack on IS). Fearful that such strongmen would bolster Iran, Western powers have been eyeing their own candidates, too. Some look to old survivors who are at arm's length from the religious blocs, including the current head of the finance committee, Ahmed Chalabi. Elections are due in 2017, but many now doubt Mr Abadi's future will be settled at the ballot box. ■

In office but not in power

Student protests in South Africa

Boiling over

JOHANNESBURG

The ANC faces perhaps its biggest challenge yet

PROTESTERS set tyres ablaze. Police sprayed rubber bullets and tear gas on university campuses. Angry students chanted struggle songs and danced the "*toyi-toyi*", a knees-high jog made famous during protests against apartheid. It was like a scene from South Africa during the chaotic years of the 1980s; instead, it was this week.

The echoes of the struggle era were striking: white university students even moved to the front of protests in the belief that police would be less likely to open fire on them than on black students. Yet the differences are also striking: these protests are not directed at a parliament devoted to upholding white supremacy but at a democratically elected government controlled by the African National Congress (ANC), the party that ushered in non-racial democracy under Nelson Mandela.

The protests started as scattered marches against plans to increase tuition fees by 10% at the University of the Witwa-

Born free but really annoyed

tersrand and the University of Cape Town, two of the country's best. Trouble had been brewing on campuses for months as student activists marched against racism—real or perceived—while demanding the "transformation" of universities. They complain that universities have too few black staff or students. This is true, but largely because, thanks to terrible schools, black South Africans still do much worse in exams than whites, something the ANC has failed to fix. Until until the fee increase was announced the protests drew little support from the wider student body. Now they have grown into a nationwide movement that has shut almost all the country's universities for two weeks.

The protests are about far more than fees. Many students, and those who support them, complain about the ANC's corruption and its inability to deliver on many of the promises it made before assuming power in 1994, among them to provide free education. "Our parents were sold dreams in 1994. We're just here for a refund," read one placard held by students in a march to the Union Buildings in Pretoria, the official seat of government.

Some local pundits liken the protests to the Soweto uprising of 1976, when schoolchildren protested against apartheid, or talk of a "South African Spring", alluding to the protests that swept away repressive dictators in the Middle East in 2011. Both analogies seem implausible. Yet the protests do mark a political awakening for a generation of young people who were born after the end of apartheid and are known in South Africa as the "born frees".

The born-frees are numerous: almost a third of South Africans are aged between ten and 24. Many expected that these young people would be crucial swing voters in the 2014 elections, because youth unemployment is as high as 50% and those who do not remember apartheid were assumed to feel less gratitude to the party that ended it. In fact, young South Africans largely stayed away from the polls.

Now that young people have taken to the streets, however, the government is shaken. Only a few days ago, the education minister, Blade Nzimande, dismissed the students' slogan ("fees must fall") with a ghoulish joke: "students must fall." Now his cabinet colleagues have taken to the airwaves to say that they salute the students' struggle, neglecting to mention that it is against their government. Jacob Zuma, the president, swiftly gave in to the protesters' demands that university fees be frozen in 2016. It is not clear where his embattled finance minister will find the additional 2.6 billion rand ($190m) to pay for this. The budget deficit is expected to be 3.8% of GDP this year—pushing government debt close to its 50% ceiling.

The students' success seems to have done little to quieten them. Activists now patrol campus entrances turning away faculty members, prompting some to fret that if exams are not held soon no one will graduate and final-year students will have lost an entire year's study.

Their protests have also inspired others. On October 27th some 30,000 supporters of the Economic Freedom Fighters, a rowdy new ultra left-wing party that won 6% of the national vote in 2014, marched through Johannesburg demanding, among other things, that the government nationalise big companies and that the central bank should scrap its inflation targets and instead start printing money. South Africa's summer is likely to be a hot one, in more ways than one. ■

Reclaiming Nigeria

After Boko Haram

YOLA AND ABUJA

Pushing back the slave-grabbing rebels is only the start

THE marks of terrorist rule start to appear a couple of hundred kilometres north of Yola, capital of Nigeria's Adamawa state. Bombed churches and burnt-out political offices sit decaying in Hong, one of the southernmost towns taken by Boko Haram. Broken-down tanks adorned with the jihadists' emblem litter the road. Deep in the self-proclaimed caliphate, signs advertising un-Islamic goods and services have been blotted out in black. In shaky Arabic, the words "There is no god but Allah" are tattooed on walls.

Nigeria has made gains against the Islamic State-affiliated insurgency, which at the height of its power occupied an area of the north-east roughly the size of Belgium. Pushed out of most major settlements now, its fighters are hiding in the scrublands of the Sambisa forest and across the border in Cameroon. Morale among Nigeria's soldiers has soared. They are better equipped, and better liked, than in years. Children smile and salute them in the streets. "They brought this land back to us," said one woman farmer, who lost two children when the insurgents took Michika, a town in Adamawa, in 2014.

In the safer reclaimed spots in this state, life is improving. Torched farms are being replanted, markets have reopened and cars have returned to the roads. Citizens are rebuilding bridges bombed by Boko Haram. Shattered banks are opening new branches in bigger settlements like Mubi, re-establishing exactly the kind of "Western" economy that the insurgents revile (the name Boko Haram means roughly "Western influence is forbidden").

Flyers distributed in Adamawa by Nigeria's armed forces tell locals to take heart. "Your villages are safe now," read the pam-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phlets, which were dropped (with no hint of irony) from helicopters. Authorities across the region promise to close refugee camps in the coming months. In Borno, the worst-affected state, the governor says he has begun rebuilding properties in "accessible" towns such as Bama.

Non-profit organisations are worried, though. They complain that leaders have downplayed the scale of the humanitarian crisis. They also worry about sending displaced people back to unsecured towns. Militants still stage murderous raids on villages where vigilantes are more visible than the military, and suicide bombers attack markets or non-extremist mosques with terrifying regularity. Almost 50 people died in twin attacks on the capitals of Adamawa and Borno states last weekend alone. "Most locations are not 'safe' from Boko Haram," one Abuja-based diplomat says. "The Nigerian army has not finished operations, and is far from doing so."

The north-east is among Nigeria's poorest regions, and many returnees are afraid to go back to farming, which is the only work many can find. Instead, they rely on overburdened relief agencies for food. The most recent counts from the International Organisation for Migration suggest that people are still fleeing their homes in Nigeria's north-east. A "conservative" tally put the number of displaced at 2.15m in August, and rising. Now is not the time to force them back into villages beleaguered by Boko Haram. ■

The International Criminal Court

The battle against impunity goes on

Despite African leaders' brickbats, the court is still fighting for justice

EVER since an incumbent president, Sudan's Omar al-Bashir, was indicted in 2008 for genocide and other alleged crimes, the pendulum began to swing against the International Criminal Court (ICC), at least in Africa. Some people, especially African leaders, think it biased, since all those so far convicted have been African. Earlier in October a South African deputy minister said his government was planning to leave the court. Kenya's parliament, nettled by the indictment of the two men later elected president and deputy president for crimes against humanity following a murderously disputed election, has previously called for Kenya to quit too. Uganda's president has urged African countries to leave *en masse*.

Even though more than half of the countries in the African Union (AU) are signatories to the ICC statute and were once its keenest backers, the AU has set up a rival court. Under a protocol proposed (but not yet ratified) last year this new court may exempt incumbent leaders and senior officials from being charged. That would make it a feeble substitute for the ICC, which aims to try even the loftiest of leaders if they slaughter their people. Bearing in mind the carnage in such places as Rwanda, Darfur and former Yugoslavia, the ICC insists that no one should have impunity.

But in mid-October the AU called for the ICC to interpret one of its rules in such a way that its case against Kenya's deputy president, William Ruto, would be weakened and even scuppered; the charges against President Uhuru Kenyatta were dropped last year. South Africa's government also seems bent on poking the court in the eye by inviting Sudan's president, Mr Bashir, to attend a China-Africa summit in Johannesburg in December, even though South Africa is bound by international law as a result of its ICC membership to arrest him and send him to The Hague, where he has been indicted for orchestrating mass murder and rape in Darfur. If South Africa welcomes him again, as it did in June, it would be another setback for the court.

Yet the ICC is not giving up, in Africa or elsewhere. For one thing, it is uncertain that South Africa will leave it. President Jacob Zuma has been more equivocal on the matter than his deputy minister. South Africa's own judges, not to mention its civil society, still intend to meet its government's obligations to the court. They guess—and doubtless hope—that the government will not in the end risk the damage to the country's reputation for upholding international law that an exit from the ICC might entail.

The AU's stand on the Ruto case is complicated, too. It rests on the interpretation of a rule that allows evidence to be taken into account even if the person who originally provided it later withdraws it, as has been the case in Kenya, where a clutch of witnesses have recanted; others have died or disappeared. The ICC's chief prosecutor, Fatou Bensouda, believes they were all interfered with. The Kenyan government and the AU both say that the court agreed not to apply the rule in Mr Ruto's case. Not so, says the prosecutor.

Ms Bensouda, a Gambian, is particularly keen to reject the charge that the court is biased against Africans. She notes hopefully that most African governments continue to co-operate with it. In September the court set a precedent when Niger arrested Ahmad al-Faqi al-Mahdi, a Malian jihadist, and sent him to The Hague, where he was charged with the war crime of ordering monuments and shrines in the city of Timbuktu to be sacked.

October's opening of a full investigation into crimes committed by Russia and Georgia during their war in 2008 lends weight to Ms Bensouda's assurance that the court is not focused just on Africa. In fact, though her team is investigating crimes in eight African countries—the Central African Republic, the Democratic Republic of Congo, Kenya, the Ivory Coast, Libya, Mali, Sudan and Uganda—it is also conducting preliminary examinations in Afghanistan (where Americans could in theory be charged), Colombia, Honduras, Iraq (where British soldiers' conduct is being looked at), Palestine (where Israeli as well as Palestinian behaviour is being scrutinised) and Ukraine. That is hardly an exclusively African tally of wickedness. ■

The fight over Ruto

Also in this section

An election in Myanmar

Change in the air

TAUNGUP

The first proper election in a generation is a stepping stone to an uncertain future

THOUSANDS waited for hours under a blazing sun on the football field in Taungup, a small town near the Bay of Bengal in Rakhine state in Myanmar's west. Most wore the red T-shirts of the National League for Democracy (NLD) and waved flags emblazoned with the party's star-and-peacock symbol (pictured above). One teenager carried a rose, intending to present it "to my leader, to my president". When Aung San Suu Kyi's four-wheel drive bumped into view, the crowd chanted "Maa Suu!"—Mother Suu.

On the face of it, the campaigning across Myanmar ahead of a general election on November 8th might seem nothing exceptional. Yet the scene in Taungup would have been unthinkable five years ago—not least because the NLD was banned, Miss Suu Kyi was under house arrest and a downtrodden people were under the army's boot. Today Miss Suu Kyi sits in parliament. Her NLD is set to reap the most votes in the election. To many in the West, it looks like a happy end to Myanmar's long and dark journey. In fact, the election is but one stepping stone to an uncertain future. Many questions remain unanswered, including whether the Burmese can pull themselves out of poverty and when ethnic conflicts that have raged for decades will end.

The most immediate question is how much power Myanmar's armed forces, who have been in charge since 1962, are willing to cede. The army wrote Myanmar's constitution, which a sham referendum put into effect in 2008. Two years later a few generals traded in their uniforms for *longyis* and set up the Union Solidarity and Development Party (USDP). Together with the quarter of seats reserved by the constitution for the army, it has a comfortable parliamentary majority. Unlike in 1990, when the army ignored the election result, at least the outcome of this one appears likely to be respected. But the soldiers are taking no chances. However well or badly the USDP does in the election, the army's 25% bloc will remain in place. The opening that Myanmar has witnessed over the past five years is astonishing in comparison with what went before. But it is taking place on the army's terms.

The election is not entirely fair. Voter lists are inaccurate and ripe for abuse. In some violent areas voting will not take place at all. Meanwhile, perhaps 1m Muslim Rohingyas in a largely Buddhist country have been deemed stateless—non-persons ineligible to vote at all (see map, next page). Three years ago Taungup was at the centre of communal mayhem that quickly flared into a pogrom carried out by Buddhist Rakhines against the Rohingya population. Tens of thousands of Rohingyas fled abroad on rickety vessels.

But Miss Suu Kyi, a Nobel peace-prize winner, is turning a blind eye to some of the election's blemishes, believing the process still marks a big step forward. Her visit to Rakhine was not a gesture of sympathy with the Rohingyas. She has been shamefully silent on the topic. Muslims make up only 4% of Myanmar's population, but being accused of supporting them is a fast way to lose Buddhist votes.

That matters to Miss Suu Kyi. She shows a steely determination to help her party win. Wirathu, a vitriolic Buddhist monk, and members of a pressure group calling itself the Association for the Protection of Race and Religion, better known as Ma Ba Tha, have been campaigning against the NLD in rural areas. They accuse the NLD of being pro-Muslim. Miss Suu Kyi says she deplores such chauvinism. But the NLD has no Muslim candidates. In Rakhine, Muslim shopkeepers complain that Buddhists boycott their shops and bus stations refuse them tickets. Yet on the campaign trail Miss Suu Kyi offers only bromides.

The real prize

In by-elections in 2012 the NLD won 43 out of 44 seats. This time it could win two-thirds of the 75% of seats that are up for grabs, which it would need for a parliamentary majority. But a landslide is not guaranteed. Despite Miss Suu Kyi's popularity, and however hard it is to meet anyone who claims to be a USDP supporter in the big cities, the army-backed party is a well-financed machine able to get out the vote. Meanwhile, over 90 other parties, many ethnic-based ones, are also fielding candidates. Not all support the NLD.

The parties have their eye on who will succeed President Thein Sein, a former general. His successor will be elected by the new parliament when it convenes early next year. Legislators will choose from among three candidates—one each nominated by the upper house, the lower house and the army. The two losers automatical- ▸▸

ly become vice-presidents, while the winner selects the cabinet.

The new president may not be known until February or even March. But one thing is certain: however well the NLD does, Miss Suu Kyi will not get the top job. The army-written constitution bans anyone with a foreign spouse or children from the presidency. Miss Suu Kyi's late husband was British, as are her two sons. The provision seems designed specifically to block her. Miss Suu Kyi says the NLD will nominate "a civilian member of our party" to be president. But there is no doubt she would be the one effectively in charge. That would lead to opaque decision-making and a lack of accountability. Worryingly, Miss Suu Kyi evinces little interest in policy detail.

As for the USDP, a tussle within the party to curb the army's influence seems to have ended, at least for now—to the benefit of the generals. In August, helped by troops who shut down the capital, Naypyidaw, Mr Thein Sein suddenly ordered the removal of his colleague, Shwe Mann, the parliamentary speaker. That ambitious politician, also a former general, was rumoured to have forged a working relationship and perhaps a future power-sharing deal with Miss Suu Kyi.

For the new president, an urgent task will be to find peace with ethnic groups who resent Burman dominance. Myanmar is a kaleidoscope of ethnicities. For decades the army justified its repression by claiming that, without it, the country would disintegrate. By contrast, ethnic groups say that the autonomy they were promised in 1947 in the Panglong agreement (signed for the government by Miss Suu Kyi's late father and independence hero, Aung San) has yet to materialise.

The shady jade trade

On October 15th the government announced that it and several ethnic armies had reached a "national ceasefire agreement". Mr Thein Sein called it a "historic gift" to future generations. In fact, it looks rather trifling. The agreement covered just eight of dozens of rebel groups, all of which had already agreed bilateral ceasefires with the government. It omitted groups that are still in conflict with the government, including the United Wa State Army, the Shan State Army North and the Kachin Independence Army (KIA). And it neglected the thorniest issues of all—sharing resources and devolving power.

Increasingly, drugs and natural resources—notably gemstones and timber—are fuelling the conflicts. Much of the world's jade is mined in Kachin state. A new report by Global Witness, an NGO, estimates that $31 billion of Burmese jade was sold in 2014, mostly on the black market. If this extraordinary figure is true, it would be more than 60 times what the government spends on health care.

Sources: "Burma: Insurgency and the Politics of Ethnicity", by Martin Smith; *The Economist*

The jade trade underwrites the KIA. It also enriches not only the KIA's leaders but also a shady alliance of high-ranking army officers (who are supposed to be fighting the KIA), USDP bigwigs, crony companies and the kingpins who control both the gemstone and drug trades.

This pattern is replicated across several conflict zones. Any comprehensive peace deal would require regions to send at least some revenues back to the central government in the form of taxes, while the army would have to return to its barracks. However, powerful people on all sides do very well out of the fighting. And even if the issues surrounding resources can be resolved between regions and the centre, then there is the matter of trust. Many ethnic groups simply do not believe the government's promises of federalism. Past promises, which came to little, give them good grounds for scepticism. Some rebel groups will wait and see what clout the NLD and Miss Suu Kyi have after the election. Given the army's continuing role, they are unlikely to be impressed.

Generally good

GDP, % change on a year earlier

Sources: National statistics; IMF *Estimate †Forecast

Until the country is at peace with itself, its people will struggle to escape from poverty. Take a striking example of multinationals' new presence in Myanmar: two pipelines that emerge from the sea and run up the beach not far from Kyaukphyu, some 50 miles (80km) north-west of Taungup. These come from offshore oil and gas concessions that foreign energy companies have bid for. The government says that it wants to build around these pipelines an industrial zone, a deep-sea port, hotels and new homes. Yet the pipelines run straight into the Rohingya-Rakhine conflict zone and then north into restive Shan state. It is hardly an easy place to build on, and plans for the zone have so far come to little.

Indeed, only one of three proposed special economic zones intended to jump-start growth seems to be getting anywhere. The Thilawa zone near Yangon, the hectic commercial capital, is backed by the Japanese government. Roads are being built, a container port on the Irrawaddy river is going up, and factories are being laid out. Yet, South-East Asian entrepreneurs say, the pace could be much faster.

Among other things, they say, the money of the Burmese elites, much of it ill-gotten, is chasing up the price of land for factories at Thilawa. That undermines the chief thing Myanmar has going for it, as a destination for low-cost manufacturing churning out clothes, shoes, cheap electronics and the like. Though foreign investment has gone into telecoms and exploration for oil and gas, what Myanmar now badly needs are factories that might employ low-skilled Burmese currently living hardscrabble lives on the land. The country's garments sector employs a mere 260,000 people in a population of 53m, compared with the more than 4m textile workers in neighbouring Bangladesh and 2.2m in Vietnam.

The challenges are daunting. The government is valiantly trying to improve a decrepit civil service. Commercial regulations are outdated and haphazardly applied. Transport infrastructure is woeful. In recent years the economy has grown impressively (see chart)—but from a very low base. Myanmar remains poor: GDP per person is just $1,270, compared with $1,670 in Laos, $5,370 in Thailand and $7,380 in China. Visitors to Yangon seldom see this. The city's skyline is dotted with cranes, its streets are clogged with new cars and a chic bar or eatery seems to open every week. Kyaukphyu in Rakhine state has its traffic jams, too. But they are caused by bullock carts. If a new dawn is breaking in Myanmar, and it is far from clear that one is, it is not evident there. ■

Politics in the Maldives

Dodging death in paradise

MALE

Turmoil erupts in the Maldives after the arrest of the vice-president

OVER the years the crystal waters of the Maldives, an Indian Ocean archipelago beloved of high-spending, beach-loving tourists, have often been muddied by internecine politicking. But even jaded Maldives-watchers are alarmed by the arrest of the country's vice-president. That is because Ahmed Adeeb is accused of conspiring in last month's apparent attempt on the life of President Abdulla Yameen.

On October 24th, after touching down at Ibrahim Nasir International Airport in the capital, Male, Mr Adeeb was taken to Dhoonidhoo, a detention facility. While he had been away on business in China, the authorities had searched the homes of several of his close associates. The drama of Mr Adeeb's arrest was captured by the tone of a tweet from the home minister, Umar Naseer: "Charges: High Treason".

Mr Adeeb is accused of involvement in an explosion on the president's yacht on September 28th, which left Mr Yameen unharmed but injured his wife, Fathimath Ibrahim. Journalists crowding around the capital's main jetty, awaiting Mr Yameen's return from the airport on his yacht, after a pilgrimage to Muslim holy sites in Saudi Arabia, saw a brief flash of flame and heard a loud crack as the rear door was blown from the boat.

Government sources say suspicions soon focused on the youthful Mr Adeeb, who has enjoyed a meteoric career: he was little-known before his appointment as minister for tourism, a post he held for three years before he was promoted to the vice-presidency in July.

Within days of his arrest, Mr Adeeb—who has denied any involvement in the explosion—was dumped by his party. Former colleagues moved quickly to begin impeachment proceedings. At initial court hearings, Mr Adeeb appeared by a shaky video link; his lawyer questioned the evidence against him.

Mr Adeeb's arrest is evidence of the frailty of the Maldives' seven-year experiment with democracy. After it was announced, Mr Yameen said in a televised address that he had allowed Mr Adeeb to amass too much power. He also commented publicly for the first time on the many controversies that have clouded his two-year presidency. These include the jailing of the defence minister, Mohamed Nazim, for attempting to harm the president; the impeachment of his first vice-president, Mr Adeeb's predecessor; and the controversial sentencing of a former president, Mohamed Nasheed, to 13 years' imprisonment on terrorism charges. New anti-terror legislation was adopted on October 27th. Ostensibly it is aimed at combating the Maldives' growing problem with home-grown jihadis. But opposition politicians say one purpose of it is to intimidate the government's critics.

The case of Mr Nasheed has attracted global attention. He had been an outspoken campaigner against global warming, which threatens the islands. His tenure as the country's first democratically elected leader was cut short when opposition politicians and rogue police officers, who had refused to curb anti-government protests, combined to force his resignation in 2012. Mr Nasheed's legal team includes Amal Clooney, whose marriage to George Clooney, a Hollywood actor, ensures extra publicity for the case. A UN body ruled in September that Mr Nasheed had been detained arbitrarily.

