The Economist

Anti-Semitism in Europe

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Disarmageddon

North Korea, Iran and the real nuclear threat

The Economist

2018-05-05

The world this week

Politics this week

May 3rd 2018

South Korea said that American troops would remain in the country even if it does reach a deal with **North Korea** to end the Korean war formally. The statement came a few days after a much-trumpeted meeting between Moon Jae-in, the South's president, and Kim Jong Un, the North's dictator, in the demilitarised buffer between the countries. Mr Kim made lots of non-specific pledges about working towards a nuclear-free Korean peninsula. He is expected to meet Donald Trump soon. See article.

India's prime minister, Narendra Modi, and **China's** president, Xi Jinping, held an informal summit in the central Chinese city of Wuhan. The meeting was aimed at defusing tensions between the two countries, which rose last year during a border dispute. After the summit, Chinese media said the two countries' armies had agreed to set up a hotline between their headquarters.

The **Dominican Republic** cut its long-standing ties with **Taiwan** and established diplomatic relations with China. The switch deepens Taiwan's diplomatic isolation: only 19 countries now recognise it.

In **Afghanistan**, at least 29 people, including nine journalists, were killed and dozens wounded in suicide-bombings in the capital, Kabul. Islamic State claimed responsibility. See article.

The president of **France**, Emmanuel Macron, visited **Australia**, where he said the rise of China was "good news". But he also called for "balance" in the region, and said it was important to preserve "rule-based development" there.

Let us in

Around 150 people in a caravan of migrants from **Central America** that has been making its way through Mexico arrived at the border with the United States and attempted to claim asylum. Immigration agents initially claimed the checkpoint was at full capacity but later started slowly processing their applications. Donald Trump accused the migrants of "openly defying our border".

Tens of thousands of people continued to throng **Nicaragua's** streets in peaceful demonstrations for and against the authoritarian socialist government of Daniel Ortega. The Catholic church and students groups tried to open talks with the regime. Activists demanded an investigation of the at least 63 deaths in recent riots, during which Mr Ortega's men used live bullets.

Prosecutors in **Brazil** filed new corruption charges against Luiz Inácio Lula da Silva, a former president who was recently jailed, and other leaders of the Workers' Party for allegedly accepting bribes from Odebrecht, a construction firm.

A tower block caught fire and collapsed in **São Paulo**. The abandoned building had been illegally occupied by some 150 families. Dozens of residents were missing.

A straight Rod

Rod Rosenstein, America’s deputy attorney-general, defended Robert Mueller’s investigation into Russian links with aides to Donald Trump, and said that the Department of Justice “is not going to be extorted” by threats from congressional **Republicans**. Agitated congressmen have drafted articles of impeachment against Mr Rosenstein, who a year ago appointed Mr Mueller as the special counsel leading the inquiry.

Relations between the White House and the Mueller investigation could be about to get tetchier, with news that Ty Cobb is to be replaced as the head of Mr Trump’s **legal team** by Emmet Flood, who represented Bill Clinton during his impeachment hearings

Bibi’s big show

Binyamin Netanyahu, **Israel’s** prime minister, produced documents suggesting that **Iran** lied when it said it had never tried to develop a nuclear bomb. The world's intelligence agencies had long assumed as much, and little of the evidence was new. Mr Netanyahu did not offer evidence that Iran continued bomb-building after signing an agreement with America in 2015 intended to stop it from doing so. A barrage of missiles, suspected to have been fired by Israel, struck Iranian bases in **Syria**. See article.

Mahmoud Abbas, the leader of the **Palestinian Authority**, said that Jews had suffered persecution in Europe because of their involvement in money-lending and banking. A rash of attacks on Jews in Germany has prompted the country's new commissioner for fighting anti-Semitism to call for better information about the perpetrators. See article.

Scores of people were killed in suicide-bomb attacks on a mosque and market in north-east **Nigeria**. The attacks were blamed on Boko Haram, a jihadist group, and came a day after Donald Trump promised more help for Nigeria in its fight against the terrorists.