This most recent round of intrigue is ominously reminiscent of the days of coups, conspiracies and arbitrary detentions that characterised the rule of Maumoon Abdul Gayoom, Mr Yameen's half-brother, who was president from 1978 to 2008. The government has repeatedly tried to reassure sceptics abroad that it is helping to strengthen democracy. That task has just got a lot harder. ■

Religion in Japan

Temples of doom

TOKYO

Japan's Buddhist temples are going out of business

FAR from preaching abstinence from earthly pleasures, the Buddhist priests behind the counter of Vowz, a Tokyo bar, encourage the opposite. There are different paths to Buddha, says Yoshinobu Fujioka, the head priest, as he pours a gin and tonic for a customer. "Spiritual awakening can come in any conversation. We provide that opportunity."

Such are the doctrinal contortions that Buddhists in Japan sometimes practise in their struggle to remain relevant. Some of the nation's 77,000 Buddhist temples run cafés, organise fashion shows or host funerals for pets. Still, hundreds close every year. By 2040, 40% may have gone, laments Hidenori Ukai, the author of a new book on the crisis in Japanese Buddhism.

In 1950 the Temple of the Golden Pavilion in Kyoto was burned down by a schizophrenic monk who adored the place. Today's temples, by contrast, are fading away in a puff of indifference. Japanese people are growing less religious, and less numerous, every year.

Where are the pilgrims and punters?

You might think that funerals would keep modern temples busy. Nearly 1.3m people died last year in Japan (a post-war record); Buddhism has for centuries been the religion of choice at funerals and in spiritual care for the bereaved. But with costs often in the region of ¥3m ($24,700), funerals in Japan are among the priciest in the world. Cremation is followed by a ritual in which the bereaved use chopsticks to pluck the charred bones of their loved ones from a tray and place them in an urn. A priest mumbles incantations and bestows a posthumous name. It's all rather elaborate.

So cheaper alternatives are becoming increasingly popular. Over a quarter of funerals in Tokyo are now non-religious, says Mark Mullins, an expert on Japanese religion. Many families are opting to scatter ashes in forests or oceans, or even send them by post to collective graves. The Koukokuji Buddhist Temple in Tokyo runs an automated indoor cemetery packed with over 2,000 small altars storing the ashes of the deceased. That helps their families avoid the expense and inconvenience of a remote country plot. A website lists prices, options and walking distances to local train stations.

In the countryside, millions of Japanese still maintain family grave-sites attached to rural temples, paying as much as ¥20,000 for their annual upkeep. But the temples need support from 200 families to break even, say sociologists. Ageing, withering communities can no longer sustain them.

Banyan | Hot water

As America challenges China, the temperature rises in the South China Sea

YOU might have thought an American invasion of China was under way. A warship had "illegally entered" waters in the South China Sea threatening "China's sovereignty and security interest", declared Lu Kang, a Chinese spokesman. In fact, all that had happened was that a destroyer, USS *Lassen*, had peacefully sailed within 12 nautical miles of Subi Reef, one of seven specks of rock and coral in the much-disputed Spratly archipelago where China has been engaged in frenetic construction over the past two years, creating artificial islands.

Chinese admirals may be fuming, but nobody expects a war over the incident. America, however, has said it will not be the last such sail-by. So tension in the South China Sea is likely to mount; relations between America and China will be under strain as their leaders meet at a series of multilateral summits in November; and the unspoken strategic rivalry, as China seeks to displace America as the predominant military power in the western Pacific, will come into sharper focus.

America called USS *Lassen*'s patrol a routine "freedom of navigation" operation (FONOP in the jargon), of a type it conducts all over the world "in accordance with international law". In fact America has never ratified the relevant treaty, the United Nations Convention on the Law of the Sea (UNCLOS), despite efforts by successive presidents to persuade Congress to do so. As the name suggests, the point of a FONOP is to protect the freedom of the seas. No government is threatening that freedom in the South China Sea, a vital artery for maritime trade. But America has been alarmed by China's building spree, seeing the artificial islands as military bases in the making.

Before this incident, China seemed to have decided that the United States was all bark and no bite over this issue. America stopped FONOPS around Chinese-occupied features in 2012; it did no more than make verbal protests when China that year evicted the Philippines from the Scarborough Shoal to the north of the Spratlys, just as it did when China sent an oil rig to drill off Vietnam last year, and when China began building long airstrips and big harbours on the artificial islands it was building.

But in recent months America has been losing patience. Pentagon officials began recommending FONOPS as a way of conveying annoyance at China's moves. The administration apparently delayed making a firm decision on this until after President Xi Jinping's state visit to America last month. During his trip, Mr Xi promised not to "militarise" the new islands, but was otherwise dismissive of American concerns. Barack Obama decided to authorise a FONOP almost as soon as Mr Xi left. But by refraining for so long he had shown that he understood it would provoke China. Whatever American officials publicly insist, this is not business as usual or no big deal.

The aim of this FONOP is not to take sides in a sovereignty dispute over Subi Reef, which is also claimed by the Philippines, Taiwan and Vietnam. America is officially neutral on the rival claims—and says it will also carry out FONOPS near features built on by other countries. The limited point the patrol made was that, whoever owns Subi, UNCLOS would not grant the island "territorial waters". Under UNCLOS, habitable islands are entitled to territorial waters extending 12 nautical miles around their periphery, as well as a 200-nautical-mile "exclusive economic zone" (EEZ). Uninhabitable rocks get the territorial waters but not the EEZ. "Low-tide elevations", ie, reefs like Subi that before the building were wholly submerged at high tide, get neither.

China has ratified UNCLOS, but has not spelled out how its claims in the South China Sea accord with it. Instead it resorts to vague and sweeping historical assertions—in America Mr Xi said that the islands and reefs had been Chinese territory "since ancient times". China's map of its claim shows a vast and mysterious U-shaped "nine-dashed line" around virtually the entire sea.

China also seems ambiguous about UNCLOS's Article 17, on the "right of innocent passage", which allows warships to pass freely even through territorial waters if they do so without any menacing behaviour. To no American protests at all, five Chinese naval ships sailed in American waters off Alaska in August—just as Mr Obama was visiting the state. So it is unreasonable that China is so infuriated by America's sailing in a part of the sea China has not even formally claimed as its territorial waters under UNCLOS. China seems neither embarrassed by the inconsistency nor interested in explaining it.

Part of the reason lies in different interpretations of UNCLOS as it relates to what foreign navies can get up to. In the past the argument has centred over EEZS. America thinks it has the right to conduct military exercises and surveillance in them. China, like some other countries, disagrees. Several times China has harassed American ships and planes engaged in what it sees as espionage. (An American defence secretary once claimed America was merely investigating "mysteries", which he blamed on China's lack of openness.) China now thinks it is powerful enough to enforce its interpretation. America is pushing back.

Perverse incentives

America's friends in South-East Asia will be relieved that it is belatedly standing up on their behalf to China's bullying, and reasserting the naval dominance that has underpinned a *Pax Americana* under which Asia has thrived for decades. With apparently little risk of actual conflict, it seems America can only gain from the FONOPS. But if they do indeed continue, there are other risks. One is that China eventually succeeds in portraying America as the destabilising force in the sea. Another is that it uses what it calls American aggression (and Chinese public anger about it) as a pretext to militarise the new islands just as America and its friends fear. It looks almost as if America has been tricked into giving China the excuse it wanted. ■

Also in this section

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Rural poverty

Ham-fisted handouts

DAYINGHAN VILLAGE, SHANXI

China's biggest anti-poverty programme isn't working

A CONCRETE track meanders past nurseries of pine saplings and sheep grazing on stubble, petering out at Dayinghan, the poorest, most remote village in the stony hills of central Shanxi, a northern province. Some of the villagers live in caves. A few chickens and ducks scratch for food amid the rocks. Zhang Erping's family is one of about 100 that remain, half the number of ten years ago. He and his wife eat meat a couple of times a month; they buy it at Gujiao, the nearest town, but even the 1.4 yuan (20 cents) bus fare is usually too much for the household to afford.

Mr Zhang used to drive there in a dilapidated three-wheel truck, hauling surplus crops to market. But the city government bans such vehicles for safety reasons, so he has two years' worth of potatoes and beans rotting away, unsellable. When he reaches 60 he will get a state pension of 1,200 yuan ($190) a year, but that is two years away and, anyway, is barely half the official poverty line. The city has promised him 350 yuan to heat his two-room home, and half-price medicines. But when his grandson fell ill recently, he had to borrow 1,000 yuan to pay the bills. Two massive debts are scrawled in pencil on a calendar hanging on the wall: 2,500 yuan and 6,400 yuan. "We've always been poor in this village," he says.

On October 16th President Xi Jinping said China would eradicate poverty by 2020. That would mean that 70m people must rise above the official poverty line, which is 2,300 yuan a year (the equivalent of about $2 a day at purchasing-power parity, slightly higher than the World Bank's global standard). This is supposed to be a priority in the next five-year plan, which was being discussed by the Communist Party's Central Committee as *The Economist* went to press.

Between 1980 and 2010 China cut the number living below the poverty line by around 600m, by far the biggest reduction in a single country ever. It did this indirectly—by building everything from roads and factories to schools and hospitals, thus boosting employment and incomes. The country has all but eradicated extreme poverty in cities (though the much-higher cost of living in urban areas means that many city-dwellers above the poverty line are still living hand to mouth). Those still living below the line are almost entirely rural people who cannot work for reasons such as age, disability or because their villages are remote and inhospitable. Helping them will require more direct measures, not least giving cash.

Still not enough

China's rural *dibao* programme

Sources: World Bank; Ministry of Civil Affairs

The government mainly does this through its "subsistence guarantee" programme, often known by its Chinese shorthand, *dibao*. In principle, those whose income is below the minimum needed to keep them in adequate comfort (the level is decided by local governments) get a payment to bring them up to that level. The *dibao* programme began as a pilot scheme in cities in 1994, spread to the countryside in the mid 2000s and went nationwide after 2007. It has grown fast: the number of rural recipients more than trebled between 2006 and 2013; spending on it rose eightfold (see chart). Two-thirds of those who were below the poverty line on joining the scheme are now above it.

Most of China's poorest, however, are not in the programme. A study published by the World Bank in August found that in 2007-09 only 10% of those below the poverty line in the countryside got *dibao* payments. (Mr Zhang does not get any.) Around three-quarters of those who did get payments were above the line. Data are patchy, but it is clear that a lot of *dibao* spending goes awry.

The *dibao* system was set up by the central government but is implemented by local authorities which can limit the size of payouts. The study found that in rural areas local thresholds for receiving *dibao* payments ranged from 500 yuan to 3,000 yuan a year (ie, from above the national poverty line to far below it). Spending per head varied from almost nothing in some ▸▸

places to 4,000 yuan a year in others. Cost-of-living differences accounted for some of this variation but not all. In practice, richer villages tend to be more generous.

Widespread discretion breeds widespread corruption. In Dayinghan a 68-year-old neighbour of Mr Zhang says that only ten households in the village get *dibao* payments, all of them friends of the village's party chief. "It's completely unfair," he says. It is also common. In 2012 He Guoqiang, then one of China's highest-ranking leaders, said of village bosses: "They don't do their jobs…they don't really understand which households are in difficulty… and they give *dibao* benefits to relatives, friends or even themselves."

The programme is thus doing little to help lift more people above the poverty line. The World Bank study says each ten yuan spent on the *dibao* system narrowed the gap between a poor person's income and the local *dibao* threshold by only one yuan to 2.4 yuan, a miserable result.

Recently, matters have begun to improve. The government has set up a system of cross-checking applications with other official documents (such as medical records) to limit fraud. It is streamlining bureaucracy and creating a database of all those in the countryside below the poverty line. Local authorities used to bear most of the cost of the *dibao* system. Now the central government pays two-thirds. This should give it more clout in its attempts to improve the programme.

But more needs to be done. "We need to improve the quality of our data and really solve the issue of who we are supporting," says Liu Yongfu, a senior anti-poverty official in Beijing. The target of eliminating rural poverty by 2020 is unlikely to be met without further reform of *dibao*.

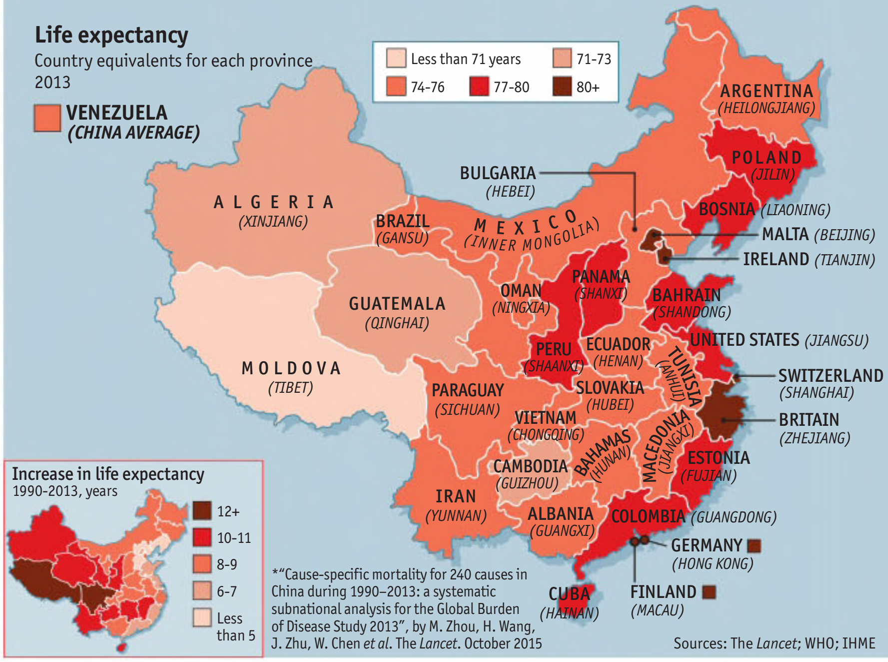
Back at Dayinghan, farmers are not optimistic. Asked about the idea of lifting everyone out of poverty within five years, Mr Zhang and his neighbour look at each other quizzically, and then smile. ■

If China's provinces were countries...

China's economic rise is well-known. But the vast improvement in the health and longevity of its people—despite appalling levels of pollution—is less so. A new study published in the *Lancet* for the first time offers a province-by-province breakdown of China's health. Our map displays life expectancy at birth for each of the 33 provincial-level regions, matched with the country that is most similar by this measure.

The study* shows that a baby born in China in 1990 would live on average to the age of 68. One born in 2013 could expect to reach 76, beyond the age at which Confucius said "one can follow one's heart's desires—without crossing the line." There is a large disparity between provinces, but the gap is narrowing. In Shanghai life expectancy is now 83—as good as Switzerland. People in six areas live longer than Americans. The most impressive progress has taken place in the most benighted regions: a child in Tibet born in 1990 had a life expectancy of 56, akin to one of the poorest African countries. This has risen to 70, roughly the same as Moldova, one of Europe's poorer countries.

The causes of death are also changing. There has been much progress in reducing infectious diseases (albeit less for HIV/AIDS). But diseases associated with lifestyle—such as strokes and heart disease—are now the biggest killers.



*"Cause-specific mortality for 240 causes in China during 1990–2013: a systematic subnational analysis for the Global Burden of Disease Study 2013", by M. Zhou, H. Wang, J. Zhu, W. Chen *et al*. The *Lancet*. October 2015

Sources: The *Lancet*; WHO; IHME

Golf

Bunkers, banquets and bribes

BEIJING

Why banning golf won't curb corruption

GOLF clubs are places where powerful men in hideous clothes hatch shady deals. So China's Communist Party has banned its 88m members from playing the game. The order was made public on October 21st after approval by the party's Central Committee and endorsement by Wang Qishan, the hatchet man for President Xi Jinping's anti-corruption campaign. Its aim is to "uphold the principle that Party discipline is stricter than the law"—that is, to show that party members are selfless sorts who would rather sit through a four-hour meeting about raising crop yields than do anything bourgeois or fun. The new rules also bar party members from "excessive eating and drinking" and "improper sexual relationships".

Golf and graft have gone together in modern China like tartan trousers and dull anecdotes. Mao Zedong is said to have denounced it as a "sport for millionaires". But since his death, the wealthy and powerful have fallen in love with it. In the 1990s the construction of new courses boomed. It was banned in the early 2000s, but many developers simply relabelled their projects "nature resorts". Peasants whose paddy fields were bulldozed to make way for fairways often had no choice and were inadequately compensated.

Nonetheless, some say the party's war on golf misses the point as woefully as a weekend hacker might miss a three-foot putt. If you are looking for a club in China where powerful people meet behind closed doors to carve up the country, the most obvious one is full of cadres, not caddies. Officials are not corrupt because they play golf; they can afford to play golf because they are corrupt. Banning the symptoms of graft is no substitute for addressing its root causes, any more than an anti-slice driver can fix your faulty golf swing. ■

The future of nuclear energy

Half-death

Nuclear power emits no greenhouse gases, yet it is struggling in the rich world

PENNSYLVANIA has played a big role in the history of American energy. Coal has been mined there since the 1760s (Pennsylvania is sometimes called "the coal state"). In 1859 Edwin Drake drilled a rickety well that set off America's first oil rush. More recently it has produced more natural gas than any other state except Texas, thanks to the vast Marcellus shale that runs beneath it. And though it barely advertises the fact, Pennsylvania is also America's second-largest provider of nuclear energy—despite the near-disaster at Three Mile Island, a nuclear plant that suffered a partial meltdown of one of its reactors in 1979 (pictured, right), killing no one but scaring millions.

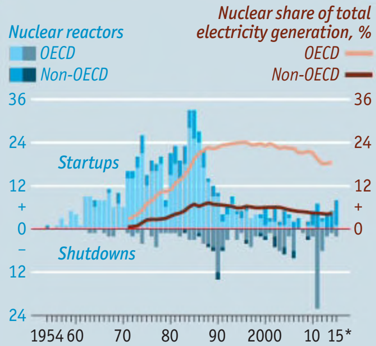
Today Pennsylvania is again at the centre of a shift in the energy industry and Three Mile Island is caught up in it. An abundance of natural gas piped out of the Marcellus shale in recent years has helped push power prices down so sharply that nuclear energy has struggled to compete in some parts of America. Three Mile Island's remaining reactor, Unit One, is one of many fighting to survive—but this time its troubles are about costs, not safety.

In America and Europe slumping commodity prices are adding to the burden on nuclear power that was already growing after the 2011 Fukushima Dai-ichi nuclear disaster in Japan. America's shale revolution, Europe's growing supply of subsidised renewable energy and sluggish electricity demand in both markets have sharply cut wholesale power prices.

That makes it harder for many nuclear plants to cover their running costs, leading their owners to shut them down. Perversely, at a time when countries around the world are pledging to cut carbon emissions, such closures often lead to the burning of more fossil fuels. Adding renewable-energy capacity does not solve the problem: when the wind doesn't blow and the sun doesn't shine, nuclear energy still provides the best low-carbon source of reliable "baseload" electricity.

It is not all gloom in the nuclear industry. China plans almost to triple its nuclear generating capacity by 2020, and other emerging markets are also building new plants. But since Fukushima, all but two of Japan's 43 reactors have been suspended, Germany is phasing out nuclear power and France intends to scale it back. Mycle Schneider, co-author of the World Nuclear Industry Status Report, says that a global total of 394 nuclear-power plants are operating, down from 431 in the pre-Fukushima year of 2010 (see chart 1).

Meltdown 1



Sources: IEA; World Nuclear Industry Status Report 2015

*To October 17th

More closures are coming, particularly of older single-reactor plants that need lots of workers even though they generate only modest amounts of power. In America the most vulnerable plants are in deregulated markets such as the Northeast and Midwest, where nuclear-power providers must compete to provide the cheapest electricity against rivals that use other fuels. Those in more regulated southern markets, such as Georgia, fare better because electricity prices are guaranteed to cover their costs. With such an assurance, on October 22nd the Watts Bar plant in Tennessee became the first new nuclear facility to be licensed in America in 20 years. (Similarly, the operator of Britain's proposed Hinkley Point C nuclear plant will sell electricity at high fixed prices.)

Where markets are freer, it is harder for nuclear-power operators to make money, and too risky for them to build plants from scratch. Exelon, based in Chicago and the largest operator of nuclear plants in America, says that five of its 14 plants are vulnerable because of economic factors, including Three Mile Island's Unit One, which it owns. "It's ironic. People ask why we still operate a reactor there. But if gas prices were not [so low], it would be making money," says David Brown of Exelon.

On October 13th Entergy, Exelon's rival, which is based in New Orleans, said it would close its Pilgrim nuclear plant in Massachusetts, partly because its costs, at about \$50 a megawatt-hour (MWh), are higher than electricity prices in the state, which have fallen to about \$45/MWh. As ▸▸

The Economist went to press, it was due to decide whether to close a third, Fitzpatrick, in New York State. In December it closed one in Vermont, the fourth American nuclear plant to shut in the past two years.

The Nuclear Energy Institute, an industry body, says that last year generating electricity from a nuclear plant in America cost on average 2.40 cents per kilowatt-hour ($24/MWh). That is still cheaper than gas- or coal-fired power (see chart 2), but the nuclear average disguises wide variations. The least efficient nuclear plants have higher operating costs per unit of electricity than either coal or gas. Since the main cost of nuclear power is building the reactor in the first place, the narrowing gap in operating costs is ominous for the industry. And American gas prices are still plunging.

In Europe, where the generation and supply are mostly deregulated, prices of coal and natural gas have also come down, lowering the cost of electricity. Roland Vetter of CF Partners, a financial-research firm, says that in Germany and parts of the Nordic region, an increase in renewables generation (see chart 3) has also pushed down wholesale prices. Supported by subsidies, wind and solar plants earn more money than nuclear ones from generating power when prices are low.

As a result, Sweden's nuclear industry is in particular trouble. On the banks of a forested North Sea inlet, the Ringhals nuclear plant has been part of the scenery in the western town of Varberg since 1969. As if in a promotional film for the industry, locals boat and fish in sight of the plant's four reactors, while visitors to the plant's information centre enjoy its collection of kitsch public art. It is one of the biggest employers in the area, with 1,600 members of staff. Yet Vattenfall, the state-owned utility that owns most of its shares, said on October 15th that it would retire its two oldest reactors in 2019 and 2020. In the same week E.ON, a German utility, said it would shut the oldest two units of the Oskershamn plant on Sweden's Baltic Sea.

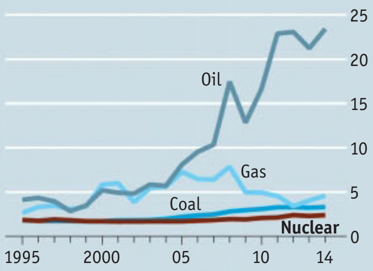
Mr Vetter says that electricity prices in Sweden have sometimes fallen below nuclear operating costs. In addition, a leftist government, including anti-nuclear Greens, has imposed additional taxes on nuclear-power plants. "They are being squeezed between revenues going down and costs going up," says Mr Vetter.

The closures on both sides of the Atlantic represent a blow to an industry that for years talked about the prospect of a "nuclear renaissance" based on the merits of large scale, low-carbon energy. They show how Western governments have waffled in their support for the technology, opting to subsidise renewables rather than putting a real price on carbon emissions that would more heavily penalise dirtier fuels, such as coal and gas, and thereby promote nuclear energy. The closures also highlight

Making less cents 2

US electricity production cost

2014 cents per kWh



Source: ABB Velocity Suite

how green NGOs, many of which were created to oppose both military and civilian use of atomic energy, have influenced the debate on nuclear power. Many greens still see it as an evil akin to global warming.

Their biggest success has been in Germany, already busy with a zealous transition to renewable energy that it calls the *Energiewende*. Four years ago Germany announced that it would close all 17 of its nuclear plants by 2022; it has already shut eight. France, long Europe's nuclear champion, passed a bill in July mandating that the share of nuclear power in the country's electricity mix be cut from 75% to 50% within ten years. Both countries promise that the nuclear shortfall will be made up with renewable sources, mainly wind and solar.

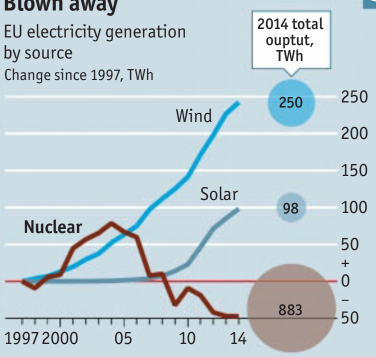
Yet when nuclear plants close, that promise is not necessarily kept. Germany's nuclear plants once produced over 20% of its power. As it has begun to shut them, the proportion of electricity produced by coal-fired plants has increased, which has pushed up carbon emissions. Sweden's government claims that nuclear plants, which provide 50% of the country's base-load electricity, will quickly be replaced with renewable energy, mostly from wind farms (more hydroelectric dams are out of the question). But Yvonne Fredriksson, a former director-general of the Swedish Energy Markets Inspectorate, dismisses that as a "naive 1980s idea".

In America, too, the question of how to replace lost nuclear capacity is causing alarm. Grid operators worry that their dependence on natural-gas-fired electricity could lead to power cuts and wildly fluctuating peak prices, especially during freak weather conditions, because of the shortage of storage and pipelines. On the coldest day of a "polar vortex" storm that lashed the eastern United States in 2014, Pennsylvania-based PJM, America's largest grid operator, found itself 22% short of generating capacity. To avoid this happening again, some operators, such as PJM, have thrown the nuclear industry a lifeline by paying a quasi-insurance policy to providers who can guarantee supply at peak times. Exelon said that these large advance payments have enabled it to defer decisions on the closure of two of its nuclear plants in Illinois.

Blown away 3

EU electricity generation by source

Change since 1997, TWh



Source: World Nuclear Industry Status Report 2015

Cheered by these "capacity auctions", the industry hopes that Barack Obama's Clean Power Plan, launched this summer to reduce America's carbon emissions, will bolster recognition of the value of nuclear power. In fact, the nuclear industry is unlikely to benefit much. The Nuclear Energy Institute, a lobby group, complains that the plan does not give credit to nuclear-power companies that go through the costly process of renewing their licences, allowing them to extend their operations beyond the 40 years originally allotted to them.

A report by Third Way, a climate NGO, estimated that even if all the 100 or so reactors in America were granted extensions to 60 years (more than 70 of them have already been approved), emissions would go up because growth in electricity demand would spur more use of natural gas. "If America's nuclear plants begin retiring in droves, achieving the Clean Power Plan emissions reductions could be impossible," it said.

The looming closures bring a further headache: the uncertainty over decommissioning old plants. Nuclear-power companies set aside large sums for this, but the challenge is complicated by the fact that neither America nor most European countries have found adequate sites for permanently storing nuclear waste. Uncertainties like this add to the prohibitive cost of building new nuclear-power plants. They also highlight why governments should shape energy policies to keep existing reactors running: they provide a reliable source of low-carbon energy, and decommissioning them is as likely to create safety problems as leaving them running.

Instead, Western governments tend to tilt the ground against nuclear plants by subsidising the alternatives or imposing heavy taxes. That means their nuclear industries will continue to ebb. More than three-quarters of nuclear plants in the rich world are 25 years old or more. In the coming years the number of them shutting down is only likely to accelerate. ■

Business

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Container shipping

The big-box game

The largest container lines are bulking up to try to withstand a fresh downturn

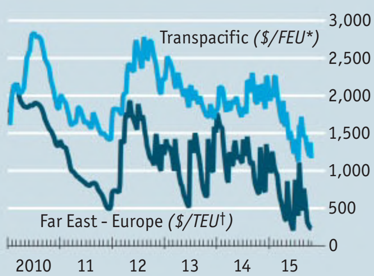
SINCE the financial crisis, the tide of recovery has not lifted all boats equally. But in few industries is that more true than in shipping. Demand for oil tankers has boomed: a combination of weak spot prices and higher futures prices, driven by the assumption that supply and demand for crude will eventually rebalance, has encouraged traders to hire tankers to store oil at sea and cash in on the price gap. Meanwhile, bulk carriers, which carry such things as iron ore and coal, have been hit by massive overcapacity, as Chinese demand for such commodities has collapsed (see box on next page).

Until the start of this year, the container-shipping business—which carries around 60% by value of all seaborne trade in goods—looked more like that for oil tankers. Rising global trade volumes, and firm steel prices that made it worthwhile for owners to scrap old ships, had kept capacity in check, and container-freight rates seemed to be steadying. As recently as August last year, demand for container shipping was so high that BIMCO, an industry association, was warning of a capacity shortage. And at the start of this year Drewry, a shipping consultant, forecast a bumper year: owners of boxships would rake in profits of up to $8 billion in 2015, they thought, helped by low fuel costs.

But since then the industry has been rattled by renewed weakness in freight rates, prompted by a fall in the volume of seaborne trade. The cost of sending a container from Shanghai to Europe, for instance, has almost halved since March, according to the Chinese city's shipping exchange (see chart). And the absence of the usual pre-Christmas pick-up is worrying both analysts and investors, according to Rahul Kapoor of Drewry. On October 23rd Maersk, the world's largest container line, told investors to brace themselves for a fall in profits when it announces its third-quarter figures on November 6th.

Some of the shipping lines' problems are due to factors beyond their control. At a time when weak trade volumes should be prompting them to scrap more old vessels, the steel price has slumped. So, 60% fewer boxships have been scrapped so far this year compared with the same period last year. However, some shipping groups have made a rod for their backs by taking on too much debt. This also makes it hard for them to scrap unprofitable vessels, since their balance-sheets would struggle to cope with the resulting writedowns.

Boxed in
Shanghai Containerised Freight Index



Source: Shanghai Shipping Exchange
*Forty-foot equivalent unit
†Twenty-foot equivalent unit

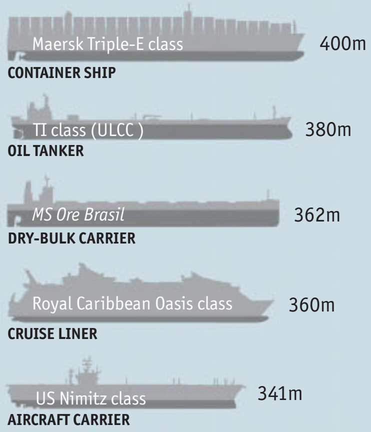
Worse still, critics say, is that shipowners have embarked upon a building boom. Orders for new container ships were 60% higher in the first five months of this year, than in the same period in 2014, according to Alphaliner, a data provider. In June Maersk ordered 11 ships that can each carry up to 20,000 standard-sized containers, in a deal worth $1.8 billion. Next week Hapag-Lloyd, another operator, plans to raise $300m by floating on Frankfurt's stock exchange, to help pay for six giant new ships, ensuring that it stays in the game.

Hapag-Lloyd has had to delay its IPO a week because demand for the shares has been so weak. And investors have good reasons to be hesitant. All the extra capacity should depress rates further, adding to the industry's problems. But for those lines that can afford it, ordering big, new ships may be a sensible reaction to falling freight rates. There are still sizeable economies to be gained from increasing the size of vessels. As Hapag-Lloyd's boss, Rolf Habben-Jansen, recently pointed out, a ship capable of carrying 19,200 containers needs half as much fuel to shift each box by one mile as a vessel with a capacity of 4,900.

As a result, the capacity of the largest container ships afloat has risen from around 14,000 before the financial crisis to just under 20,000 today—and boxships are taking the place of oil supertankers as the giants of the seas (see diagram, next page).

Among the winners from this flight to scale will be the world's largest three lines—Maersk, Mediterranean Shipping Company (MSC) and CMA CGM. They

Who rules the waves?



have the industry's lowest costs, because they have the biggest ships and the cheapest finance costs. They also have the advantage of being based in Europe: demand to transport goods across the Atlantic has remained strong. Analysts expect the big three to stay profitable over the next few tough quarters, even as their revenues fall.

Maersk and MSC have also formed an alliance, 2M, to save more money by sharing space on their ships on transatlantic and transpacific routes. As the strongest lines get stronger, through fleet renewal and alliance-building, smaller lines that cannot cut their costs quickly enough or obtain cheaper finance to build bigger ships will suffer. China's two biggest lines, China Shipping Group and Cosco, were losing money before the current downturn started. They have recently swung back into profit, but only thanks to generous state aid to help them scrap old vessels. The government regards it as vital to have a national merchant fleet, so it will not let the two go to the wall. But it plans to merge them to save money, and to stamp out corruption at Cosco which, according to internal documents leaked this week, is another reason for its poor performance.

The hardest hit, however, will be the smallest container lines that do not enjoy state backing. Several smaller Japanese and South Korean operators, in particular, are sailing close to bankruptcy, analysts say. The pressure to cut costs is also hitting container lines' suppliers; several shipping-services firms in Denmark and container-logistics firms in Britain have gone bust in the past year.

The move towards ever bigger vessels poses a risk to ports which lack the capacity to handle them. International trade is shifting towards big, centralised hubs. And smaller ports, somewhat like smaller airports when the hub-and-spoke model for long-haul flights became dominant, are losing many of their direct connections. This has already happened at Portland on America's west coast, which is no longer served by any regular container routes.

To avoid this fate, port authorities in some countries are now investing heavily in upgrading their infrastructure, to handle larger vessels. Recent development projects in Liverpool and London have already brought traffic back to those British ports. In a similar vein, Indonesia announced details of a $3.6 billion project to upgrade its container ports earlier this month, to ensure it does not lose routes to Singapore, the nearest big hub.

As falling volumes and weak shipping rates force the industry to consolidate, with fewer, bigger lines sailing ever-larger ships to fewer, bigger ports, the resulting gains in efficiency should mean cheaper transport costs, bringing benefits for consumers in many places. That is, unless the consolidation goes too far, and the surviving lines are able to jack up their rates. The 2M alliance now controls more than 28% of global container-shipping capacity, and almost a third on the Europe-to-Asia route.

Regulators are already worried about the impact on competition: in June last year, the Chinese authorities vetoed plans for a larger alliance, called P3, that would have involved all three of the world's biggest lines. Cheaper container rates are a boon for firms engaged in international trade, and their customers. But there is a risk that the benefits will not last. ■

Dry-bulk cargo shipping

Hitting the bottom

Worse is still to come for many bulk carriers

HOW low can the Baltic Dry Index go? That is the question the owners of bulk carriers—ships that carry loose commodities such as coal and iron ore—are asking themselves. Between the start of the financial crisis and January this year, the index—a measure of bulk freight rates—had fallen by 95%. Many in the industry had hoped it would start to recover this year. But there is not much sign of that—and it looks as if more pain is still in store for shipowners.

Overcapacity is the main reason for such low rates. When the index approached an eye-watering figure of 12,000 in 2008, shipyards could not keep up with the orders for new bulk carriers. But then the bubble popped, as demand for commodities collapsed due to the financial crisis, and Chinese economic growth underwent a structural shift away from heavy industry. The index fell to a 30-year low of around 500 in February. There was a modest rebound in the summer, but it did not last.

Shares in dry-bulk shipping lines have tanked as a result. The Guggenheim Shipping ETF, a weighted index of such shares, lost 23% of its value in the first nine months of the year. Some highly indebted operators, such as DryShips, an Athens-based outfit, have performed even worse: its shares have fallen by about 80% so far this year.

As a brief summer recovery has fizzled out, and as some firms have started to run out of cash, there has been a spate of bankruptcies. Several Asian bulk carriers, such as Daebo International of South Korea and Daiichi Chuo Kisen of Japan, have been forced to seek bankruptcy protection. In July, Lithuania's government pulled the plug on its state-owned bulk-carrier line, so bad was its prognosis for the industry.

More dry-bulk lines, especially smaller ones, are likely to go bankrupt in the months to come, says Angelina Valavina of Fitch, a credit-rating agency. This is because banks have slashed their lending to the sector. There are few lines that could afford to take on any more debt.

And unlike in the container-shipping business, the dry-bulk lines are not cutting costs and capacity through consolidation. That is partly because of a lack of co-operation between carriers, but also because there are hardly any profitable firms with the financial strength to take over the stragglers. Without a sustained increase in freight rates, more bankruptcies may be the sector's only way back to profitability.

Bumping along the bottom

Baltic Dry Index, 1985=1,000

Source: Thomson Reuters

Clarification: In our piece on multi-level marketing last week ("Pharaonic creations"), we jumbled our words when referring to Amway. We should have said that in 1979 a court deemed the firm to be legitimate thanks to certain policies it had, including requiring distributors to sell a certain proportion of the products they had bought. Sorry.

Network neutrality

A multi-speed Europe

The EU's new internet rules will hurt the continent's startups

INTERNET providers will be barred from charging online businesses for "fast lanes"—that is, giving priority to their traffic—except for certain specialised services, such as videoconferencing or telesurgery. They also must not block or slow traffic other than reasonably to manage their networks, such as to avoid congestion.

This is the essence of a law the European Parliament passed on October 27th, after months of argy-bargy with the EU's executive, the European Commission, and national governments. For those unfamiliar with the debate over "network neutrality", the principle of treating all internet traffic equally, the rules may seem much the same as those approved by America's Federal Communications Commission (FCC) in February. But although the wording is similar, the details vary enough that they may produce a very different outcome—one that could further weaken Europe's smallish online industry.

To understand the differences it helps to compare the telecoms markets on both sides of the Atlantic. America has big, profitable fixed-line and mobile operators, such as AT&T, Comcast and Verizon, which want to be free of regulation. They may not be very popular with their customers, but competition between them is limited and they wield great lobbying power. However, they have found their match in America's internet giants, including Google and Facebook, which have an interest in keeping internet traffic untrammelled, and have formed a strong pact with the country's vocal internet-policy campaigners.

In Europe the balance of power between the two industries is more uneven. Activists and politicians have pushed for stricter net-neutrality rules, but they have not hooked up with the continent's internet industry, which anyway lacks political heft. In contrast, Europe's telcos, often former (and, in some cases, still partially) state-owned firms, have kept a direct line to their respective governments. And they have two arguments in particular that carry weight in national capitals and Brussels: looser net-neutrality rules would allow them to introduce new services and make the money they need to improve their networks; and such rules would also let them charge America's mighty online firms for using their networks.

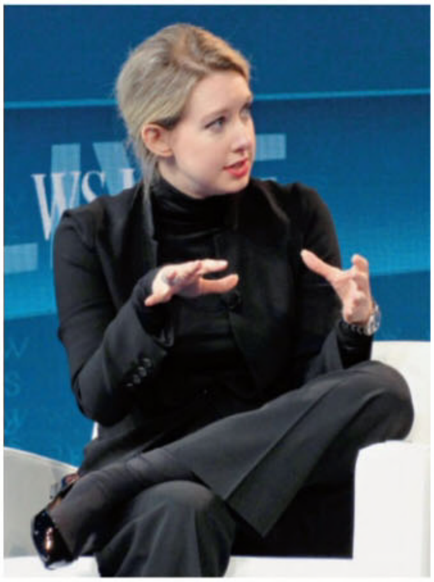
Unsurprisingly, then, Europe's new rules have bigger loopholes than America's, even if the law just passed is much stricter than the commission's first proposals. America's rules also allow "reasonable" network management, for instance, but ban operators from discriminating against certain types of service, such as video or file-sharing—which the EU's law allows. Similarly, American internet providers can offer specialised services, but the FCC can intervene if it thinks they are using this exception to undermine the spirit of net neutrality. In Europe the exception is so broad that internet providers could bring in paid-for fast lanes simply by labelling them as specialised services, reckons Barbara van Schewick of the Centre for Internet and Society at Stanford University.

Although the differing small print of Europe's and America's rules may not have dramatic effects in the short term, "there is a reasonable chance that net neutrality in practice in the EU will be much weaker than in the US," write Stefan Heumann of the Stiftung Neue Verantwortung, a think-tank in Berlin, and others in a recent report.

This is good news for fixed-line and mobile operators, but is likely to hurt European internet startups because it creates barriers to market entry, argues Mr Heumann. Online firms will face extra fees for telecoms services and extra bureaucracy—no problem for the mostly American firms that dominate the internet business, but unhelpful for smaller European contenders. Or indeed American ones. Interestingly, an open letter expressing concern about the loopholes, in the run-up to the European Parliament's vote, was signed by some smaller American online firms such as Etsy, Kickstarter and Tumblr, though not by Facebook or Google.

Much depends on how national regulators interpret the new rules. Some countries have already passed stricter laws. The Netherlands, for instance, bans "zero rating", in which a mobile operator strikes a deal with, say, Facebook, in which people's use of the social network on their phones does not count towards their monthly data allowance, potentially discouraging them from switching to Facebook's rivals. The EU's new law, in theory, allows zero rating; in America the FCC says it will judge on a case-by-case basis. If Europe ends up with a patchwork of local rules, that will make it harder still for its online startups to gain scale. So much for the commission's grand talk of a "digital single market".

That said, America's new rules are also far from set in stone. Republicans are still trying to stop the FCC from enforcing them. Several of their presidential hopefuls have said they would get rid of them. And in December a court in Washington, DC, will hear legal challenges against them by telecoms firms. The rules of the digital roads will be in flux for the foreseeable future, but in Europe toll booths, fast lanes and an assortment of traffic signs are likely to be more frequent than in America. ■



Theranos

The fable of the unicorn

SAN FRANCISCO

A much-hyped medical startup is suddenly plagued with doubts

"FIRST they think you're crazy, then they fight you, and then all of a sudden you change the world," Elizabeth Holmes, the boss of Theranos, said recently. If she is to change the world, first Ms Holmes (pictured) will have to change minds. In the past fortnight she has faced an onslaught of negative press reports saying that her blood-testing firm's technology is not all it purports to be.

Theranos is one of Silicon Valley's most prominent "unicorns", or unlisted startups valued at more than $1 billion. Its aim is to disrupt a market for blood tests that, in America alone, is worth $75 billion a year. A recent injection of $400m from investors gave it an implied value of $9 billion. In early October, just before the bad headlines began, 31-year-old Ms Holmes, who is said to be the world's youngest female self-made billionaire, was featured on the cover of *Inc.* magazine in a black turtleneck, with the headline "The Next Steve Jobs".

Opinion can change as quickly as a pinprick. Soon after, the *Wall Street Journal* ran a report that Theranos has overstated its technology's reach and reliability. Theranos has attracted great acclaim because it claims to be able to perform a wide variety of tests by drawing a few drops of blood instead of using a full-sized needle to take larger samples; and because of its promises to make it cheaper and easier for consumers to get blood tests without having to go through a doctor. However, the *Journal*'s article argued that its tests are not reliable, ▸▸

and revealed that it does only a few tests with its own devices, using other firms' technology for most of them.

Ms Holmes said the *Journal*'s report was "false", and defended the reliability of Theranos's tests. But that has not quelled the storm of scepticism. Indeed it gathered force on October 27th, when America's Food and Drug Administration published reports on its inspection of Theranos. These accused it of distributing an "uncleared medical device", and registered a few other objections, including that the firm lacked an adequate system for responding to complaints. Separately, GlaxoSmithKline, a giant drugmaker for which Theranos has claimed to have done tests, said that it has not done any business with the startup in the past two years.

The best-case scenario is that Theranos has simply experienced more setbacks than onlookers had expected, and that its technology will eventually catch up with its lofty valuation. Every startup has difficulties, especially in highly regulated industries like health care. Some women working in the tech industry question whether a young man trying to overthrow an established industry would face as much criticism as Ms Holmes has in recent days. But if the allegations prove to be true, at the very least Theranos's valuation may never again reach the heights seen so far.

In several respects, Theranos is highly unusual in the tech industry. Formed twelve years ago after Ms Holmes dropped out of Stanford University, the firm has not raised capital from the usual suspects in the tech or medical businesses. Only one prominent venture-capital firm, Draper Fisher Jurvetson, has invested, along with Larry Ellison, one of the founders of Oracle, an IT giant. Several of its investors are small-time players with no known expertise in the industry. Its ten-member board boasts George Shultz and Henry Kissinger, two former secretaries of state, but only two people with medical training. The average age of board members is nearly 76.

Yet in other ways Theranos evokes a central theme in today's tech industry: startups which promise to disrupt lucrative businesses and become valued on the basis of fantasies about their potential, rather than present reality. Investors are so keen to get a piece of any sexy-sounding startup that they lap up entrepreneurs' hype—and anyone who asks awkward questions risks being cut out of the funding round in favour of someone more trusting.