The government of **Burundi** campaigned to pass a referendum that would change the constitution and allow President Pierre Nkurunziza to stay in power for another 16 years. A former rebel leader, Mr Nkurunziza has been in charge since 2005 and believes that God wants him to keep ruling.

Cleaning up a Ruddy mess

Amber Rudd resigned as **Britain's** home secretary, as the Windrush scandal unfolded. Her position became untenable when targets for enforcing the return of people to Jamaica and other former Commonwealth countries were leaked. Ms Rudd had denied that such targets existed when giving evidence to a parliamentary select committee. She was seen by many as a shield for Theresa May, the prime minister, who ran the Home Office when the "hostile environment" policy for immigrants was introduced. Sajid Javid, whose parents were Pakistani immigrants, was appointed as the new home secretary. See article.

Mr Javid, meanwhile, reportedly threw his support behind the hard Brexiteers on a cabinet committee that scuppered Mrs May's plan to sign off on a **"customs partnership"** with the EU when Britain leaves the union. The Brexiteers back a "maximum facilitation" proposal on customs, based on futuristic and untested technology. The cabinet is still discussing the options. See article.

Armenia's capital, Yerevan, was largely shut down as hundreds of thousands of people poured onto the streets, demanding that the liberal opposition leader, Nikol Pashinian, be made prime minister. The ruling party has so far rejected this. See article.

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Business this week

May 3rd 2018

T**-Mobile** and **Sprint** decided to have another go at merging, announcing a deal that values the combined company at $146bn, including debt. The pair toyed with the idea of hooking up in 2014. Antitrust regulators were not keen, as a merger would reduce the number of big wireless carriers in America from four to three. That issue will come to the fore again now. T-Mobile and Sprint argue that their new company would have the capacity to roll out a nationwide 5G network quickly. See article.

Competition concerns were also raised in Britain after **Sainsbury's** said that it had reached an agreement to buy **Asda**, which is owned by Walmart. The melding of Britain's second-and third-biggest supermarket chains would create a colossus in the industry, though both brands would be retained—Asda pitches its appeal to more cost-conscious shoppers than Sainsbury's. See article.

Steady on

At its latest meeting, the Federal Reserve left its benchmark **interest rate** unchanged at a range of between 1.5% and 1.75%. The central bank is expected to raise rates at its next meeting, in June. The Fed's decision came after data indicated that the **American economy** grew at an annualised rate of 2.3% in the first quarter, the slowest pace in a year.

In an abrupt move, **Argentina's** central bank raised its benchmark interest rate from 27.25% to 30.25% in an effort to shore up the peso, which has taken a battering in currency markets amid worries about stubbornly high inflation.

The Trump administration postponed implementing **tariffs** on steel and aluminium imports from countries in the European Union by a month, saying it wanted more time for negotiations. The Europeans, annoyed that they should be bracketed with countries like China, want permanent exemptions from the tariffs, which Argentina, Australia and Brazil have attained. See article.

In a $36bn deal that creates America's biggest oil-refining company, **Marathon Petroleum** said it would buy **Andeavor**. Andeavor operates ten refineries in the western United States. Marathon owns six, but handles more oil.

Higher oil prices helped lift **BP's** headline profit in the first quarter by 71%, to $2.6bn. The energy giant hinted that it would increase its dividend for the first time in four years if oil prices remain buoyant; its stock hit an eight-year high.

A working strategy

Apple reported a net profit of $13.8bn for the first three months of the year. Although the rate of growth in iPhone sales has slowed over the years, revenue from its signature product rose by 14% compared with the same quarter last year, thanks in part to the more expensive iPhone X. With 1.3bn Apple devices in use around the world, its income from associated services, such as music, soared by a third. Swimming in cash, Apple launched another share buy-back plan, worth $100bn.

Xiaomi, a Chinese smartphone-maker, filed for an IPO in Hong Kong. The company is reportedly hoping to raise up to $10bn, which would make it one of the biggest tech flotations to date.