All this helps to explain the inflation of valuations among unlisted technology companies. Today there are 142 unicorns, more than three times as many as in 2013. Many of them are growing quickly. But in terms of reaching profitability, they are often far behind the stockmarket-listed competitors they are seeking to displace, and thus are burning through cash. Theranos, for example, is not believed to have any significant revenues or profits, yet it is valued about as highly as Quest Diagnostics, a listed laboratory company, which last year achieved $7.4 billion in revenues and nearly $600m in net profits.

Many unicorns have been insulated from scrutiny, because they have no obligation to publish figures or provide progress reports on their technology. Not having to worry about a fluctuating share price frees their founders to think long-term, but also makes it easier for them to brush aside searching questions. However, in time Silicon Valley's growing herd of fabled creatures will have their encounter with reality. If they do not live up to their promise, their valuations will slump, either at their next funding round or when they finally go public. Many vials of blood may spill. ■

Multinationals in China

A harder road ahead

SHANGHAI

Life is getting tougher for foreign firms, but the fittest can still flourish

FOR two decades China was a land of seemingly limitless opportunity for multinationals. Japan and South Korea had shut out foreign firms during the early phase of their economic development. By contrast, China's leaders, after Deng Xiaoping's reforms in the early 1990s, made them welcome. Provided firms brought world-class technologies, and agreed to joint ventures with locals in certain strategic industries, they were free to take a generous slice of China's growing economic pie. But now a combination of factors is making life much more difficult for them.

Even foreign firms that looked like they might dominate the Chinese market are getting a rude awakening, as its economy slows and as competition from local rivals intensifies. Earlier this year Douglas McMillon, Walmart's boss, declared that China was vital to the American retail giant's future growth and vowed to add more than 100 new stores in the next two years to its current tally of 400-plus there. Walmart does not give much detail on how those outlets are performing. But a filing this month by its local joint-venture partner at 21 of the stores revealed that those outlets' sales had fallen 6% last year compared with the year before.

The boom is over

Fast-moving consumer goods in China

% increase on a year earlier

Source: Bain & Company

One of the great success stories of multinationals in China has been Yum Brands. It was the first big foreign fast-food firm to enter the country. Its thousands of KFC restaurants became hugely popular with local families. Even opening a restaurant a day, the firm could not keep pace with demand. In 2011 Yum's China division was providing more than half of its global operating profits. But the days of finger-lickin' good performance now seem to be over. KFC's sales growth in the most recent quarter was down to a plodding 3%, and on October 20th, shortly after cutting its global profit forecast because of weakness in China, Yum said it would spin off the China division into a separate company next year.

In some cases the authorities seem to be coming down hard on foreign firms while going easier on their Chinese competitors. State-run China Central Television (CCTV) has broadcast harsh criticisms of some multinationals, including an absurd harangue over Starbucks' prices—as if Chinese consumers were incapable of deciding how much they wanted to pay for a coffee. New rules on internet security have a techno-nationalist bent, which may help local technology firms like Huawei and Lenovo gain an edge over IBM and Cisco in government procurement (although these American firms can hardly complain, since their government has blacklisted Huawei from its official contracts).

China's antitrust laws have been used to bully foreign carmakers into cutting the price of spare parts, whereas legions of state-owned firms, in everything from telecoms to tobacco, have been left to enjoy their monopolies and oligopolies. GlaxoSmithKline, a British drugmaker, was fined heavily under anti-corruption laws, over sales practices that local analysts say were common across China's health-care industry. A recent report from the EU Chamber of Commerce in China, representing European firms operating there, lamented the

lack of a level playing-field.

For all that they have some legitimate gripes, not all of the multinationals' problems can be blamed on an obstructive government. In Yum's case, food-safety scares in 2012 and 2014 left consumers with the impression that it was not keeping a close enough eye on its suppliers. In the 2014 case, for example, investigative reporters found that one supplier had sent out-of-date meat to KFC outlets in China. Yum, like foreign restaurant groups, had hitherto benefited from Chinese consumers' assumption that its quality controls were higher than those of local rivals, an advantage it seems to have squandered.

In other cases, foreign firms' travails have more to do with the maturing of the Chinese market. Growth is slowing. Wage costs are rising because broader demographic trends are making labour scarcer. The government is introducing higher environmental standards, not to punish multinationals but because wealthier, more educated citizens now demand cleaner air and water. Those citizens are also becoming more sophisticated as consumers and will no longer pay huge premiums for brands just because they are foreign.

The most potent challenge of all for multinationals in China comes from local upstarts. When China's economic opening began there were few domestic brands of any note. Multinationals had superior technology as well as slicker marketing. But local firms are catching up fast, and are winning over Chinese shoppers.

A study by Bain, a Western consulting firm, looked at 26 categories of consumer products, from confectionery to cosmetics, with combined sales of 542 billion yuan ($85 billion) last year. In value terms, they found that local brands gained market share in 18 categories last year, and now command 70% of their combined markets. As overall sales growth of such goods is falling, Western firms' share is declining (see chart). The hottest brands on Chinese high streets are such things as Huiyuan's fruit juices and Galanz's domestic appliances rather than Western rivals' offerings.

Frustrating though this is for foreign consumer-goods firms, they cannot claim that it is because the game is rigged. For one thing, there is little state involvement in their industry: the competition comes from private-sector Chinese firms. For another, the rise of local brands is a global phenomenon. A recent study by José Santos of INSEAD and Peter Williamson of Cambridge University's Judge Business School shows that foreign multinationals are losing out to local firms in other emerging markets too, across a range of products. Nowhere is this more evident than in China, though. After years of investment in the country's ice-cream market, Unilever had won a market share of just 7% by 2013; Nestlé's share was a mere 5%. But Yili and

Going local

Foreign brands in China by category

Change in market share, 2013-14, %

Source: Bain & Company

Mengniu, two local firms, enjoyed shares of 19% and 14%. Unilever and Procter & Gamble were bested in laundry detergents, their traditional strong suit, by two Chinese rivals, Guangzhou Liby and Nice.

Fools rush in, or out?

If life has become so hard for foreign firms in China, why not quit? A few have done so—prominent examples include Revlon, an American cosmetics firm; and Best Buy and Media Markt, an American and a German electronics retailer. But few others are following. Others are still rushing in, or doubling down on existing bets on China. It received more than $120 billion in foreign direct investment last year, double Brazil's total, and four times what India got.

There are still plenty of multinationals doing nicely in China. On October 27th Apple announced sparkling quarterly results, boosted by an 87% year-on-year rise in sales of iPhones in China. Samsonite, an American maker of luggage, enjoyed a 30% rise in sales in the first half of this year, compared with a year earlier. Adidas, a German sportswear firm, had a 20% rise in first-half sales. Surveys of the members of foreign business chambers in China often highlight the problems that some firms are having. But read on, beyond the executive summaries, to the figures below, and they show that a majority are still making money and still see the country as a leading investment destination.

China may struggle to achieve even the reduced target of 6.5% annual GDP growth that it is expected to set soon. Even so, that much growth in an economy already so big is not to be sniffed at—and a fair chunk of it will translate into increased spending on consumer goods. The Boston Consulting Group expects urban private consumption in China to grow by more than $2 trillion by 2020. However, as the recent stockmarket panic makes clear, this is not a market for the faint of heart. Therefore, multinationals must work out how to put their businesses on a stronger footing.

First, they need to shift from a mindset of growth at all costs. One implication of this, argues Nigel Knight of EY, another consulting firm, is the need to boost productivity. EY surveyed more than 1,700 firms across various industries in China last year. It found that many were being squeezed (due to rising wages, higher input prices and tougher competition) or had got bloated (through acquisitions) but that few could pass on cost increases. Multinationals must therefore make the same efforts to enhance competitiveness that they are used to making in mature economies. But Mr Knight says many local managers are too "accustomed to a growth agenda and lack the experience, expertise or, to be blunt, desire to carry out major efficiency-improvement programmes."

Another is the need to put more effort into marketing. In the past, suggests Anil Gupta of the University of Maryland's Smith School of Business, many industries were so undeveloped in China that all a business needed to make sales was some people to take down customers' orders. Now, with overcapacity in everything from steel to cars, competition has intensified; and with rising sophistication among shoppers even in smaller cities, branding and differentiation are vital.

Rachel Duan, who runs General Electric's businesses in China, says it is more important than ever to align the firm's strategy with the government's goals. The days when officials courted foreign firms with tax breaks and other incentives are largely over. But they are putting more pressure on the firms to invest in areas the government sees as priorities. That is why GE is ploughing billions into health care, civil aviation and energy, including into cutting-edge local research. The strategy is starting to pay off. In January, the firm's wind-turbine division won its largest Chinese contract to date.

A willingness to learn from mistakes also helps. Yonghui, a supermarket chain that started in Fujian province, has grown into one of China's most successful by staying focused on a few provinces. Walmart, in contrast, spread itself too thinly and hit snags in distribution and quality control.

Sean Clarke, the head of its China operations, has revised his expansion plans, realising that, "To be successful in China you don't have to be in every city."

Another tactic is to find a powerful local partner, even in industries in which the government does not require this. Jeffrey Towson and Jonathan Woetzel, authors of "One Hour China", a business book, point to basketball as an example. Football (soccer) has a far longer history in China, but has fallen flat commercially. In contrast, America's National Basketball Association (NBA) has made China its biggest foreign market. Four or five NBA games are broadcast weekly on CCTV, and big games attract 200m viewers. It helped that Yao Ming, a Chinese player, became a global sensation, but Messrs Towson and Woetzel believe the real secret lay in the NBA's partnership with CCTV.

To see how to get China right, consider L'Oréal, a French beauty firm which has enjoyed 18 years of uninterrupted sales growth there. The country's cosmetics market, now the world's second largest, is brutal. Customers are extremely fickle, and switch brands often. Chinese rivals attack foreign firms both from below, on price, and from above, using traditional medicine and herbs to sell premium products. But unlike Revlon, the French firm stayed, and adapted to local conditions.

Alexis Perakis-Valat, L'Oréal's China boss, whips out his smartphone to give an example. Since earlier generations of Chinese women rarely used make-up, few girls learn how to apply cosmetics from their mothers. They are often too shy to experiment in front of friends or at shop counters, he explains. Millions now do so in private using Makeup Genius, an app that shows them, like a magic mirror, what they would look like in various styles of lipstick, eyeliner and blusher.

The firm has invested 2 billion yuan in the past decade on a gleaming research centre in Shanghai, which has created winning products tailored to local tastes. A pricey range of cosmetics and creams to fight skin damage from air pollution, a big concern for Chinese consumers, has flown off the shelves. But when it makes sense, the firm has pulled back—for example, last year it yanked Garnier, a middling brand that did not sell well, out of the country.

In all, most multinationals would be wise to tough it out in China, and adapt to its changing markets. Those which do so will find there are still fortunes to be made. And though their advantages over local firms are diminished, they still have some strengths, in technology and marketing, that they can exploit. As Xiang Bing, dean of Beijing's Cheung Kong business school, puts it, multinationals are no longer sitting comfortably at the very front of the plane, but compared with Chinese firms, they are "still flying in business class." ■

Recruitment

No names, no bias?

Anonymising job applications to eliminate discrimination is not easy

"IF YOU'VE got the grades, the skills and the determination, this government will ensure you can succeed," trumpeted David Cameron, the British prime minister, on October 26th, as he unveiled plans to tackle discrimination in the workplace. Ten big employers in the public and private sectors—including the civil service, HSBC and Deloitte—have agreed to start recruiting on a "name-blind" basis in Britain; others may also follow suit. In such schemes, those drawing up shortlists of applicants cannot see their names, with the aim of reducing racial and sexual bias. But do they work?

Several countries have experimented with name-blind applications. In 2010 Germany's Anti-Discrimination Agency, an advisory body, sponsored a voluntary scheme to get businesses to try it. In France a law passed in 2006 made the anonymising of applicants' CVs compulsory for firms of over 50 employees. But the government was slow in laying down the conditions for how the law would operate, and only started enforcing it last year. In Sweden and the Netherlands there have been some trials.

Discrimination against job applicants based on their names is well documented, particularly among ethnic minorities. An experiment in Germany found that candidates with German-sounding names were 14% more likely to be called for an interview than candidates with Turkish ones. A review of various studies, by the Institute for the Study of Labour (IZA), a German outfit, found that anonymised job applications boost the chances of ethnic-minority candidates being invited to an interview. A Swedish study found that it led to more ethnic-minority people being hired.

However, the results from other trials are less clear. A second Swedish experiment found that only women, not immigrants, were boosted by anonymous recruitment. According to the IZA, experiments in the Netherlands showed no increase in the likelihood of ethnic-minority candidates being offered a job if their CVs were seen anonymously, suggesting that discrimination had crept in at the interview stage.

Ensuring that a candidate is completely anonymous is also tricky. A 2012 French study found that foreign-born candidates and those from poor districts were less likely to be called for interview when applications were anonymised. Its authors suggested that recruiters may have used other indicators, such as knowledge of Arabic, to identify race. In places fraught with religious tension, such as Northern Ireland, the name of a school can reveal a candidate's faith, while a few years missing on a CV may suggest maternity leave, and thus that the candidate is female. Going name-blind when shortlisting candidates may be a sensible start, but it is likely to be just a small step towards ending hiring bias.

And I still didn't get the job!

Schumpeter | The story and the numbers

The meaning of Valeant's accounting troubles

IT IS fashionable to lament the vapidity and short-termism of institutional shareholders. Without them, it is argued, companies would invest for the long term, run by their enlightened managers. But a rash of creative-accounting incidents is a reminder that firms may go astray. On October 26th Valeant Pharmaceuticals, a drugs company, tried to rebut claims it was massaging its figures. A day later IBM said regulators were investigating how it books its sales. Tesco, a British grocer, is on the rack after admitting inflating its profits. Shares in Noble Group, a Singapore-listed commodities firm accused of questionable book-keeping, have collapsed. In May Hong Kong's regulators suspended trading in Hanergy, a solar-panel firm. These episodes have had a brutal impact on shareholder wealth, with a total loss of $80 billion.

The last outbreak of outright book-cooking was in 2001-03 when Enron, MCI-WorldCom and Parmalat were found to be engaged in fraud. Together they had $170 billion of assets and all went bankrupt. So far, today's scandals are different: the firms are accused not of breaking the law but of creative accounting, or stretching the rules to paint an optimistic picture to outside investors. The specific transactions under the microscope are mostly small. For Valeant, Tesco and Noble they accounted for less than 10% of total sales, profits or assets. Despite this, they have led to an outsized slump in market values. The magnified reaction betrays the mistrust in which many big firms are held.

A firm's market value is supposed to equal the net present value of its future cash flows. In practice it reflects an unstable balance between two versions of the truth. First, the story managers tell, which is usually self-serving and emphasises their brilliance. Second, the numbers. They can be manipulated but are open to scrutiny. Over the years the gap between these two versions of reality has grown. Many bosses of big listed firms are now practised propagandists, in the same way campaigning politicians are, probably because their pay is linked to the share price. Plain talkers struggle. Lawyers script firms' every utterance, making it hard to have frank discussions with outsiders. Investors have grown cynical and trigger-happy.

An extreme symptom of these tensions is the advent of firms whose integrity is continually contested, just like the character of a presidential candidate. Valeant is backed by two respected hedge funds, ValueAct and Pershing Square, whose boss, William Ackman, has publicly celebrated it. But Valeant has been accused of creative accounting by both James Chanos, a famed short-seller, and Allergan, a rival drugs firm it tried to buy in 2014. Herbalife, a direct-sales firm, has also been the subject of a war of words on Wall Street. Noble, when attacked by an ex-employee and short-sellers over its accounts, adopted the American tactics of indignant rebuttals and legal threats. Although couched in the politically correct language of transparency, the impression left by such cases is of a bunker mentality.

That some communication by bosses and big firms is now guff, or worse, is a huge regret. Rule-setters can only do so much, leaving creative accountants always a step ahead. In the 1980s and 1990s the most common ruses were the use of provisioning and capitalised costs to understate expenses in the profit-and-loss account, and dodgy pension accounting. Once these were stamped out, the game shifted to issuing debt disguised as equity, as practised by most banks in 2003-08 to disastrous effect. Today, four of the five cases in the news involve dealings with notionally arm's-length entities—perhaps this is the latest area of innovation. With half of America's big firms experiencing shrinking profits, the urge to juice the numbers may be rising. The boom in unlisted technology firms with billion-dollar valuations, the "unicorns", is also a worry. Lacking outside scrutiny, showered with praise and supposedly worth a combined $200 billion-plus, there will surely be a few spectacular frauds.

You can handle the truth

Yet despair is the wrong reaction, for three reasons. First, not all firms are going backwards. America's big listed technology firms have long been criticised for their opacity and indiscipline. Some are responding. In April Amazon revealed figures for its cloud-hosting division, AWS, and it has put more emphasis on cash flow. In early 2016 Alphabet (formerly known as Google) will separate the results of its search business from its empire of experiments, which range from virtual-reality goggles to autonomous cars. Both firms have seen a jump in their share prices as investors grow more confident that they, and the managers, understand how capital is being allocated and costs controlled.

Second, there are still reliable ways to identify problem firms. Short-sellers such as Mr Chanos play a vital role. And it remains much harder for firms to fluff up the audited cash-flow figures—which measure the cash coming in less the cash paid out—than profits or the balance-sheet. Four of the five firms in trouble today have had weak cash flow. Other warning lights include repeated changes to the way the business is divvied up in the accounts, low levels of cash tax paid, regulatory investigations, the use of second-tier banks as underwriters, an emphasis on "adjusted" results and "pro-forma" numbers, payments made to other firms with links to the relatives of executives, high debt and serial acquisitions. Valeant is giving off worrying signals on all counts.

Lastly, companies' books are not being cooked systematically: the aggregate audited cash flows of the S&P 500 index of big firms (excluding financial companies) mirror their reported profits. America's government statisticians say that listed firms' aggregate reported profits broadly reconcile with those computed by the tax authorities and those in the national GDP accounts. There will be some accounting implosions. But capitalism, especially in America, suffers from an epidemic of public-relations drivel and legalese, not an epidemic of fraud. ■

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Brazil's economy

Broken lever

Are dire public finances hindering the central bank from tackling inflation?

BRAZIL does not look like an economy on the verge of overheating. The IMF expects it to shrink by 3% this year, and 1% next. (The country has not suffered two straight years of contraction since 1930-31.) Fully 1.2m jobs vanished in the year to September; unemployment has reached 7.6%, up from 4.9% a year ago. Those still in work are finding it harder to make ends meet: real (ie, adjusted for inflation) wages are down 4.3% year-on-year. Despite the weak economy, inflation is nudging double digits. The central bank recently conceded that it will miss its 4.5% inflation target next year. Markets don't expect it to be met before 2019.

If fast-rising prices are simply a passing effect of the real's recent fall, which has pushed up the cost of imported goods, then they are not too troubling. But some economists have a more alarming explanation: that Brazil's budgetary woes are so extreme that they have undermined the central bank's power to fight inflation—a phenomenon known as fiscal dominance.

The immediate causes of Brazil's troubles are external: the weak world economy, and China's faltering appetite for oil and iron ore in particular, have enfeebled both exports and investment. But much of the country's pain is self-inflicted. The president, Dilma Rousseff, could have used the commodity windfall from her first term in 2011-14 to trim the bloated state, which swallows 36% of GDP in taxes despite offering few decent public services in return. Instead, she splurged on handouts, subsidised loans and costly tax breaks for favoured industries. These fuelled a consumption boom, and with it inflation, while hiding the economy's underlying weaknesses: thick red tape, impenetrable taxes, an unskilled workforce and shoddy infrastructure.

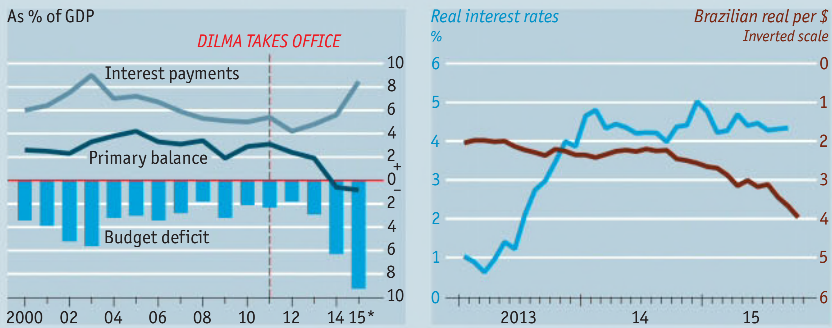
The government's profligacy also left the public finances in tatters. The primary balance (before interest payments) went from a surplus of 3.1% of GDP in 2011 to a forecast deficit of 0.9% this year. In the same period public debt has swollen to 65% of GDP, an increase of 13 percentage points. That is lower than in many rich countries, but Brazil pays much higher interest on its debt, the vast majority of which is denominated in reais and of relatively short maturity. It will spend 8.5% of GDP this year servicing it, more than any other big country. In September it lost its investment-grade credit rating.

Stagflation of the sort Brazil is experiencing presents central bankers with a dilemma. Raising interest rates to quell inflation might push the economy deeper into recession; lowering them to foster growth might send inflation spiralling out of control. Between October last year and July this year, the country's rate-setters seemed to prioritise price stability, raising the benchmark Selic rate by three percentage points, to 14.25%, where it remains.

The alluring real rates of almost 5% ought to have made reais attractive to investors. Instead, the currency has lost two-fifths of its value against the dollar over the past 12 months. It is this pattern of a weakening currency and rising inflation despite higher interest rates, combined with a doubling of debt-servicing costs in the past three years (see chart), that has led to the diagnosis of fiscal dominance. The cost of servicing Brazil's debts has become so high, pessimists fear, that rates have to be ▸▸

Going the wrong way

Brazil



Sources: Economist Intelligence Unit; Thomson Reuters; Haver Analytics; Goldman Sachs; Central Bank of Brazil *12 months to August set to keep it manageable rather than to rein in prices. That, in turn, leads to a vicious circle of a falling currency and rising inflation.

Monica de Bolle of the Peterson Institute for International Economics reckons that the Selic should be 2-3 percentage points higher than it is in order to anchor inflation expectations. If the selic rose by that much, however, it might actually stoke inflation, by adding to the government's already hefty interest bill and thus raising the risk of default—a prospect that would cause the real to slump and inflation to jump. Alternatively, the central bank could print money to buy government bonds. But such monetisation would itself fuel inflation. Either way, spooked investors would surely dump government bonds for foreign assets, speeding the currency's fall and inflation's rise.

Brazil has been caught in such a trap before, most recently just over a decade ago. In a paper published in 2004 Olivier Blanchard, the former chief economist of the IMF who is now at the Peterson Institute, found evidence that rate rises in Brazil in 2002-03 spurred inflation rather than reining it in. Prices were brought under control only owing to the fiscal restraint of Ms Rousseff's predecessor and patron, Luiz Inácio Lula da Silva, who took office in 2003.

The situation today is different, Mr Blanchard stresses. Real rates are less than half what they were in the early 2000s and only about 5% of government debt is denominated in dollars, compared with nearly half back then. The central bank's reluctance to raise the Selic further may have more to do with the impact on output than with fiscal concerns. Currency depreciation, too, could be down to general gloom about the economy rather than fear of default or money-printing. It has also made Brazil's $370 billion in foreign re-

Buttonwood | Take it easy

Economies are too weak for normal monetary policy to resume

THIS was supposed to be the year when monetary policy started to get back to normal. Seven years after Lehman Brothers collapsed, central banks were expected to edge away from a policy of near-zero interest rates. But now, with the year almost over, the Federal Reserve has yet to push up rates while other rich-world central banks are focused more on easing than on tightening.

Sweden's Riksbank extended its quantitative easing (QE) programme on October 28th. Mario Draghi, the president of the European Central Bank, has indicated that further easing may come in December, probably by adjusting the pace, scale or type of asset purchases in its QE regime. More than two-fifths of economists polled by Bloomberg forecast that the Bank of Japan would pick up the pace of its monetary easing on October 30th, after *The Economist* went to press. Even if policy is kept unchanged, the bank plans to expand the money supply at an annual rate of ¥80 trillion ($664 billion).

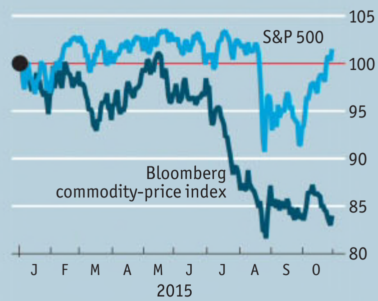
The picture in the emerging markets is more mixed. Capital Economics calculates that, on balance, slightly more emerging central banks have been tightening than cutting. But China cut interest rates on October 23rd, the sixth reduction in the last year. India unveiled a half-percentage-point rate cut in late September.

The attitude of central banks reflects their worries about economic growth. The IMF just lowered its global growth forecast to 3.1% for 2015, with cuts applying to both advanced and developing economies. Inflation is also low in Europe, North America and Asia, giving central banks more freedom to be supportive.

The benign interest-rate outlook is one reason why equities have recovered from the wobbles they suffered in August and September. As of October 28th, the S&P 500 index had regained nearly all the ground lost in the previous two months (see chart). Futures markets indicate that investors do not expect the first Fed hike until next year, although that may change after the Fed's open market committee removed a previous reference to global economic risks in its October statement.

Mixed fortunes

January 1st 2015=100, $ terms



Source: Bloomberg

The other main reason why markets have rallied is a more sanguine view of the Chinese economy. Official figures for third-quarter GDP showed growth of 6.9% and, although some have doubts about the data, it was noticeable that the IMF did not downgrade its forecast for Chinese growth in its latest global outlook.

But the optimism should not be taken too far. Other market indicators still suggest investors are worried about sluggish growth and deflation. Bloomberg's commodity index is down by more than a quarter over the past 12 months. The yield on the ten-year Treasury bond is hovering around 2%, not a level that suggests investors expect normal levels of economic growth to return any time soon.

American companies are also struggling to maintain the robust profit growth they have shown since 2009. While third-quarter profits for S&P 500 companies are marginally ahead of expectations (as is usually the case), they are still likely to be 4% lower than they were a year ago; sales will probably fall by 3%.

It is simply hard to keep pushing up profits when global GDP growth is subdued. The number of American companies citing a slowing global economy as affecting their profits and revenues is more than 50% higher than a year ago, according to Thomson Reuters. The news is no better in Europe, where third-quarter profits are expected to be down 5.4% on the year, with revenues dropping 7.9%.

So the equity markets are caught in something of an awkward equilibrium. Positive economic news will make the outlook for profits more rosy but will also mean that the Fed is more likely to push up rates. And bad economic news may mean a respite from monetary tightening but is still bad news.

This explains the rather bumpy ride that stockmarkets have had in 2015. The lack of profit growth makes it hard for markets to surge ahead (the MSCI world index is back around its end-2014 level). But without higher interest rates, or evidence that big economies are slipping into outright recession, share prices are unlikely to collapse.

Equities may be following the path of government bonds, which have been stuck in a narrow trading range for a while. Central banks may have helped stockmarkets in an era of low growth by making other assets less attractive; the result was a positive shift in share valuations. But slow growth hasn't gone away. For equity investors, it was better to travel hopefully than to arrive.

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serves more valuable in domestic-currency terms—a handy cushion.

There is no question, however, that Brazilian monetary policy is at best hobbled. State-owned banks have extended nearly half the country's credit at low, subsidised rates that bear little relation to the Selic—at a cost of more than 40 billion reais ($10 billion) a year to the taxpayer. As private banks have cut lending in real terms in the past year, public ones have continued to expand their loan books. All this hampers monetary policy, says Marco Bonomo of Insper, a university in São Paulo. If left unchecked, this spurt of lending may itself threaten price stability.

Joaquim Levy, the finance minister, has ordered a spending review. But unlike Lula in 2003, Ms Rousseff has hardly any political capital left to push through painful reforms. The downturn is now deeper, too; tax receipts are falling sharply, making it harder to trim the deficit. Mr Levy's (modest) fiscal measures have faced stiff opposition from Congress, where much of Ms Rousseff's coalition is embroiled in a bribery scandal and fearful of angering voters further with spending cuts or tax rises. Fiscal dominance may be no more than a theory, but the political burden that is dragging Brazil down is plain for all to see. ■

Bank regulation in China

Letting go

SHANGHAI

China liberalises interest rates at last

YI GANG, a deputy governor of China's central bank, mused this week about shopping in Moscow in the 1980s. In the streets around Red Square, he said, visitors could find many big shops with identical low-quality goods. But among the drab displays were a few Yugoslav and Polish stores with better selections. These countries had experimented with competition earlier than the Soviet Union and the results were visible on the shelves of their outposts in Moscow.

Banks, Mr Yi suggested, are no different from stores. If governments control them too tightly—as China has long done by dictating the interest rates they pay and charge—banks do not compete with each other and thus fail to develop the range of financial products their customers want and need. So on October 23rd, at the same time as cutting interest rates to support stuttering growth, the People's Bank of China (PBOC) announced that it was setting banks free. They can now offer depositors whatever interest they like, at least in theory. That removes the last formal re-

There are strings attached

striction on rates.

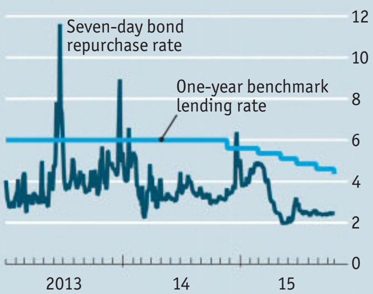
China has been slowly liberalising rates for well over a decade. First, it allowed banks to set lending rates above its benchmark. Then, it eliminated the floor on lending rates too. In recent years, it started raising the ceiling on deposit rates.

The full liberalisation of interest rates should, in theory, change the face of China's financial system. By keeping rates well below where they would have settled in a free market, the government transferred wealth from savers to banks and to borrowers. Banks benefited because regulators created a large gap, about three percentage points, between savings and lending rates, guaranteeing them easy profits when turning deposits into loans. This made them rich but lazy. Borrowers did well because lending rates were also held artificially low, providing them with cheap credit to fuel China's investment boom. But savers—workers stashing a share of their hard-earned wages in their accounts—earned paltry returns.

Rate liberalisation promises to reverse all this. Banks will have to work harder to make profits. Borrowers, facing higher

From noise to signal

China, %



Sources: People's Bank of China; Wind Info; Bloomberg

rates, will have to be more discerning about their investments. Long-suffering households will start to reap bigger incomes from their savings. The reforms that have already been implemented have set this process in motion. After a decade of double-digit growth in profits, banks are barely making any money this year. Savers, meanwhile, have a greater array of options than ever, from certificates of deposit to wealth-management products.

Progress will be gradual, however. The central bank will continue to publish benchmark deposit and lending rates. Although banks are no longer obliged to stick to them, the big, state-owned ones that dominate the financial system tend to hew closely to official guidance. Eventually, the PBOC says (without specifying when), it will stop publishing benchmark rates. Its approach would then resemble that of its counterparts in developed countries, which seek to influence rates through their own borrowing and lending, rather than by decree.

Indeed, the PBOC is already moving in that direction. The seven-day bond repurchase rate (in effect, the interest it charges financial institutions that borrow cash for a week, using bonds as collateral) used to be very volatile. Recently, the central bank has managed to flatten it out (see chart), creating what appears to be an anchor for short-term rates. The PBOC is certainly not bowing out altogether. ■

Robo-advisers

Does not compute

The growth of firms selling computer-generated financial advice is slowing

GIVEN the many mistakes that human investors are prone to—selling after a market tumble, trading too often, believing they can beat the stockmarket—dealing with money is perhaps best left to computers. That is the premise behind a host of firms selling computer-generated financial advice, which assist savers tired of paying for pricey human counsel. The low cost of these "robo-advisers" had helped them grow rapidly, to the horror of conventional money-managers. But growth in assets under management (AUM) at the biggest outfits has sagged recently, and with it the upstarts' prospects.

It used to be only those with hundreds of thousands of dollars to invest, if not millions, who could afford advice about where to put their money. Humans charge 1-3% of their clients' portfolios every year, simply to rebalance among asset classes every so often and do clever things to minimise taxes. Robo-advisers, led by Wealthfront, a Californian outfit, and Betterment, based in New York, do much the same, but for a mere 0.25% or so a year.

Largely because they squash fees, robo-services do a good job for anyone bar the very rich with complex financial arrangements. A basic questionnaire—age, salary, investment aims and the like—helps establish risk appetite. Money is then allocated to low-cost funds provided by third parties. For those who believe, correctly, that fees and human error are the main pitfalls of investing, the approach is hard to beat.

Other features include snazzy smartphone apps (customers tend to be on the younger side), transparent pricing and low or no minimum investment. Wealthfront describes itself as the Charles Schwab of the millennial generation, widening access to investing by cutting costs, just as the discount stockbroker has done for baby-boomers since the 1970s.

But being very cheap means Betterment and Wealthfront need lots of assets to turn a profit. Their AUM of roughly $2.9 billion each, accumulated largely in the past two years, delivers revenues of $7m or so a year. That is not enough to sustain around 100 staff each as well as hefty marketing budgets. Total costs are likely to be $40m-50m a year, according to one fintech grandee (neither firm discloses the data).

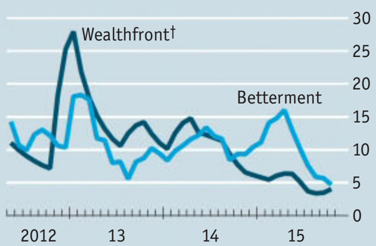
Scale is vital, as every new client brings fresh revenue at little extra cost. AUM in the tens of billions of dollars, if not hundreds, will be needed to break even. The two firms' venture-capital backers, which have poured over $100m into each, expect initial losses. But even they will hope for profits in years, not decades.

Last year the two firms' AUM grew by over 10% a month, so doubling every seven months. Growth has since fallen to less than 5% (see chart). Wealthfront used to trumpet its AUM, but now reveals it only in regulatory filings. In August it was $2.6 billion; assuming it is now $2.9 billion (it says only that it is less than $3 billion), it will take a year and a half to double at its recent rate of growth. Betterment is faring only slightly better.

Bit disappointing

Assets under management

% increase on previous month*



Sources: Company reports; SEC; *The Economist*

*3-month moving average
†Based on latest estimate of $2.9bn AUM

Adam Nash, Wealthfront's boss, says AUM is a misleading measure, as it is affected by asset-price swings, such as the stockmarket slide of the late summer (largely reversed since). It might be that volatility has spooked potential investors. Both firms say customers are joining in big numbers, and that AUM will grow with their savings.

Competition from incumbent wealth managers will have hurt the robotic duo. Vanguard (which puts together many of the funds Betterment and Wealthfront recommend to clients) and Schwab have both recently launched robo-advisory services. These have grown quickly—Schwab's now has $4.1 billion in AUM—if only by poaching existing customers. Robo-purists decry potential conflicts of interest.

In dollar terms, both Betterment and Wealthfront are still attracting over $100m a month—it is the second $100m that is proving elusive. Yet fintech firms usually count on their custom growing at exponential, not arithmetic, rates. If AUM growth does not pick up, both firms will have to raise prices, expand their offerings or put themselves up for sale. In August BlackRock, a giant asset manager, bought FutureAdvisor, a smaller robo-rival. That robots of the sort devised by Betterment and Wealthfront will direct an ever-larger chunk of investors' cash seems inevitable. Whether such products can be sold profitably by startups remains in doubt. ■

Cashpoints

The eyes have it

NEW YORK

Who wouldn't love a machine that spews out cash?

THEY are, in the view of Paul Volcker, a former chairman of the Federal Reserve, the only useful financial innovation of recent decades. Better yet, cashpoints (ATMs, to Americans) are still evolving. This week Citibank unveiled one that can identify account-holders by scanning their irises, thus doing away with codes—and with cards, for that matter. Customers request funds via their phones before confirming their identity with a scan.

Noteworthy

Nearly half a century since the cashpoint came into service, its origin is still disputed. Barclays, a British bank, often gets the credit for installing the first one, at its Enfield branch in 1967. Its future is just as uncertain: those who think plastic and, increasingly, mobile phones are displacing cash one transaction at a time see little need for either paper money or the machines that dispense it.

In fact, cashpoints are still multiplying. Nearly 200,000 were installed in 2014, taking the global total to over 3m, says RBRLondon, a British consultancy. Much of the rise is in emerging markets; Europe and America are barely growing. Diebold and NCR, both American firms, and Wincor Nixdorf of Germany, still make most of them, however.

A few do novel things, such as selling gold or tickets to football matches. Some double as share-trading machines, or allow users to withdraw bitcoin. Airports have cash machines that spew holiday money, usually at lousy rates. A bakery in New York, Sprinkles, has built what it calls a cup-cake ATM. But cash is still king when it comes to dispensers. Most cashpoints do a limited number of things in increasingly sophisticated ways, whether it be switching languages or letting customers pick the notes they want.

In retrospect, cashpoints have typically revealed preferences that only seem obvious later on. In America, many banks initially operated ATMs only during normal business hours, much as supermarkets use self-checkout machines today. But a blizzard in 1978 prompted Citibank to keep them open around the clock as human tellers struggled to get to work. The slogan it launched that year, "The Citi never sleeps", underscored how the demands of customers had ceased to coincide with the hours bankers kept. Will iris scanning catch on? Citibank is taking the long view.

Private-debt investing

Lenders of first resort

Investors are increasingly eager to lend to European firms directly

EAT, a British sandwich chain, was looking for £13m ($20m) last year to tart up its stores. It knew conventional banks would be hesitant to provide such a loan, given its existing debt. Worse, it would soon need to borrow more, to fund a rapid expansion. So it turned to Ardian, an investment firm, which lent it £40m, not just for the refurbishments, but also to refinance its existing debt and to open 90 new stores.

Although Ardian is charging a heady 15% interest rate, says Strahan Wilson of EAT, it is much less bureaucratic and more flexible than a bank. That has allowed EAT to expand 12-18 months faster than it otherwise could have. What is more, he adds, "Now that we've established this relationship with Ardian, if we need more capital we need only ask."

The easiest way for institutional investors to lend to companies is to buy bonds. Many also buy loans originated by banks and repackaged into securities, or invest in funds that purchase non-performing loans from banks. Before the financial crisis American funds began investing in private debt, as opposed to the sort available publicly on the bond markets. This involves providing credit directly to firms that either cannot borrow from banks and bond markets or do not like the terms.

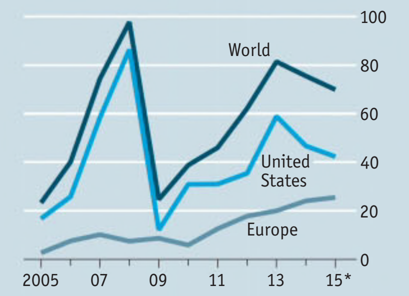
It is in Europe that private debt funds have been proliferating recently (see chart). European businesses depend heavily on banks, but changes in capital rules have made it relatively expensive for banks to lend to them. Securitisation, meanwhile, earned a bad name during the financial crisis. S&P, a rating agency, estimates that middling European firms will need around €3 trillion ($3.3 trillion) in new loans over the next five years.

Money managers are eager to fill the gap: $70 billion has already been raised for private debt this year, says Preqin, a data provider ($2.2 billion of it by Ardian). Pension funds and insurers like private debt because returns tend to be much higher than in the bond markets; Pitchbook, a data provider, says yields of 9-12% have been typical in recent years.

That cannot last. For one thing, the market has yet to be tested by widespread defaults. Interest in private debt in America has waned in recent years as intense competition has driven down returns. "We're getting better returns in Europe than in America for taking on the same risks," says Jim Blakemore of GreenOak, which lends

European dawn

Capital raised by private debt funds, $bn



Source: Preqin *Year to October

to property developers. But Europe seems to be heading the same way. The average fund raised this year is three times bigger than in 2008. Smaller, specialist funds are also springing up in niches such as health-care or aeroplane finance.

It does not help that most lending so far has been to firms backed by private equity, such as EAT. Many of the conservative, family-owned European companies that are short of credit still would not dream of borrowing from anything but a bank. How fast that changes will determine the industry's fortunes. ■

Credit unions

Winning converts

A venerable form of banking comes back into fashion

THERE is a proselytising feel to the credit-union movement. Believers talk of a "social mission": to serve communities, not the false gods of the stockmarket. Today, this creed is winning more converts than ever before. Globally, the number of people in credit unions has doubled since 2000, from 108m to 217m. Savings are up by 130% in real terms (see chart).

Credit unions first appeared in 19th century Germany. Like banks, they took deposits and made loans. But, crucially, they were owned by their members, who shared a "common bond", such as a profession or place of residence. Earnings were returned to members in the form of better interest rates.

In Europe, most of these early institutions evolved into co-operative networks, such as DZ Bank in Germany and Rabobank of the Netherlands, which are still owned by members but no longer serve a particular group. Elsewhere, the requirement for a common bond endures: Partners Federal Credit Union, for example, is open only to employees of Walt Disney and their families. Fully 39% of American adults belong to a credit union, up from 36% a decade ago—an increase of 14m. In Australia, another stronghold, 24% do.

Three forces are driving the growth of credit unions. The first is simple: they offer higher rates than banks to savers and lower rates to borrowers. American credit unions charge an average rate of 2.66% on a three-year used-car loan, against 5.13% for banks, according to SNL Financial, a research company. Credit unions also outscore banks in customer satisfaction surveys in America, Canada and elsewhere.

A second factor is the financial crisis. Some credit unions failed; "corporate" ones, which pool and reinvest the funds of individual credit unions, were especially badly hit. But, in general, credit unions were more resilient than banks, says a report published in 2013 by the International Labour Organisation. Without the same pressure to chase short-term profit, they took fewer risks. As the big banks were hit by failure and scandal, credit unions presented themselves as a more wholesome alternative. That boosted membership, especially among the young.

The third cause of growth is more lasting, argues Bill Hampel of the Credit Union National Association, an American industry group. In America, legal changes have allowed for multiple "common bonds", helping credit unions to merge. Big credit unions are now professional operations with nationwide ATM networks and a wide range of products: the Navy Federal Credit Union, which serves American sailors and soldiers, has nearly 6m members. All this makes credit unions easier to join, and more convenient to use.

This brings them into closer competition with banks. In America, bankers complain loudly about credit unions' exemption from federal income tax. But even in Australia, where they don't enjoy the same tax breaks, credit unions still offer competitive rates, according to data from Canstar, a research company. Happily for banks, though, the very thing that makes credit unions different also hampers their growth: they cannot raise equity. ■

Blessed union

Global credit unions, 2014$ trn

Sources: World Council of Credit Unions; Bureau of Labour Statistics; *The Economist*

Free exchange | Keeping up with the Karumes

A new study shows that money can buy you happiness—but only fleetingly, at others' expense

"WHEN you open the window, both fresh air and flies come in," said Deng Xiaoping, describing the good and bad consequences of the opening of China's economy. Most people see economic growth and rising incomes as desirable, but they have their disadvantages. Families break apart, as young people move to the cities. Jobs become more insecure if the labour market is liberalised. Rising inequality may upset even those who are becoming richer. Small wonder, perhaps, that the satisfaction ordinary Chinese expressed with their lot fell at the start of the economic boom sparked by Deng's reforms, before rising again as growth accelerated. So, at any rate, concluded a study* published in 2012 by Richard Easterlin of the University of Southern California and colleagues.

Mr Easterlin is best known for a hotly contested paper published in 1974, which argued that rising incomes do not make people happier. Ever since, in spite of the obvious benefits, economists have debated whether getting richer is all it's cracked up to be. The most comprehensive study, published in 2012, looked at a range of countries over time, and concluded that there is a positive relationship between income growth and satisfaction.

That study did not make clear, however, whether money leads to happiness or happiness to money. Andrew Oswald, Eugenio Proto and Daniel Sgroi of the University of Warwick have posited that happiness comes first. Depressed workers are less productive, after all, and so earn less. In addition, high incomes and happiness may have a common cause. Those with a big network of friends are both more satisfied in life and better at finding well-paid jobs.

One way to answer questions about causality is to look at evidence from randomised trials. Lotteries randomly allocate extra wealth, and so could serve as a focus of study, but in most countries only a small proportion of people buy tickets. The behaviour of those having a flutter may not be typical of people in general, skewing the results. The solution would be for economists to run their own experiments, doling out big jackpots at random among the population. In rich countries it is too expensive to mimic a lottery. But in poorer places some charities already do.