Tesla Motors' latest earnings report raised more questions for investors about the rate at which it is burning through its cash reserves. Plagued by production problems for its Model 3 mass-market car, Tesla ended the first quarter with $2.7bn in cash on hand, compared with $3.4bn in December. It also reported another headline loss, of $710m.

Cambridge Analytica folded. The data-mining firm hit the headlines for obtaining information on Facebook users that was then deployed to help Donald Trump's presidential campaign. The firm blamed a media "siege" for its decision to shut up shop.

Ahead of a visit to Beijing by senior economic officials in the Trump administration, **China** relaxed the restrictions on foreign investors becoming controlling shareholders in joint-venture securities companies, raising the cap on foreign ownership from 49% to 51%. Only financial institutions with a "good international reputation" need apply.

The mouse that roared

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Marvel Entertainment, a subsidiary of Disney, broke box-office records with the release of **"Infinity War"**, the latest of its Avengers movies, beating the global record for an opening weekend with a total of $641m. "The Force Awakens", Disney's first Star Wars outing after acquiring the Lucasfilm franchise, still boasts the best opening weekend in America after adjusting for inflation. It is possible that this Avengers adventure may be the biggest yet and take $2bn worldwide.

KAL’s cartoon

May 3rd 2018

Leaders

Disarmageddon

Despite North Korea, arms control is unravelling

Complacent, reckless leaders have forgotten how valuable it is to restrain nuclear weapons

May 3rd 2018

RARELY do optimism and North Korea belong in the same breath. However, the smiles and pageantry in April's encounter between Kim Jong Un and Moon Jae-in, leaders of the two Koreas, hinted at a deal in which the North would abandon nuclear weapons in exchange for a security guarantee from the world, and in particular America. Sadly, much as this newspaper wishes for a nuclear-free North Korea, a lasting deal remains as remote as the summit of Mount Paektu. The Kims are serial cheats and nuclear weapons are central to their grip on power (see article). Moreover, even as optimists focus on Korea, nuclear restraints elsewhere are unravelling.

By May 12th President Donald Trump must decide the fate of the deal struck in 2015 to curb Iran's nuclear programme. This week Binyamin Netanyahu, Israel's prime minister, gave a presentation that seemed designed to get Mr

Trump to pull America out. He may well oblige. Worse, within three years current agreed limits on the nuclear arsenals of Russia and America are set to lapse, leaving them unconstrained for the first time in almost half a century (see Briefing).

In the cold war a generation of statesmen, chastened by conflict and the near-catastrophe of the Cuban missile crisis, used arms control to lessen the risk of annihilation. Even then, nuclear war was a constant fear (see article). Their successors, susceptible to hubris and faced with new tensions and new technology, are increasing the chances that nuclear weapons will spread and that someone, somewhere will miscalculate. A complacent world is playing with Armageddon.

START worrying

One problem is that the critics of arms control overstate its aims so as to denigrate its accomplishments. Opponents of the Iran deal, such as John Bolton, Mr Trump's new national security adviser, complain that it has not stopped Iran from working on ballistic missiles or from bullying its neighbours. But that was never the intent of the Joint Comprehensive Plan of Action (JCPOA), as it is formally known. Instead, for at least ten years, the pact cuts off Iran's path to a bomb and makes any future attempt more likely to be detected early. Whatever Mr Netanyahu implies, Iran has kept its side of the agreement despite not getting many of the economic benefits it was promised.

Wrecking the Iranian deal has costs. Iran would be freer to ramp up uranium enrichment, putting it once more in sight of a weapon. The nuclear Non-Proliferation Treaty (NPT), still the best bulwark against the spread of the bomb, would be undermined: other countries in the region, such as Saudi Arabia and Egypt, may well respond by dusting off their plans to become nuclear powers; and America would be abandoning a fix that shores up the NPT. Mr Trump would have to work even harder to convince Mr Kim that he can trust America—especially as Mr Bolton compares North Korea to Libya, whose leader gave up a nuclear programme only to be toppled by the West and butchered a few years later.