The Busara Centre for Behavioural Economics in Nairobi, Kenya, runs experiments with participants from slums and rural areas. Its researchers looked at the results of a lottery-like scheme in rural Kenya, in which a random sample of 503 households spread over 120 villages was chosen to receive cash transfers of up to $1,525. The average transfer, $357, was almost enough to double the wealth of a typical villager. The researchers measured the well-being of villagers before and after the transfer, using a range of different methods: questionnaires about people's life satisfaction, screening for clinical depression and saliva tests for cortisol, a hormone associated with stress.

Since not all the villagers received a transfer, the experiment sheds no light on what would happen if everyone's wealth increased equally. But the study does mimic the distributional results of economic growth, which tends to allot gains unevenly. As expected, those who received transfers reported greater satisfaction with their lot after the money arrived. Cortisol levels and the incidence of depression fell too.

However, the satisfaction of those who did not receive anything fell sharply as their neighbours' fortunes improved. The decline in satisfaction prompted by seeing one's peers get $100 richer was bigger than the increase of satisfaction from getting a handout of the same size. The bigger the handouts to others in their village, the greater the dissatisfaction of non-recipients. (The handouts did not seem to have any impact cortisol levels or the prevalence of depression among non-recipients.)

Both the bitterness and the joy that the windfalls produced were passing. The effects of changes in people's circumstances wear off as they get used to them—a phenomenon economists call "hedonic adaptation". The large swings in satisfaction were found in the middle of the transfer scheme. Within about six months, all the transfers had been made (if they had been spread over a longer period, as usually happens when a country develops, the outcome may have been different). A year later the happiness of both the recipients and those who did without had returned close to its initial level.

Moreover, it was not inequality in general that bothered the unlucky, so much as a decline in their own wealth relative to the mean. Participants in the experiment shrugged off changes in the Gini coefficient of their village, which measures overall inequality. Take the example of a village in which one person gets richer, and another gets poorer. The village is less equal, but the mean income is unchanged. In the Kenyan experiment this did not matter to the rest of the village. Instead, participants compared how well everyone else was doing (the village mean) to themselves.

Blinded by aspiration

A study by Ada Ferrer-i-Carbonell looking at data on life satisfaction from Germany might help explain the Kenyans' reactions. She concludes that there is an asymmetry in the way people compare themselves with others. We tend to look exclusively at those better off than us, rather than contemplate our position within the full range of outcomes. When the lot of others improves, we react negatively, but when our own lot improves, we shift our reference group to those who are still better off. In other words, we are never satisfied, since we quickly become accustomed to our own achievements. Perhaps that is what spurs people to earn more, and economies to grow. ■

* Studies cited in this article can be found at www.economist.com/happiness15

Economist.com/blogs/freeexchange

For daily analysis and debate on science and technology, visit
Economist.com/science

Evolution

Greater than the sum of its parts

It is rare for a new animal species to emerge in front of scientists' eyes. But this seems to be happening in eastern North America

LIKE some people who might rather not admit it, wolves faced with a scarcity of potential sexual partners are not beneath lowering their standards. It was desperation of this sort, biologists reckon, that led dwindling wolf populations in southern Ontario to begin, a century or two ago, breeding widely with dogs and coyotes. The clearance of forests for farming, together with the deliberate persecution which wolves often suffer at the hand of man, had made life tough for the species. That same forest clearance, though, both permitted coyotes to spread from their prairie homeland into areas hitherto exclusively lupine, and brought the dogs that accompanied the farmers into the mix.

Interbreeding between animal species usually leads to offspring less vigorous than either parent—if they survive at all. But the combination of wolf, coyote and dog DNA that resulted from this reproductive necessity generated an exception. The consequence has been booming numbers of an extraordinarily fit new animal (see picture above) spreading through the eastern part of North America. Some call this creature the eastern coyote. Others, though, have dubbed it the "coywolf". Whatever name it goes by, Roland Kays of North Carolina State University, in Raleigh, reckons it now numbers in the millions.

The mixing of genes that has created the coywolf has been more rapid, pervasive and transformational than many once thought. Javier Monzón, who worked until recently at Stony Brook University in New York state (he is now at Pepperdine University, in California) studied the genetic make-up of 437 of the animals, in ten north-eastern states plus Ontario. He worked out that, though coyote DNA dominates, a tenth of the average coywolf's genetic material is dog and a quarter is wolf.

The DNA from both wolves and dogs (the latter mostly large breeds, like Doberman Pinschers and German Shepherds), brings big advantages, says Dr Kays. At 25kg or more, many coywolves have twice the heft of purebred coyotes. With larger jaws, more muscle and faster legs, individual coywolves can take down small deer. A pack of them can even kill a moose.

Coyotes dislike hunting in forests. Wolves prefer it. Interbreeding has produced an animal skilled at catching prey in both open terrain and densely wooded areas, says Dr Kays. And even their cries blend those of their ancestors. The first part of a howl resembles a wolf's (with a deep pitch), but this then turns into a higher-pitched, coyote-like yipping.

The animal's range has encompassed America's entire north-east, urban areas included, for at least a decade, and is continuing to expand in the south-east following coywolves' arrival there half a century ago. This is astonishing. Purebred coyotes never managed to establish themselves east of the prairies. Wolves were killed off in eastern forests long ago. But by combining their DNA, the two have given rise to an animal that is able to spread into a vast and otherwise uninhabitable territory. Indeed, coywolves are now living even in large cities, like Boston, Washington and New York. According to Chris Nagy of the Gotham Coyote Project, which studies them in New York, the Big Apple already has about 20, and numbers are rising.

Even wilier

Some speculate that this adaptability to city life is because coywolves' dog DNA has made them more tolerant of people and noise, perhaps counteracting the genetic material from wolves—an animal that dislikes humans. And interbreeding may have helped coywolves urbanise in another way, too, by broadening the animals' diet. Having versatile tastes is handy for city living. Coywolves eat pumpkins, watermelons and other garden produce, as well as discarded food. They also eat rodents and other smallish mammals. Many lawns and parks are kept clear of thick underbrush, so catching squirrels and pets is easy. Cats are typically eaten skull and all, with clues left only in the droppings.

Thanks to this bounty, an urban coywolf need occupy only half the territory it would require in the countryside. And getting into town is easy. Railways provide corridors that make the trip simple for animals as well as people.

Surviving once there, though, requires a low profile. As well as having small territories, coywolves have adjusted to city life by becoming nocturnal. They have also ▸▸

learned the Highway Code, looking both ways before they cross a road. Dr Kays marvels at this "amazing contemporary evolution story that's happening right underneath our nose".

Whether the coywolf actually has evolved into a distinct species is debated. Jonathan Way, who works in Massachusetts for the National Park Service, claims in a forthcoming paper that it has. He thinks its morphological and genetic divergence from its ancestors is sufficient to qualify. But many disagree. One common definition of a species is a population that will not interbreed with outsiders. Since coywolves continue to mate with dogs and wolves, the argument goes, they are therefore not a species. But, given the way coywolves came into existence, that definition would mean wolves and coyotes should not be considered different species either—and that does not even begin to address whether domestic dogs are a species, or just an aberrant form of wolf.

In reality, "species" is a concept invented by human beings. And, as this argument shows, that concept is not clear-cut. What the example of the coywolf does demonstrate, though, is that evolution is not the simple process of one species branching into many that the textbooks might have you believe. Indeed, recent genetic research has discovered that even *Homo sapiens* is partly a product of hybridisation. Modern Europeans carry Neanderthal genes, and modern East Asians the genes of a newly recognised type of early man called the Denisovans. Exactly how this happened is unclear. But maybe, as with the wolves of southern Ontario, it was the only way that some of the early settlers of those areas could get a date. ■

Financial time machines

Stamp collectors

Book-keeping will soon require atomic levels of precision

"IF EVER you wanted to set your watch, now is the time." Leon Lobo, of Britain's National Physical Laboratory (NPL), stands before a rack of servers near Canary Wharf, London's eastern financial outpost. The rack holds a high-precision, caesium atomic clock—the most accurate sort on the planet—and two other digital timepieces, called "grandmaster clocks", that work alongside it. Ticking in synchrony, all three display the time to within a whisker of co-ordinated universal time (UTC), the world's absolute standard.

The purpose of this high-tech horological trio is to tell banks and trading services *exactly* what the time is, so that they can comply with a new set of accounting rules, called the Markets in Financial Instruments Directive II, which are being promulgated by the European Commission and will come into force in 2017. Among many other things, this directive drastically tightens rules on the time-stamping of transactions. That tightening is needed to give a better account of who did what and when in a world where market crashes can happen in a flash. Dr Lobo and his colleagues therefore met, on October 28th, with regulators, banks and trade bodies from all over Europe, to discuss how to implement the directive.

At the moment European rules demand accuracy to within one second (other jurisdictions vary; in America, for example, it is 50 milliseconds). Many companies comply by using signals from satellites belonging to the Global Positioning System (GPS). Others buy cheap atomic clocks to do their timing. But neither route offers a guaranteed link to UTC. GPS signals can be jammed, and even atomic clocks may drift. Such discrepancies make forensic accounting a nightmare.

Those problems will get worse when the directive is implemented. For standard electronic transactions, the new rules say accuracy must improve a thousandfold, to within one millisecond. For so-called high-frequency traders (firms that carry out several trades a second), the rules are even stricter. They call for accuracy within 100 microseconds. Only for old-fashioned voice trading will the rule remain a full second. But all recorded times, whatever degree of latitude they are permitted, must also be traceable to a national standard. In Britain the NPL is responsible for imposing this standard, so the lab is going into the business of piping its timing pips to data centres like the one in Canary Wharf—in effect, selling certified time-stamps.

The process of time-stamping starts with a signal carrying the pips travelling over a dedicated optical-fibre link. This trip's duration must therefore be determined. To do so, a caesium atomic clock is synchronised with the main standard at the NPL and then carried to the place where it will be installed. Once it is there, the pips' journey time through the fibre-optic cable can be worked out, by logging the discrepancy between what the pips say and what the caesium clock says. One of the two grandmaster clocks then subtracts that delay from the pips it is receiving from the NPL (the other serves as a fail-safe). Relative drifts of the time to and fro are monitored and corrected once a second. And if the fibre connection bringing the pips should be cut, the caesium clock takes over until a connection is restored.

All of this is just what the directive ordered: fault-tolerant precision, certified right at the servers where so much of finance now happens. But, says Ian Salmon, a consultant at Accedian Networks, it leaves unanswered many questions about what to time-stamp, and how. A shares transaction is not just a trip to a till that spits out a receipt. Orders come in, are routed to this server or that, trading algorithms do their crunching, decisions are made and sent off to the back office for settlement, and so on. It is a decision tree that might split hundreds of times, with a transaction taking as much as a few milliseconds. Determining which time-stamps to collect, and ensuring that all the traders set their proprietary systems to do so in the same way, will take some doing. The meeting this week has been called in part to start tackling these thorny questions. Frankly, it's about time. ■

Malaria

One more punch

A drug used to rid people of worms may be a new weapon against malaria

IVERMECTIN, a medicine employed for the treatment of nematode-worm infections, has a side-effect. It has been known since the 1980s that the drug kills arthropods (ticks, mites, insects and so on) foolish enough to bite someone treated with it. That has led some researchers to wonder if it might be deployed deliberately against the mosquitoes which transmit malaria. Preliminary studies suggested so. Mosquitoes do, indeed, get poisoned when they bite people who have taken the drug. Moreover, even if a mosquito does not succumb, ivermectin imbibed this way is often enough to kill any malarial parasites it is carrying. And, since ivermectin is routinely deployed en masse to deal with lymphatic filariasis (a nasty disease that can lead to extreme swelling of limbs and genitalia), river blindness and so on, it might already be expected to be having an effect. What no one had measured, though, was the size of that effect.

A paper presented by Brian Foy of Colorado State University, to this year's meeting of the American Society of Tropical Medicine and Hygiene, in Philadelphia, has changed that. Dr Foy and his colleagues ran a small clinical trial in Burkina Faso that is the first to measure the drug's impact on rates of malaria. In four villages included in the trial, everyone except pregnant women and young children received five doses of ivermectin, at three-week intervals. People in a comparison group of villages got just the first dose—which is the routine annual mass-treatment for worm diseases. The extra rounds of ivermectin, Dr Foy found, cut the number of malarial episodes among children under five by 16%, even though these children were not, themselves, receiving the drug. That equates to about one episode per child being averted over the course of two years.

A second study presented to the meeting, which was conducted in Thailand by Kevin Kobylinski of the Walter Reed Army Institute of Research, in Maryland, brought further good news. It was the first to test ivermectin's effect on *Plasmodium vivax*, the predominant parasite in Asia (the African parasite is *Plasmodium falciparum*). Dr Kobylinski and his colleagues fed mosquitoes malaria-infected human blood mixed with the drug. They found that a dose of ivermectin which killed 25% of mosquitoes also cleared the parasite in 45% of their surviving sisters. And even in those surviving insects that remained infected, the drug cut the number of parasites in half.

In Thailand, a country well on its way to eliminating the scourge of malaria, one line of attack is mass-treatment with drugs that can clear the parasite from its human hosts. Unfortunately, those infected with *P. vivax* often have no symptoms. Convincing the asymptomatic to take antimalarial drugs can be tricky. Indeed, they may not even realise they are infected. But the task may be easier if the mix includes ivermectin, since this is already a familiar treatment for common problems like scabies.

The discoverers of ivermectin's predecessor, avermectin, were among the winners of this year's Nobel prize for medicine. By an odd coincidence, the third winner was the inventor of artemisinin, which is now the most effective antimalarial drug around. If ivermectin can be pressed into service as an antimalarial agent, too, it will increase the chance that the disease can be knocked on the head once and for all. ■

Dentistry

Tooth fairy-dust

Adding tiny gems may make root-canal treatment more effective

TIME was when the preferred material for filling superficial dental cavities was gold. Often, it still is, although cheaper materials are frequently used instead. But, for the deepest sort of filling, root-canal treatment, another substance familiar from the jeweller's shop is about to join the dentists' armamentarium—diamond.

Root-canal fillings reach, as their name suggests, right to the bottom of a tooth. They are needed when bacterial infection has penetrated both a tooth's protective enamel and the somewhat softer dentine layer that underlies this, and has got into the nutrient-rich, nerve-containing pulp in a tooth's centre. Unfortunately, such fillings are complex, painful and tricky to pull off—and it is common for the infection to return, either because the void left when the pulp has been removed has not been cleared properly by the dentist performing the operation or because gutta percha, the gum usually used to fill that void, does not create a good enough seal, permitting bacteria to creep back in. The idea of changing this by mixing diamonds into the gutta percha is the brainchild of Dean Ho, a bioengineer at the University of California, Los Angeles. He outlines it in this month's edition of *ACS Nano*.

A tooth's best friend?

The diamonds in question are 4-6 nanometres (billionth of a metre) across. Geometrically, they are truncated octahedrons—meaning they have 14 facets. The edges where the facets come together are sharp, and the facets themselves are covered with chemical groups such as amines, carboxyls and hydroxyls. These properties grant nanodiamonds abilities that are desirable from Dr Ho's point of view.

Their geometry means they are good at digging into and thus adhering to surfaces—including the dentine lining of an evacuated root canal. And their surface chemistry means that their facets are perfect for attracting and holding on to molecules of antibiotics. In contrast, antibiotics mixed into pure gutta percha migrate rapidly out of the material, leaving the plug vulnerable to bacterial colonisation. A bonus is that diamonds, which are (surface groups aside) crystals of pure carbon and thus chemically inert, are unaffected by the harsh chemical environment that is the mouth. A second bonus is that nanodiamonds are cheap, because conventional mining and refining techniques generate them as by-products.

To test his idea, Dr Ho mixed nanodiamonds with amoxycillin, a common antibiotic, and let the mixture sit for five to seven days at room temperature. This gave the antibiotic plenty of time to adhere to the diamonds. He and his colleagues then added the pepped-up diamonds to some gutta percha and shook the result with sound waves to distribute the diamonds evenly. This done, they measured their new composite material's tensile strength and elasticity (both of which were about three times that of gutta percha alone), and its ability to withstand a variety of stresses (better than gutta percha's, too). They also monitored the rate at which the antibiotic leaked from the diamonds.

The answer to that was, not too badly. The tiny gems shed only 13-17% of their load during the course of a week's monitoring. With such encouraging findings, Dr Ho reckons that clinical trials on patients are now just two years away. ■

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Espionage in fiction

The spy who came in from the cold

A secretive life becomes an open book

John le Carré: The Biography. By Adam Sisman. *Harper; 651 pages; $28.99. Bloomsbury; £25*

JOHN LE CARRÉ'S novels study human treachery, ideological conflict and geopolitical upheaval with a rare intelligence and sympathy. Of the author himself, whose real name is David Cornwell, not much is known beyond (sometimes contradictory) snippets offered in interviews and facts masquerading as fiction in his most autobiographical novel, "A Perfect Spy" (1986). Now, Adam Sisman, the author of acclaimed biographies of A.J.P. Taylor and Hugh Trevor-Roper, has got behind Mr le Carré's mask to unravel the enigma.

Mr Sisman makes it clear at the outset that he is an admirer and that Mr le Carré (whom he refers to throughout as "David") wished him to write "without restraints". What could have been a cloying hagiography or a lurid warts-and-all exposé is instead a balanced, focused and compelling study of a man of depth and individuality.

Mr le Carré's childhood was marked by heartache and disruption. His mother left when he was five. The following "16 hugless years" consisted of a series of prep schools, bounced cheques and broken promises. Ronnie, his flamboyant conman father, is everywhere, seemingly a lovable rogue with the gift of the gab who lived beyond his means with a variety of lady friends, executing one elaborate scam after another. Beneath the glitzy exterior was a core so tawdry at times it was downright sinister. Ronnie was in and out of prison for fraud. He beat his wife, groped his children and scammed not only strangers, but friends and relatives too. Years later, one partner in crime told Mr le Carré that his father was "very, very bent".

Mr le Carré spent large chunks of his life appalled by Ronnie's deeds, humiliated by his presence and haunted by his memory. At 16 he fled to Bern to immerse himself in German literature. After he returned to England and while studying at Oxford, he was approached by MI5 and given the task of infiltrating left-wing student groups to identify communists. When he was eventually recruited as a full-time spy he left MI5 ("a dead-end sort of place") for the more glamorous MI6, the secret intelligence service (SIS), and a posting in Bonn, "a nest of spies". To supplement his income, Mr le Carré began to write and, after two modest successes, his third novel, "The Spy Who Came in from the Cold" (1963), launched his literary career. It was written in just five weeks.

Readers got a glimpse of the real, murky world of espionage, the flip side to Ian Fleming's glossy, soft-focus artifice, with the flawed and jaded Alec Leamas more victim than hero. Further bleakness, moral uncertainty and anti-Bond protagonists followed, in "Tinker, Tailor, Soldier, Spy" (1974), which featured Mr le Carré's most famous creation, George Smiley. "The Secret Pilgrim" (1990) was Smiley's swansong, appearing a year after the fall of the Berlin Wall. Some people thought that Mr le Carré had lost his subject; the spy novel was dead. Mr Sisman disagrees. "Communism might have been vanquished," he writes, "but other enemies remained." In his post-cold-war novels Mr le Carré has tackled Russian mafias in "Single & Single" (1999), the pharmaceutical industry in "The Constant Gardener" (2001) and even the American government in his most strident novel, "Absolute Friends" (2003).

Mr Sisman reveals the inspiration for Mr le Carré's plots and characters, finding real examples for those perennial themes of abandonment and betrayal, and offering illuminating accounts of fact-finding field trips. However, readers hoping for pages of unlocked state secrets and cold-war exploits will be disappointed, as Mr le Carré explained to his biographer that he was bound "legally and morally" to stay silent about his SIS work.

Mr Sisman retreads old ground with Mr le Carré's friendship with Alec Guinness and his feud with Salman Rushdie over the publication of "The Satanic Verses". "Nobody has a God-given right to insult a great religion and be published with impunity," Mr le Carré asserted. But Mr Sisman also explores new terrain, including about the author's many extramarital adventures. At one low point, when Mr le Carré felt choked by domesticity, miserable in his dead-end marriage and afraid that his talent had run dry, he embarked on "six months' madness", sleeping with any woman who wanted him. When Mr le Carré's recollections are hazy or contradic- ▸▸

tory Mr Sisman singles them out as "false" or "imagined" memories and strives to correct them. After locating one inconsistency, he notes that "fiction may have replaced reality." It is up to the reader to decide if these are mere slip-ups and oversights, or whether the former spook has a deceiver's heart.

Mr le Carré always felt himself to be an outsider at school. Mr Sisman argues that this sense of not belonging "would dog him all his life". Mr le Carré has gone from being unable to fit in to actively preferring "to stay outside the tent"—shunning and scorning literary London from his Cornish redoubt, and railing against American foreign policy and the "corporatisation" of Britain. This biography expertly shows how distance, distrust and even disillusionment have informed Mr le Carré and influenced his bestselling fiction. ■

English fiction

Woman of substance

Charlotte Brontë: A Life. By Claire Harman. *Viking; 446 pages; £25. To be published in America by Knopf in March 2016, $30*

"MISS AUSTEN and Thackeray have admirers; Charlotte Brontë has worshippers." So it seemed to one critic half a century after her death. But it was less the novels than the life itself that stirred the public imagination. The lonely genius of the Yorkshire moors and her doomed sisters, Emily and Anne, touched a romantic nerve. So much so that Henry James was driven to complain that the Brontë legend had "fairly elbowed out" "Jane Eyre" and "Wuthering Heights". A photograph in Claire Harman's excellent new bicentennial biography, of a crowd jostling towards the Brontë parsonage when it first opened to the public in 1928, seems to bear him out.

Ms Brontë would have despaired. Not that she was a shrinking violet. Aged 20, she sent a poem to Robert Southey, the British poet laureate, with a letter declaring her desire "to be forever known". But it was as an author that she wanted fame, and even then she clung to anonymity—hence her pseudonym, Currer Bell: "What author would be without the advantage of being able to walk invisible?" she wrote. Of course, "advantage" meant more than just privacy. It was protection from the double standard. Speaking for her sisters too, she realised that their "mode of writing and thinking was not what is called 'feminine'". She was right. When "Jane Eyre" came out in 1847, one critic found the novel praiseworthy if written by a man, but "odious" from a woman.

No wonder, then, that Ms Harman's Charlotte Brontë is angry. Anger explodes from her early journals and anger, she says, is the predominant emotion of "Jane Eyre", the penniless orphan who is hired as governess to the ward of the mysterious Mr Rochester. Charlotte and Jane represented a new kind of woman. "Women are supposed to be very calm," says her heroine; but neither she nor her author could keep quiet. Utterance was a necessity: "something spoke out of me", says Jane, "over which I had no control".

Ms Harman tells a story about a "bog burst", a methane explosion on the moors when Ms Brontë was eight. The sense of a verbal substratum burning under the "feminine" crust runs through this biography, as it did through Lyndall Gordon's brilliant study, "Charlotte Brontë: A Passionate Life" (1994). Ms Harman is less inward than Ms Gordon, but she brings to the theme an eloquence of her own—most movingly when Ms Brontë finds a language for the man she loved, Constantin Heger, the married French literature master at the Brussels school where she taught: "the union she craved with Heger was one of souls; a possession, a haunting, a living-through, a sharing of ideas, intensely verbal, profoundly silent..."

Ms Harman writes with warmth and a fine understanding of Ms Brontë's literary significance. Above all, she is a storyteller, with a sense of pace and timing, relish for a good scene and a wry sense of humour. Here is the writer, but also the woman people knew—thick spectacles, bad teeth, slipping hairpiece and all. ■

An Eyre of importance

Economic history

FDR for beginners

The Money Makers: How Roosevelt and Keynes Ended the Depression, Defeated Fascism and Secured a Prosperous Peace. By Eric Rauchway. *Basic Books; 305 pages; $28.99*

OLD-FASHIONED historians recoil at the idea of learning from the past to inform the present. But in "The Money Makers", Eric Rauchway, a historian at the University of California, Davis, tries to do just that. His book looks at the economic policy of Franklin Delano Roosevelt, a four-time American president from 1933 to 1945, and how he was influenced by John Maynard Keynes, a British economist. Mr Rauchway argues that policymakers today could learn "valuable lessons" from Roosevelt, who shook up the economic orthodoxy to rescue America from the Great Depression of the 1930s and to keep the Allies going during the second world war.

In what ways was Roosevelt so radical? For one, in the depths of the Depression he launched a series of public works—building bridges, dams, highways and schools—to put people in jobs. (Studies show, however, that the macroeconomic effect of these efforts was slight.) More important, says Mr Rauchway, in 1933 he took America off the gold standard, a system whereby the amount of dollars in circulation was determined by the country's gold reserves. Despite vocal opposition by bankers, whose interest lay in preserving the gold standard, Roosevelt ensured that the money supply rose, thereby warding off deflation and encouraging Americans to spend.

Neither was Roosevelt afraid to ruffle feathers during the second world war. In 1941 he pushed the "lend-lease" programme through Congress, whereby America would supply its allies with oil, food and weaponry without demanding gold in return. Since Britain was fast running out of bullion, Roosevelt promised only to ask for compensation, in some form, once the war had ended. The plan infuriated some—Charles Lindbergh, the aviation entrepreneur and activist, thought America should keep out of world affairs—but this financial help was crucial to Britain's sustaining the war effort.

Mr Rauchway argues that policymakers have a lot to learn from FDR. Since the financial crisis a "terror of inflation" has gripped the world, he says; unlike Roosevelt, those in power today have refused to use radical policies to rescue the economy. But this comparison is questionable. Central banks in America, Britain, Europe and Japan have all deployed quantitative eas-

ing (printing money to buy government bonds). Like Roosevelt, they have rightly ignored those economists who warned their actions would lead to runaway inflation. And in any case, copying all of Roosevelt's policies is neither realistic nor desirable; after all, he implemented them as the world was descending into war.

This flaw aside, this work is impressive. Mr Rauchway combines three things that you seldom see in economic-history books: sufficient attention to complexity; a solid grasp of the economics; and writing that is enjoyable to read. Barely a page goes by without some lovely detail: for instance, a formal dinner with seven wine courses that Felix Frankfurter, a professor at Harvard, shared with Keynes at King's College, Cambridge in 1933, the conversation at which ultimately led to the first meeting between the economist and Roosevelt.

The title of the book oversells it slightly. The British economist and the president were not equal in the task, nor was Keynes really Roosevelt's adviser, as is implied; indeed Mr Rauchway himself shows that they met only occasionally. Nonetheless, as an introduction to the economic debates taking place in London and Washington in the 1930s and 1940s, Mr Rauchway's work could not be bettered. ■

American fiction

Hot town

City on Fire. By Garth Risk Hallberg. *Knopf; 944 pages; $30. Jonathan Cape; £20*

NEW YORK in the late 1970s was coming apart at the seams. People would be strung out in broad daylight, tottering down streets strewn with spent Pall Malls and "nickelbags like punctured lungs". The Bronx was burning, graffiti spread like kudzu and muggers owned the parks after dark. Donna Summer oozed out of radios ("Love to love you babeee…") while Patti Smith's punk sermons drew acolytes downtown. The city was broke and on its way to hell. Or maybe it was already there.

This is the New York—vital, homicidal and seedy—of "City on Fire", Garth Risk Hallberg's dizzyingly ambitious debut novel. Like the city itself, the book sprawls unapologetically, teeming with punks, suits, cops, junkies, hacks, strivers, losers and artists. It is crammed with tattooed nihilists talking Nietzsche in the Village, uptown moguls writing tenderly defensive letters to sons ("what you see is not the whole of me"), scrawny painters stumbling into Coney Island methadone clinics, single Brooklyn mothers hiding their hangovers, blocked writers envying Truman Capote and closeted men discovering a world of unspeakable pleasure. It would be easy enough for these souls and their stories to orbit each other, proximate but apart. Yet Mr Hallberg manages to tie them up in a whodunit of sorts, revolving around the mysterious shooting of a 17-year-old girl in the first frigid hours of 1977.

Knotting these stories into a single thick tapestry might seem an act of "literary wishful thinking", in the words of one of Mr Hallberg's creations (a lanky, hard-drinking investigative journalist named Richard Groskoph). But it is easy to forgive the author his Dickensian affection for co-incidence. Readers will be swept along by the suspenseful tale, whizzing through pages without speed bumps. Alas, Mr Hallberg's colourful parade of characters includes some archetypes, such as an evil stepmother and her cunning brother. But most have the fleshiness of real people, whether he is describing the heartache of an earnest black teacher abandoned by his boyfriend or the near-titillating thrill of bulimia ("the hot acid swoon") for a professional woman whose self-possession is a trick of self-erasure. With a chronology that whips forward and back like a yellow cab in rush hour, the book treats nearly every character to a back-story and some personal mythology, a particular language of experience.

It takes cheek for Mr Hallberg to burst onto the literary scene with a back-breaking novel set in a widely remembered era that predates his birth, in a relentlessly observed city he adopted as an adult. That he has written something as convincing as "City on Fire" is to be applauded. Some might quibble with the fact that he never seems quite ready to let go of his characters. Like a protective parent, he is rather too eager to solve every last mystery, tie up every loose end. But after spending so much time with this urban chorus, readers may share Mr Hallberg's unwillingness to let these New Yorkers go. ■

Ottoman history

All the world's a stage

The Ottoman Endgame: War, Revolution and the Making of the Modern Middle East, 1908-1923. By Sean McMeekin. *Penguin Press; 576 pages; $35. Allen Lane; £30*

FEW international relationships are as volatile and important as that between the Russians and the Turks. Although they were a formidable combination when they occasionally teamed up (against the French in 1798-99, for example), the tsars and the sultans were more often at loggerheads. In fact they clashed in 12 wars between the 16th and the early 20th century. Not much has changed since. In the early 21st century Turks and Russians have veered between warm commercial relations and war by proxy over Syria.

The last big Russo-Turkish war, which formed one of the fronts in the first world war, is a source of continuing fascination to Sean McMeekin, a history professor at Bard College north of New York who previously taught at two universities in Turkey. In "The Ottoman Endgame", a sweeping account of the last 15 years of the Ottoman empire, the most original and passionately written parts concern the fight between Russians and Turks in eastern Anatolia and the Caucasus.

Two things distinguish Mr McMeekin from many other writers in English about this period. First, he has a deep empathy with Turkish concerns, and he hews closer to the official Turkish line than to the revisionist, self-critical approach taken by some courageous Turkish liberals. Second, he has some unusual insights into imperial Russian thinking, based on study of the tsarist archives.

Mr McMeekin finds it easy to imagine the world as it appeared to the young masters of the Ottoman realm, as they and their Teutonic allies faced the combined forces of Russia, Britain and France; and he brings alive the memory of tsarist commanders like Nikolai Yudenich and the titanic battles they fought in wild places like Van and Erzurum, with ghastly consequences for civilians on the wrong side.

The author has a well-founded sense that traditional theocratic powers which look ramshackle or even moribund to Western eyes can still act with ruthless effectiveness when the strategic stakes are really high; and he applies that point in equal measure to the late Ottoman empire and to the late tsarist one.

Using this lens, he brings some useful correctives into focus. It has become a commonplace to say that the Middle Eastern boundaries now being challenged by Is- ▸▸

lamic State are the ones laid down by an Anglo-French deal, struck in 1916 and known as the Sykes-Picot agreement. Actually, Mr McMeekin insists, it was an Anglo-Franco-Russian deal; and he argues, controversially, that the Russians were senior partners in the bargain.

Many students of the period will see in Mr McMeekin's approach a barely hidden agenda. He stresses the fighting spirit of all the forces battling for the tsar, a coalition which at certain times and places included local Armenians. Whether with disgust or approval, that emphasis will certainly be interpreted as a way of vindicating or explaining away the mass deportation of Armenians, decreed in 1915, which was really a death march.

In fact, Mr McMeekin does not play down the fact that many hundreds of thousands of Armenians perished "...whether through starvation, thirst, disease, simple exhaustion, or at the hands of execution squads." As he delicately puts it, the choice of a parched strip of Syrian desert as the uprooted Armenians' destination suggests that "the survival of the deportees was not...[the] first priority" of Talaat Pasha, the Ottoman official whom Armenians regard as the main perpetrator of genocide.

To many, such cautious turns of phrase will amount to praising, or at least excusing, by faint damnation. But if Mr McMeekin's purpose was merely to exonerate all Ottoman behaviour and play down Armenian suffering, he would not have included the observation of a Venezuelan soldier of fortune who saw on a mountainside "thousands of half-nude and bleeding Armenian corpses, piled in heaps or interlaced in death's final embrace." ■

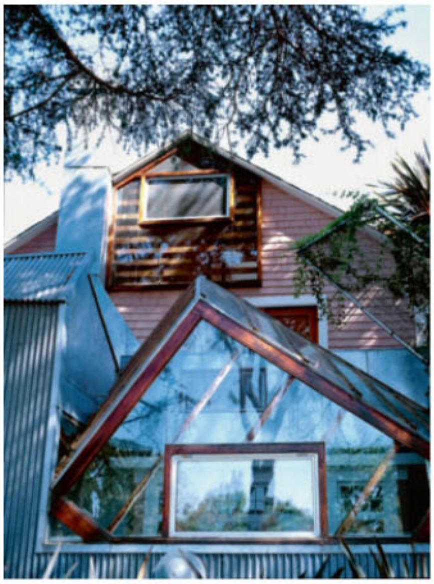
Contemporary architecture

A life in shapes

A retrospective and a new biography shed fresh light on an old architect

FRANK GEHRY'S buildings often come to define the cities where they are built. Think of Bilbao, a down-at-heel northern Spanish steel town until Mr Gehry's confection of beaten metal, which opened in 1997 as the Guggenheim Museum Bilbao, changed the way people thought of architecture and collecting—and put the city on the cultural map. Mr Gehry helped create the era of big-name "starchitects" and he has become a frequent lightning rod for society's mixed feelings about urban spectacle and celebrity.

None of this could be predicted early on, for his career did not take off until middle age. He is now 86, and shows little sign of slowing down. "I get excited about working on new things," he said recently. On the list is a shimmering tower that he is creating in Arles, France, to mark a lushly funded private arts complex called LUMA and a series of wriggling slabs for the vast Battersea Power Station in London which is being converted into luxury flats. He is adding to the quarter-mile-long building he recently completed for Facebook in California. And he is supporting arts education in low-performing Los Angeles schools. Mr Gehry is hard on himself, never satisfied that a given design is right. "All I see is what I could have done better. I can't help it."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With the passing of the years, though, a look-back has become unavoidable. "Building Art: The Life and Work of Frank Gehry" (Knopf) by Paul Goldberger, a critic, is the first biography written with the architect's acquiescence. At the same time an expanded version of a retrospective that began at the Pompidou Centre in Paris has now opened at the Los Angeles County Museum of Art (LACMA) in Mr Gehry's home city.

The architect grew up in Toronto in straitened circumstances, and his long climb to the pinnacle of architecture was arduous. Mr Goldberger shows him not to be flamboyant and arrogant, as many people think, but unassuming and easy to like. There was much soul-searching in the early years about whether he risked eternal penury by taking the harder path of doing only the work he wanted to do. After all, he was good at drawing up inexpensive and ordinary designs for flats and shopping centres—just what his clients and collaborators sought.

The exhibition does a good job of documenting Mr Gehry's artistic evolution as consistent themes begin to emerge. In 1978 he created the Familian house in which off-kilter cubes of exposed wood framing poked out from tidy white boxes. He then went on to wrap his own stolid Dutch colonial house (pictured) in Santa Monica with chain-link fencing, corrugated metal siding and tilting planes of glass, riffing on the rapidly ageing, fast and flimsy cityscapes that the rapid growth of California had produced. He thought of his house as a laboratory of ideas. Neighbours took it as an attack on their dream of a tidy Mediterranean paradise.

Although Mr Gehry's bold designs emerged from an individualistic California ethos, a conservative civic establishment greeted his design for the Walt Disney Concert Hall with consternation when it was unveiled in 1987. It was an awkward collision of boxy auditorium and greenhouse-style lobby, which Mr Gehry would rapidly refine into the unfurling leaflike exterior that was ultimately built. It would take 16 long years of cost overruns, funding shortfalls and construction delays before the hall opened—to extraordinary acclaim. Mr Gehry was awarded architecture's Nobel, the Pritzker prize in 1989, when he was 60. Yet his most admired work lay ahead. The Vitra Museum for a Swiss furniture-maker, in particular, introduced the lyrical interlocking curves that he has used with ever-greater freedom and which have become his signature.

The process by which Mr Gehry works is almost entirely intuitive, which plays into the hands of sceptics, because it subverts the idea of architecture as mainly a practical art. What is often overlooked, though, amid the sculptural fireworks is his clear and pragmatic organisation of space and an unerring sense of proportion. Many architects struggle with both; for Mr Gehry they come easily, leaving him free to develop elaborate spatial drama and sculptural form that, at its best, looks inevitably right.

He has not shied from controversy. He has attempted to engage protesters over labour rights in Abu Dhabi, where the design he completed in 2006 for another Guggenheim Museum remains unbuilt. He relishes work on a vision to make the 51 miles (82 kilometres) of the concrete-lined Los Angeles river an urban amenity as well as a model of flood control, even as critics see his presence muddling an undertaking that had languished for decades.

Mr Gehry's best projects are almost uniquely, engagingly lyrical: the fluttering surfaces and gorgeously ballooning spaces seem unbound by either gravity or the limits of construction technology. The "sails"—the ascending, curving panels of glass that form the carapace of the Fondation Louis Vuitton which opened in the Bois de Boulogne in western Paris a year ago—appear to billow above the tree line. It is a feat that was thought not worth attempting—before Mr Gehry made it happen. ■