A second problem is mistrust, heightened since the revival of great-power competition between America and Russia after a post-Soviet lull. That ought to give arms control new urgency; instead it is eroding it. Take New START, which caps the number of strategic warheads deployed by Russia and America at 1,550 each. It will expire in 2021 unless Vladimir Putin and Mr Trump extend it, which looks unlikely. Instead Mr Trump boasts that America’s nuclear arsenal will return to the “top of the pack”, bigger and more powerful than ever before. That repudiates the logic of successive strategic-arms-control agreements with Russia since 1972, which have sought to hold back a nuclear arms race by seeking to define parity.

Fix it, don’t nix it

Or take the insouciance with which the likes of Mr Bolton and his Russian counterparts condemn the Intermediate-Range Nuclear Forces (INF) Treaty. Struck in 1987 by Ronald Reagan and Mikhail Gorbachev, this deal dismantled 2,700 ground-launched nuclear missiles with a range of 500-5,500km that put European deterrence on a hair-trigger. Today each side says the other is violating the INF. Mr Bolton et al argue that it is worth keeping only if it includes countries such as China—which they know will not happen.

Last comes the problem of technology. Better missile defence could undermine mutually assured destruction, which creates deterrence by guaranteeing that a first strike triggers a devastating response. Speaking on March 1st, Mr Putin brandished exotic new nuclear weapons he would soon deploy to counter future American missile defences. A new nuclear arms race, with all its destabilising consequences, is thus likely. A cyber-attack to cripple the other side’s nuclear command and control, which could be interpreted as the prelude to a nuclear first strike, is another potential cause of instability in a crisis. Verifying the capabilities of software is even harder than assessing physical entities such as launchers, warheads and missile interceptors. New approaches are urgently needed. None is being contemplated.

Extending New START, saving the INF, creating norms for cyber-weapons and enhancing the Iran deal are eminently doable, but only if there is sufficient will. For that to gel, today’s statesmen need to overcome a fundamental misunderstanding. They appear to have forgotten that you negotiate arms-control agreements with your enemies, not your allies. And that arms control brings not just constraints on weapons of unimaginable destructive force, but also verification that provides knowledge of capabilities and intentions. In a crisis, that can reduce the risk of a fatal miscalculation.

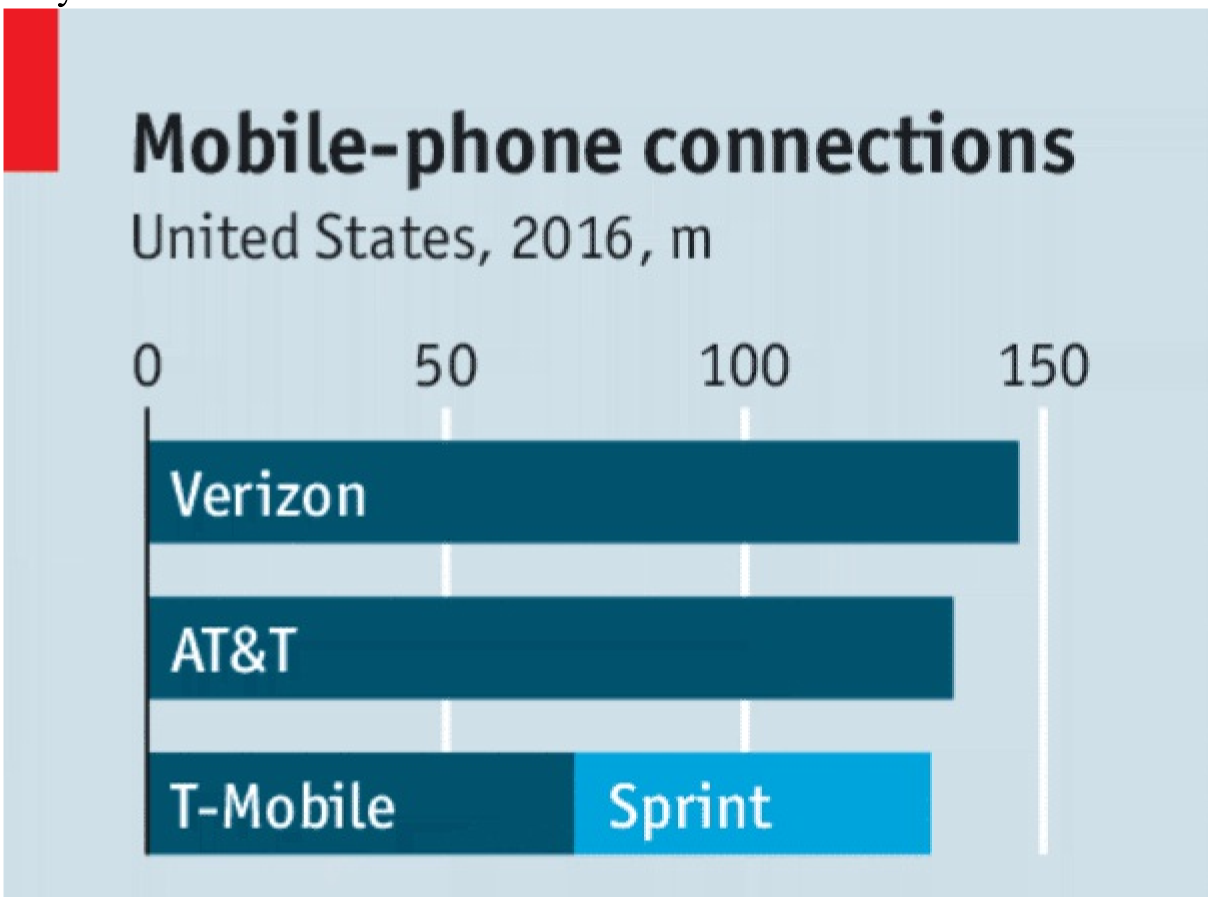
Cherish the scintilla of hope in North Korea, and remember how arms control needs shoring up. The alternative is a future where countries arm themselves because they cannot be sure their enemies will not get there first; where every action could escalate into nuclear war; where early warnings of a possible attack give commanders minutes to decide whether to fire back. It would be a tragedy for the world if it took an existential scare like the Cuban missile crisis, or worse, to jolt today's complacent, reckless leaders back to their senses.

Block the call

T-Mobile and Sprint plan to combine

Regulators should squash plans for a big telecoms merger in America

May 5th 2018



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SO MANY false starts would have soured other romances. Resistance from antitrust authorities halted a union between T-Mobile and Sprint, America's third-and fourth-largest wireless carriers, in 2014. A row over merger terms scuppered talks last year. But the attraction never dimmed.

This week the pair announced an all-stock deal that would create a company with a heft similar to that of AT&T; and Verizon. The happy couple promises lower prices for customers, higher profits for shareholders and a sharpening of America's technological edge (see article). Regulators should be sceptical. The tie-up is bad for consumers; and there are better ways to build whizzy new networks.

Consumer welfare first. The international evidence suggests that cutting the number of big operators would be bad for customers. Research by British regulators into 25 countries shows that average prices were up to one-fifth lower in markets with four network operators than in those with three. (Ignore the claims of T-Mobile and Sprint that the American market is contested by as many as eight firms: in its latest report on the industry, the Federal Communications Commission found that the four carriers accounted for over 98% of connections.)

T-Mobile itself is testament to the benefits of a more crowded market. Trustbusters not only zapped its discussions in 2014 with Sprint but also blocked an earlier attempt by AT&T; to buy it in 2011. The firm has thrived on its own. It has added almost 40m customers in the past five years by cutting prices and adding features such as free video-streaming. Subscribers everywhere have felt the benefits. Between 2013 and 2016 overall consumer prices in America rose by 4.5%; prices for wireless telephone services decreased by 8%. Consolidation threatens a different outcome. The combined firm projects relatively slow growth in revenue, a jump in profit margins and rapid deleveraging. That does not sound like the plan for a price war.