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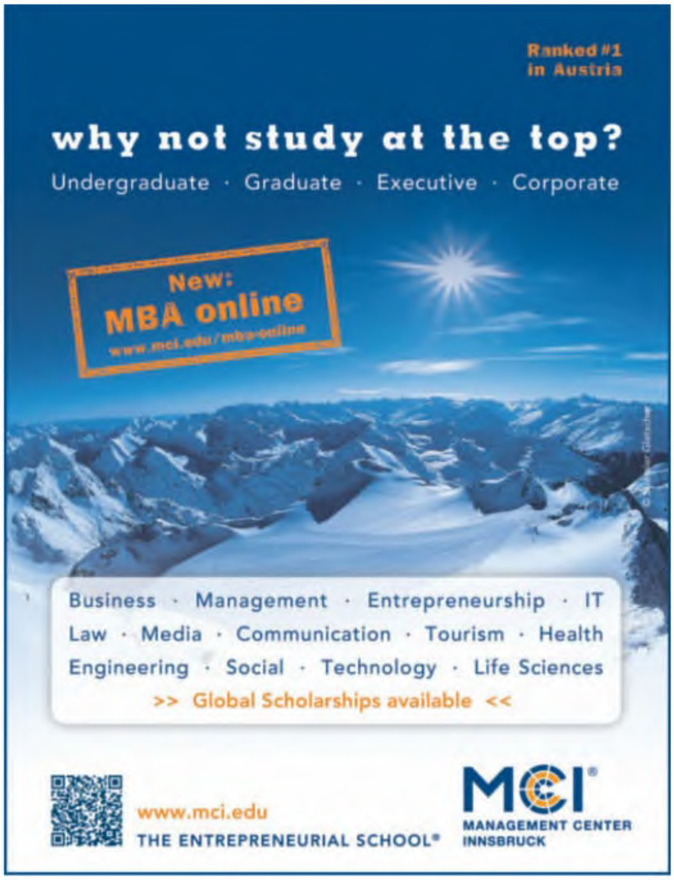
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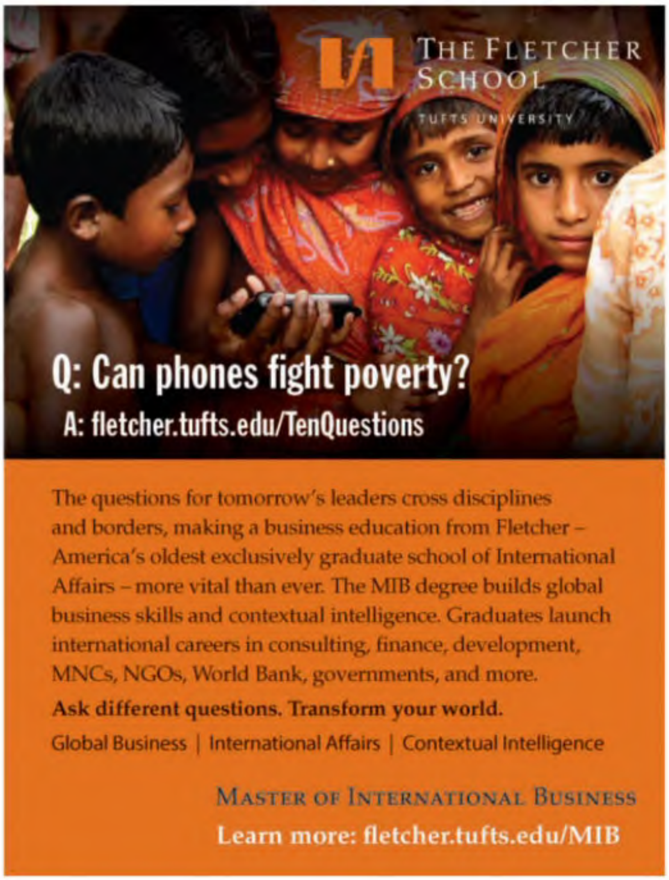
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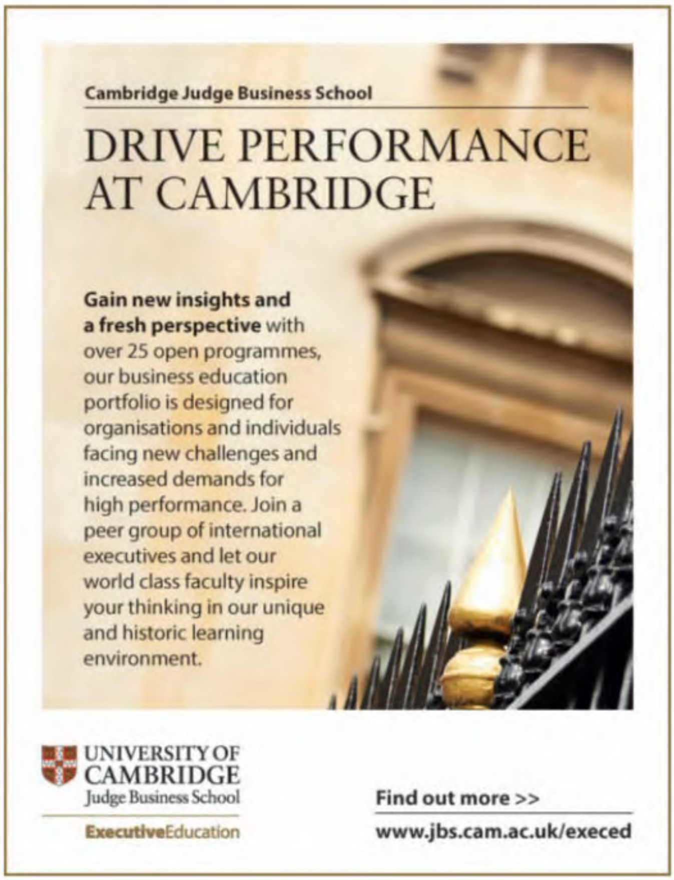
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	latest	qtr*	2015†	latest	latest	2015†		latest 12 months, $bn	% of GDP 2015†	% of GDP 2015†	10-year gov't bonds, latest	Oct 28th	year ago
United States	+2.7 Q2	+3.9	+2.5	+0.4 Sep	nil Sep	+0.3	5.1 Sep	-429.0 Q2	-2.5	-2.6	2.02	-	-
China	+6.9 Q3	+7.4	+6.8	+5.7 Sep	+1.6 Sep	+1.6	4.1 Q3§	+287.8 Q2	+3.1	-2.7	2.84§§	6.36	6.11
Japan	+0.8 Q2	-1.2	+0.7	-0.9 Sep	+0.2 Aug	+0.7	3.4 Aug	+118.8 Aug	+2.8	-6.8	0.30	121	108
Britain	+2.3 Q3	+2.0	+2.5	+1.9 Aug	-0.1 Sep	+0.1	5.4 Jul††	-149.2 Q2	-4.8	-4.4	1.85	0.65	0.62
Canada	+1.0 Q2	-0.5	+1.1	-1.1 Jul	+1.0 Sep	+1.2	7.1 Sep	-48.5 Q2	-3.0	-1.8	1.48	1.31	1.12
Euro area	+1.5 Q2	+1.4	+1.5	+0.9 Aug	-0.1 Sep	+0.1	11.0 Aug	+353.4 Aug	+2.8	-2.1	0.45	0.90	0.78
Austria	+0.5 Q2	-2.6	+0.7	+1.0 Aug	+0.7 Sep	+1.0	5.7 Aug	+10.7 Q2	+1.2	-2.1	0.72	0.90	0.78
Belgium	+1.3 Q2	+1.7	+1.3	+2.4 Aug	+1.1 Sep	+0.5	8.8 Aug	-5.8 Jun	+1.9	-2.6	0.79	0.90	0.78
France	+1.1 Q2	nil	+1.1	+1.6 Aug	nil Sep	+0.2	10.8 Aug	-0.4 Aug‡	-0.5	-4.1	0.80	0.90	0.78
Germany	+1.6 Q2	+1.8	+1.6	+2.5 Aug	nil Sep	+0.2	6.4 Sep	+280.7 Aug	+7.7	+0.7	0.45	0.90	0.78
Greece	+1.7 Q2	+3.7	+0.5	+4.5 Aug	-1.7 Sep	-1.1	25.0 Jul	-2.9 Aug	+2.5	-4.1	7.72	0.90	0.78
Italy	+0.7 Q2	+1.3	+0.7	+1.0 Aug	+0.2 Sep	+0.2	11.9 Aug	+38.3 Aug	+2.0	-2.9	1.41	0.90	0.78
Netherlands	+1.8 Q2	+0.8	+2.0	-0.7 Aug	+0.6 Sep	+0.4	8.3 Sep	+85.3 Q2	+10.3	-1.8	0.61	0.90	0.78
Spain	+3.1 Q2	+4.1	+3.2	+5.1 Aug	-0.9 Sep	-0.4	22.2 Aug	+19.6 Jul	+0.5	-4.4	1.59	0.90	0.78
Czech Republic	+4.6 Q2	+4.4	+3.4	+6.3 Aug	+0.4 Sep	+0.3	6.1 Sep§	+2.4 Q2	-0.1	-1.8	0.53	24.5	21.8
Denmark	+2.0 Q2	+0.6	+1.5	+2.4 Aug	+0.5 Sep	+0.6	4.5 Aug	+23.2 Aug	+5.4	-2.9	0.79	6.74	5.84
Norway	+2.2 Q2	-0.4	+0.7	+5.2 Aug	+2.1 Sep	+1.7	4.6 Aug‡‡	+37.8 Q2	+9.3	+5.9	1.63	8.45	6.61
Poland	+3.6 Q2	+3.6	+3.4	+4.1 Sep	-0.8 Sep	nil	9.7 Sep§	-1.9 Aug	-1.4	-1.5	2.58	3.88	3.31
Russia	-4.6 Q2	na	-3.8	-3.5 Sep	+15.7 Sep	+15.2	5.2 Sep§	+64.3 Q3	+4.9	-2.8	9.97	63.7	42.5
Sweden	+3.3 Q2	+4.6	+2.9	+3.8 Aug	+0.1 Sep	+0.1	6.7 Sep§	+35.1 Q2	+6.6	-1.2	0.64	8.42	7.33
Switzerland	+1.2 Q2	+1.0	+0.9	-2.5 Q2	-1.4 Sep	-1.1	3.4 Sep	+60.9 Q2	+7.8	+0.2	-0.32	0.99	0.95
Turkey	+3.8 Q2	na	+2.9	+8.4 Aug	+7.9 Sep	+7.5	9.8 Jul§	-43.0 Aug	-4.9	-1.6	9.90	2.89	2.21
Australia	+2.0 Q2	+0.7	+2.3	+1.2 Q2	+1.5 Q3	+1.7	6.2 Sep	-47.4 Q2	-3.7	-2.4	2.58	1.41	1.13
Hong Kong	+2.8 Q2	+1.6	+2.4	-1.2 Q2	+2.0 Sep	+3.1	3.3 Sep‡‡	+7.4 Q2	+2.8	nil	1.46	7.75	7.76
India	+7.0 Q2	+6.6	+7.4	+6.4 Aug	+4.4 Sep	+5.1	4.9 2013	-25.9 Q2	-1.1	-3.8	7.59	65.0	61.3
Indonesia	+4.7 Q2	na	+4.8	+4.4 Aug	+6.8 Sep	+6.4	5.8 Q1§	-21.6 Q2	-2.5	-2.0	9.34	13,478	12,170
Malaysia	+4.9 Q2	na	+5.4	+3.0 Aug	+2.6 Sep	+2.5	3.2 Aug§	+8.8 Q2	+2.5	-4.0	4.09	4.27	3.27
Pakistan	+5.5 2015**	na	+5.7	+4.8 Aug	+1.3 Sep	+3.9	6.0 2014	-2.6 Q2	-0.7	-5.1	8.75†††	105	103
Philippines	+5.6 Q2	+7.4	+6.4	+3.7 Aug	+0.4 Sep	+2.4	6.5 Q3§	+11.7 Jun	+4.1	-1.9	3.67	46.8	44.8
Singapore	+1.4 Q3	+0.1	+2.9	-4.8 Sep	-0.6 Sep	+0.2	2.0 Q3	+69.5 Q2	+21.2	-0.7	2.35	1.39	1.27
South Korea	+2.7 Q3	+5.0	+2.4	+0.3 Aug	+0.6 Sep	+0.8	3.2 Sep§	+104.8 Aug	+6.7	+0.3	2.04	1,131	1,050
Taiwan	+0.5 Q2	-6.6	+3.2	-5.3 Sep	+0.3 Sep	+0.1	3.8 Sep	+72.8 Q2	+12.8	-1.0	1.18	32.4	30.4
Thailand	+2.8 Q2	+1.5	+3.4	-8.3 Aug	-1.1 Sep	+0.8	1.0 Aug§	+24.4 Q2	+2.4	-2.0	2.59	35.5	32.5
Argentina	+2.3 Q2	+2.0	+0.5	+0.2 Sep	— ***	—	6.6 Q2§	-8.3 Q2	-1.7	-3.6	na	9.50	8.50
Brazil	-2.6 Q2	-7.2	-2.7	-8.9 Aug	+9.5 Sep	+8.9	7.6 Sep§	-79.3 Sep	-4.2	-6.0	15.83	3.86	2.47
Chile	+1.9 Q2	nil	+2.8	-5.1 Aug	+4.6 Sep	+3.9	6.5 Aug§‡‡	-0.3 Q2	-1.2	-2.2	4.46	686	579
Colombia	+3.0 Q2	+2.4	+3.3	+2.6 Aug	+5.4 Sep	+4.2	9.1 Aug§	-20.8 Q2	-6.7	-2.1	7.77	2,918	2,054
Mexico	+2.2 Q2	+2.0	+2.4	+1.0 Aug	+2.5 Sep	+2.9	4.2 Sep	-25.3 Q2	-2.3	-3.4	5.85	16.4	13.5
Venezuela	-2.3 Q3~	+10.0	-4.5	na	+68.5 Dec	+84.1	6.6 May§	+10.3 Q3~	-1.8	-16.5	10.51	6.31	6.35
Egypt	+4.3 Q4	na	+4.2	-5.5 Aug	+9.2 Sep	+10.0	12.7 Q2§	-12.2 Q2	-1.4	-11.0	na	8.03	7.15
Israel	+1.8 Q2	+0.1	+3.3	+3.9 Aug	-0.5 Sep	-0.2	5.3 Aug	+10.2 Q2	+4.9	-2.8	1.93	3.87	3.74
Saudi Arabia	+3.5 2014	na	+2.7	na	+2.3 Sep	+2.7	5.7 2014	-1.5 Q2	-2.7	-12.7	na	3.75	3.75
South Africa	+1.2 Q2	-1.3	+1.5	+0.6 Aug	+4.6 Sep	+4.8	25.5 Q3§	-15.6 Q2	-4.7	-3.8	8.31	13.6	10.9

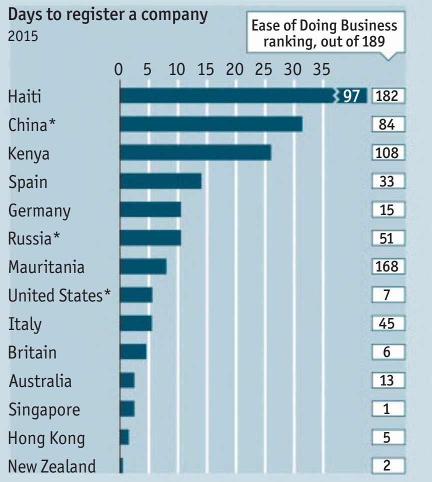
Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. ~2014 **Year ending June. ††Latest 3 months. ‡‡3-month moving average. §§5-year yield. ***Official number not yet proven to be reliable; The State Street PriceStats Inflation Index, August 27.01%; year ago 38.49% †††Dollar-denominated

Markets

	Index Oct 28th	% change on one week	Dec 31st 2014 in local currency	Dec 31st 2014 in $ terms
United States (DJIA)	17,779.5	+3.6	-0.2	-0.2
China (SSEA)	3,534.9	+1.6	+4.3	+1.7
Japan (Nikkei 225)	18,903.0	+1.9	+8.3	+7.7
Britain (FTSE 100)	6,437.8	+1.4	-2.0	-3.7
Canada (S&P TSX)	13,863.2	+1.2	-5.3	-16.5
Euro area (FTSE Euro 100)	1,138.8	+4.4	+9.8	+0.4
Euro area (EURO STOXX 50)	3,421.1	+4.5	+8.7	-0.6
Austria (ATX)	2,435.5	+1.0	+12.7	+3.1
Belgium (Bel 20)	3,579.4	+4.4	+9.0	-0.4
France (CAC 40)	4,890.6	+4.2	+14.5	+4.7
Germany (DAX)*	10,832.0	+5.8	+10.5	+1.0
Greece (Athex Comp)	727.4	+4.1	-12.0	-19.5
Italy (FTSE/MIB)	22,686.2	+2.3	+19.3	+9.1
Netherlands (AEX)	463.2	+3.0	+9.1	-0.2
Spain (Madrid SE)	1,051.8	+2.6	+0.9	-7.7
Czech Republic (PX)	981.4	+1.1	+3.7	-3.1
Denmark (OMXCB)	866.0	+4.0	+28.2	+17.0
Hungary (BUX)	22,064.5	+2.4	+32.6	+22.8
Norway (OSEAX)	663.9	+0.8	+7.1	-5.0
Poland (WIG)	51,198.4	nil	-0.4	-8.7
Russia (RTS, $ terms)	854.7	-0.2	+14.8	+8.1
Sweden (OMXS30)	1,499.6	+3.3	+2.4	-4.8
Switzerland (SMI)	8,932.6	+3.8	-0.6	+0.3
Turkey (BIST)	78,536.3	-1.5	-8.4	-25.9
Australia (All Ord.)	5,374.4	+1.7	-0.3	-13.1
Hong Kong (Hang Seng)	22,956.6	-0.1	-2.7	-2.7
India (BSE)	27,039.8	-0.9	-1.7	-4.5
Indonesia (JSX)	4,608.7	+0.1	-11.8	-19.0
Malaysia (KLSE)	1,686.5	-1.2	-4.2	-21.6
Pakistan (KSE)	34,061.4	+0.3	+6.0	+1.2
Singapore (STI)	3,040.5	+0.5	-9.6	-14.0
South Korea (KOSPI)	2,042.5	nil	+6.6	+3.6
Taiwan (TWI)	8,666.0	+0.7	-6.9	-9.3
Thailand (SET)	1,409.3	-0.5	-5.9	-12.7
Argentina (MERV)	12,333.1	+13.9	+43.8	+28.1
Brazil (BVSP)	46,740.9	-0.6	-6.5	-35.6
Chile (IGPA)	18,960.2	+0.9	+0.5	-11.1
Colombia (IGBC)	9,293.1	-1.7	-20.1	-34.9
Mexico (IPC)	44,741.7	+0.7	+3.7	-7.1
Venezuela (IBC)	11,964.0	-5.6	+210	na
Egypt (Case 30)	7,479.6	-2.5	-16.2	-25.4
Israel (TA-100)	1,360.0	+0.7	+5.5	+6.2
Saudi Arabia (Tadawul)	7,118.4	-4.8	-14.6	-14.5
South Africa (JSE AS)	53,755.7	+1.4	+8.0	-7.9

Starting a business

The World Bank's "Doing Business" report has found that during the past year 45 economies, of which 33 were developing, introduced reforms to make it easier for entrepreneurs to get started. In New Zealand a simple online procedure means that it takes only a few hours to set up a business. By contrast, in Haiti it takes more than three months and involves a complex legal process. Spain has improved: in 2005 starting a business took more than 130 days, now it takes 14. Mauritania has eliminated a minimum capital requirement for establishing an enterprise. Although Singapore was once again ranked first for ease of doing business, it implemented no reforms over the past year in the areas measured.



Source: World Bank *Based on data for two cities

Other markets

	Index Oct 28th	% change on one week	Dec 31st 2014 in local currency	Dec 31st 2014 in $ terms
United States (S&P 500)	2,090.4	+3.5	+1.5	+1.5
United States (NAScomp)	5,095.7	+5.3	+7.6	+7.6
China (SSEB, $ terms)	346.1	+4.1	+22.0	+19.0
Japan (Topix)	1,547.2	+1.3	+9.9	+9.3
Europe (FTSEurofirst 300)	1,484.9	+3.7	+8.5	-0.8
World, dev'd (MSCI)	1,714.1	+2.5	+0.3	+0.3
Emerging markets (MSCI)	860.3	+0.1	-10.0	-10.0
World, all (MSCI)	413.6	+2.2	-0.8	-0.8
World bonds (Citigroup)	883.8	-0.7	-2.0	-2.0
EMBI+ (JPMorgan)	719.6	+1.0	+4.0	+4.0
Hedge funds (HFRX)	1,193.8§	+0.6	-2.0	-2.0
Volatility, US (VIX)	14.3	+16.7	+19.2	(levels)
CDSs, Eur (iTRAXX)†	71.7	-7.9	+13.9	+4.2
CDSs, N Am (CDX)†	78.5	-4.9	+18.7	+18.7
Carbon trading (EU ETS) €	8.6	+1.5	+17.5	+7.5

Sources: Markit; Thomson Reuters. *Total return index.
†Credit-default-swap spreads, basis points. §Oct 27th.

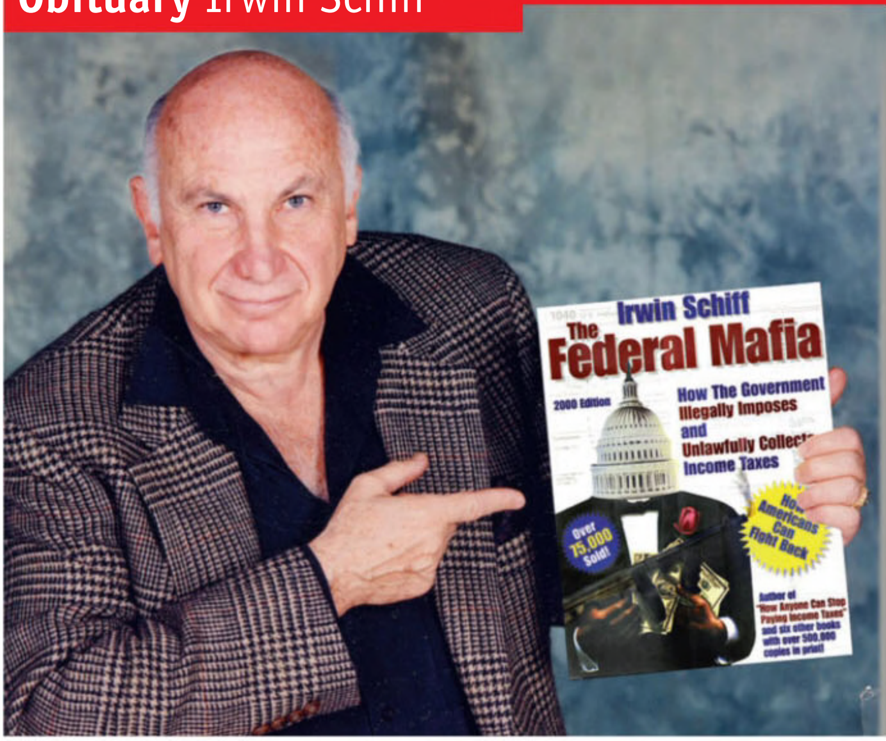
Indicators for more countries and additional series, go to: **Economist.com/indicators**

The Economist commodity-price index

2005=100

	Oct 20th	Oct 27th*	% change on one month	% change on one year
Dollar Index				
All Items	131.7	130.7	+0.9	-16.9
Food	152.5	151.9	+0.9	-12.6
Industrials				
All	110.2	108.7	+0.9	-22.5
Nfa†	111.4	109.1	+1.1	-16.5
Metals	109.6	108.6	+0.8	-24.8
Sterling Index				
All items	155.0	155.3	-0.3	-12.3
Euro Index				
All items	144.4	147.1	+2.4	-4.2
Gold				
$ per oz	1,178.1	1,167.2	+3.1	-5.0
West Texas Intermediate				
$ per barrel	45.8	43.2	-4.5	-47.1

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 who said no

Irwin Schiff, America's loudest tax protester, died on October 16th, aged 87

THE adage that one man's hero is another man's scoundrel was seldom truer than in the case of Irwin Schiff. From 1974 he stopped paying his federal income tax, on the chief ground that it was unconstitutional; and never paid it thereafter. Not only did he refuse to pay it himself, but he encouraged thousands of other Americans to write "zero" on their tax returns, selling books and advice and running a noisy national campaign out of his baby-blue office in Las Vegas. He spent many hours in court and 17 years in jail, and as a result became a martyr of the far libertarian right and the scourge of IRS agents everywhere.

What had suddenly moved him to defy the government with such abiding fury? Friends could not say. The family had been ardent New Dealers. At accountancy college he had ingested a lot of Hayek: too much, perhaps. Later he was a small-government conservative, quietly managing investments in Connecticut: nothing rebellious there. But all his money went south in 1968, when a con-man persuaded him to invest in a gold mine that was a giant Ponzi scheme, and possibly this was the fuse for the explosion that followed.

The Founding Fathers, he declared, had never devised an income tax. It first appeared in 1861 as a war levy, meeting such resistance that repeal came 11 years later. In 1894 it reared its ugly head again, and a man called Pollock challenged it in the Supreme Court—which struck it down. Congress still being desperate to have one, in 1913 it was enshrined in the 16th Amendment. Since then, no legal challenge to the federal income tax had ever been successful, but that did not deter Mr Schiff; for he had the bit between his teeth and, besides, the *Pollock* decision had never been overturned, remaining "good law to this day".

That composed the main thread of his argument. It then got much more rabbinical and etymological. The constitutional sense of the word "income", he argued, did not mean wages, commission, interest, alimony or capital gains; only corporate profit, and therefore nothing received by an individual could be taxed at all. The constitution also assumed that "income" was solid gold and silver coin, not those flimsy bits of paper whose detachment from the gold standard had, in his view, ruined the country.

Compliance, he argued, was in any case voluntary; if compulsory, he became no more than a serf of the government. Since the tax was unlawful, an income-tax "declaration" was, in fact, a "confession" of facts that the government had no right to know. Under the Fourth, Fifth, Sixth, Seventh, Eighth, Ninth, Tenth and 13th Amendments, especially the Fifth against self-incrimination, he had no duty to co-operate and tax agents had no power to make him.

He knew the law up and down, forwards, backwards and sideways, and defended himself volubly in court, though he was no lawyer. Cases, clauses and codicils tumbled from his lips. Nonetheless, because there was a monumental criminal conspiracy of the government, the judiciary and the IRS against him, his arguments were dismissed as frivolous and he always lost. On multiple occasions from 1978 onwards he was convicted for wilful failure to file returns, for tax evasion and for conspiracy to defraud the United States of an amount that rose steadily to $4.2m by 2005. In that year he was also convicted of helping to falsify the returns of 3,100 other folk who owed, in total, $56m to the government. But none of this was wilful, he said; since his arguments were always dismissed as Dead Wrong, he was probably delusional and could not help himself.

In jail and out he wrote, and self-published, a stack of books. "The Biggest Con: How the Government is Fleecing You" (1976) got a glowing review in the *Wall Street Journal*; "How Anyone Can Stop Paying Income Taxes" (1982) became a *New York Times* bestseller. "The Federal Mafia" (1992) brought down a federal injunction, the first book banned from sale in America since "Fanny Hill" (for obscenity) in 1821. Unfazed, Mr Schiff gave it away on his website as soon as technology allowed. He liked to pose outside his office, in check shirt and jeans, with his thumbs stuck in his wide leather belt: a cowboy aiming to smash, with his legal acuity, every bottle of snake-oil on the government's shelf.

Hero of zero

It might all have been fun if he had been more crazy and less calculating; but he was moving assets around between several bank accounts, the better to confuse the issue of what was income and what wasn't. And it might have been more heroic, though still doomed, if others had not been hurt. But the hundreds who followed him and declared their income "zero" soon found themselves in trouble, with a threatening letter from the IRS or a lien on their car or their house. He could then offer them, for a price, advice to deal with that too, up to $1,000 for a "tax-court toolkit". No wonder he liked to do business in Nevada, where gambling was a way of life.

The fact that he spent his frail last years in federal prison made him a martyr to the tax-protest cause. He would have made a better one if the pleasant open facilities where he resided, and all meals and services therein provided, had not been paid for by Uncle Sam; or rather, by those who uncomplainingly stumped up their federal income taxes, unlike himself. ■