If regulators have opposed such tie-ups before, why do T-Mobile and Sprint expect a different answer this time? One explanation is the risk that Sprint, which is heavily indebted and has been struggling for a while, might go bust if it remains a stand-alone entity. But that ought not to sway the trustbusters. Sprint could shed its debts in a Chapter 11 bankruptcy process and re-emerge in better shape, or it might get swallowed up by a different firm entirely.

Trumpeterian destruction

The second explanation is that the two firms think that they can win a public-interest argument about technological leadership. The bosses of T-Mobile and Sprint argue that by bringing together their bands of spectrum, they would be able to build America's first national 5G network. Their merger presentation, featuring slides with headlines such as "US must lead innovation again” and “Global economic leadership is at stake!”, was aimed as much at economic nationalists in the White House as analysts with spreadsheets.

It is true that 5G networks are expensive to build: they require more antennae, base stations and fibre-optic cables than their predecessors. It is also true that 5G’s speed provides a platform upon which all sorts of data-hungry new services, from self-driving cars to industrial robots, can develop. But that does not mean operators have to build their own, separate networks. Mobile providers in South Korea have agreed to share the costs and use of 5G infrastructure. Mexico is building a wholesale mobile network; its capacity can be leased out to different firms. Better this approach than muted competition and price-gouged consumers. The union of T-Mobile and Sprint is one that regulators should not bless.

Identity crisis

Britain needs a national identity register

The Windrush scandal was caused by the lack of a simple way to perform migration checks

May 5th 2018

THE harassment of the Windrush generation of Caribbean migrants is a shameful chapter in Britain's history, and ministers are paying for it. One home secretary resigned on April 29th; her predecessor, Theresa May, now the prime minister, is weakened. It falls to Sajid Javid, who took charge of the Home Office this week, to clear up the mess.

There is little to like about Mrs May's migration policy. The state-led hounding of thousands of law-abiding British citizens was a side-effect of the "hostile environment" for illegal immigrants that she created as home secretary.

Indeed, Mrs May's rigid insistence on reducing net inflows to the arbitrary level of 100,000 a year created a hostile environment for all migrants, not just the illegal ones (see article). Landlords, employers and others were given new duties to check people's migration status. The result has been that those with incomplete paperwork have been denied homes, jobs and public services, and have even been locked up. Mrs May sent mobile billboards bearing the legend "GO HOME OR FACE ARREST" to migrant-heavy districts. She ridiculed "citizens of nowhere" and threatened to make companies publish lists of their foreign workers (before backing down). Cowboyish Home Office officials desperate to reach their targets have used any excuse to notch up ejections. Claiming to crack down on illegal migrants, they even broke the law themselves.

For all its shortcomings, Mrs May's approach does contain one idea that is worth preserving: enforcement should happen inland, not just at the border. Most of Britain's half-million or so illegal immigrants did not enter the country illicitly but have overstayed their visas. Furthermore, from the camps of Calais to the Mediterranean sea, there is plenty of evidence that fortifying borders does not stop lots of people continuing to try to cross them. The result is migrants' suffering, extra cost to taxpayers and a bonanza for people-smugglers.

The Windrush debacle highlighted that Britain has no easy way of carrying out this inland enforcement. The government's guide for landlords who need to verify tenants' migration status is 35 pages long. If landlords get it wrong they risk a fine or even imprisonment. Researchers have shown that, unsurprisingly, they tend to err on the side of caution, rejecting those without passports (and especially those who are not white). The result is pressure against all migrants, and also against ethnic minorities, British or otherwise. After Brexit the problem will be worse, as 3m Europeans will be allowed to remain permanently but without passports.

The scandal has rightly provoked calls for an overhaul of migration enforcement. Any rethink must get to the root of the problem. This is not that Britain checks the status of migrants, as any country must if it values the rule of law. The real shortcoming is that Britain, rarely among advanced countries, lacks a simple, non-discriminatory way to check the identity of its population. Under Mr Javid it should get one.

Liberals, including this newspaper, have argued against national identity registers on the basis that they invade privacy and aid oppression by the state. But the balance of this trade-off has changed. In a globalised world more people spend time travelling, studying or working abroad, and access to labour markets and public services depends on their exact status. Proving identity thus matters more than ever. Countries like Britain that lack an ID register rely on other proofs—bank statements, tax records, phone bills—that are even more intrusive. As for the risk of oppression, the Windrush affair shows that it is not just all-knowing states that have the power to persecute their citizens. It was precisely the opacity of information that the Home Office exploited in order to pursue many thousands of people who had a right to be in Britain.

Papers please

Setting up an identity register would not be cheap or easy. A previous, abortive effort to roll out ID cards a decade ago was priced at about £5bn ($7bn). It would probably have to involve an element of amnesty for those caught up in a Windrush-style trap of missing paperwork. But Brexit is forcing Britain to think hard about matters of migration and citizenship. Taking back control of who enters the country is one of the biggest prizes advertised by Brexiteers. To do that, Britain must first have a better idea of who is already there.

Non-selective nonsense

France, where the grossly unprepared try for maths degrees

Why Emmanuel Macron is right to try to reform French universities

May 5th 2018

"LIKE organising a shipwreck in order to find out who can swim," is how Alain Peyrefitte, then France's education minister, described his country's non-selective system of recruiting university students half a century ago. Peyrefitte hoped to transform the system by introducing selective admissions. He failed, and instead triggered the student uprising of May 1968. Now President Emmanuel Macron, attempting a similar reform, has also brought students out on the streets (see article), and the French hear echoes of *soixante-huit*. But he is right to try to reform a wasteful higher-education system, just as Peyrefitte was. France's model is inefficient, inequitable and allows too many young people to sink without a chance.

Napoleon who?

That model traces its roots to 1808, when Napoleon Bonaparte introduced the *baccalauréat* and decreed that anybody who passed it was entitled to a place at university. For many years, keeping that promise was easy because so few held what was then an elite qualification. In 1950 only 5% of pupils attempted the *baccalauréat*. That has changed dramatically: these days almost everyone takes the bac and, in 2016, nearly 80% of pupils passed it. Yet the entitlement has not changed. The bac's holders still have the right to enter the university of their choice to study the course of their choice. So youngsters with only rudimentary maths may sign up for a maths degree and those who have little acquaintance with the past can read history.

Since the costs of public university are paid almost entirely by the state and the fees are low—an average of €189 a year ($227) in 2017—the results are predictable. Universities are overwhelmed. In the first year, thousands jam into lecture halls designed for hundreds. Professors cannot offer the support that laggards need. Most students drown: many drop out after a year, but some struggle on, retaking exams again and again. In all, over 70% fail to complete a degree within three years. The same system prevails in Italy and bits of Latin America.

Odd as it may seem, this "republican" model of higher education commands great support in France, so Mr Macron is treading lightly in his attempts to reform it. He is not—heaven forbid—saying explicitly that universities should "select" students (the word is political dynamite). He is merely proposing that they should be able to require those who wish to study a particular degree to have some basic knowledge of the subject. But opponents of reform suspect (probably rightly) that any conditions for admission will lead to more stringent rules—which is why the students and the left are marching.

The arguments for reform on efficiency grounds are obvious. Jamming up publicly financed universities with people who are never going to finish their degrees is not a good use of taxpayers' money. But the system is also unfair. It promises students a leg-up in life that most of them will not get, and it induces them to spend a year, and sometimes several, pursuing a dream that is likely to be dashed.

Even in terms of *égalité*—the issue that matters most to its supporters—the "republican" system fails. Measured by the share of people who get degrees but whose parents didn't, France does not do well by the disadvantaged, performing below average among rich countries. But it provides plenty of opportunities for the rich and clever, through an elite system that floats above the public one with which the masses must make do. Around 8% of students go to the *grandes écoles*, the highly selective elite universities with whose existence French egalitarians seem strangely comfortable. Around 18% attend private universities. And many who can afford it go abroad. France has one of the highest rates in the rich world of study abroad. In a survey by Studyportals.com, French students were more satisfied with their time abroad than those of any other big European country; foreigners studying in France were less satisfied than those in any other such country.

Because the risk of a backlash is so high, Mr Macron is wise to move slowly. But if he is to make French higher education more efficient and more equitable, he needs to succeed in these first steps, and then build something better. America is not a great model. Its system is highly selective at the top, not at all at the bottom, and has a huge drop-out rate, the consequences of which are borne by the students who emerge with no qualifications but lots of debt. Britain's and Australia's system—selective universities paid for largely by graduates who are earning enough to afford the loan repayments, and a low drop-out rate—is probably the best on offer. But it will be a long time before France is ready for that sort of revolution.

Augean Angola

Is Angola’s new president serious about reform?

Africa’s second-largest oil producer is even more corrupt than Nigeria. President João Lourenço will struggle to clean it up

May 5th 2018

IF ANY country ever needed a fresh start, Angola does. It is more corrupt than Nigeria; its infant mortality is higher than Afghanistan’s. Until September it had been ruled by the same man, President José Eduardo dos Santos, for 38 years—more than twice as long as most Angolans have been alive. Even in retirement, many expected Mr dos Santos to continue pulling the strings; he remains head of the ruling party. Hardly anyone expected his successor, João Lourenço, to break the chokehold that the dos Santos family and their cronies have on the Angolan economy. So Mr Lourenço’s first few months in office have pleasantly surprised (see article).

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He has ousted Mr dos Santos's daughter, reputed to be Africa's richest woman, from her perch at the top of the national oil firm, and sacked the former president's son from his job running the sovereign-wealth fund. He has even allowed the junior Mr dos Santos to be charged with fraud, which he denies, over the transfer of $500m out of the country. That would never have happened under his father's regime. The $640bn question is whether Mr Lourenço's anti-corruption drive is real, or whether he plans to replace one set of snouts at the trough with another.

$640bn is the amount of money that Angola is thought to have made from oil and gas exports since 2002. That was the year its ghastly, three-decade civil war ended, leaving its people traumatised and its soil studded with landmines. Soon afterwards oil prices surged, giving Africa's second-largest oil producer a chance to reap a huge peace dividend and rebuild its bombed-out cities. This chance was not entirely squandered—Angola has more roads and dams and skyscrapers than before, and its people are a bit less poor. But the main benefits of the oil boom flowed to a tiny elite.

Tens of billions of petrodollars simply vanished. Many more were grabbed by bigwigs who won permits for projects and let their foreign partners do the work. Practically everything in Angola costs more because cronies take a cut: Luanda, the capital, was recently ranked as the most expensive city in the world for expats. Genuine entrepreneurs are crushed. “It is virtually impossible for meaningful economic activity to occur outside the charmed circle of the politically protected,” wrote Ricardo Soares de Oliveira in “Magnificent and Beggar Land: Angola since the Civil War”. When the oil price crashed in 2014, Angola was left with stalled growth, vast debts to China and no export industry of any consequence to replace hydrocarbons. This is the mess Mr Lourenço must clean up.

Lourenço’s toil

Some early signs are encouraging. Besides sidelining the dos Santos clan, he has pushed through a law making foreign investment easier, by removing a requirement to have a local partner, and asked the IMF how to stabilise the economy. But this is not nearly enough. Since Angola’s biggest problem is corruption, the government’s most urgent tasks are to promote transparency and accountability. A good start would be to allow an independent audit of the country’s public debt. How was it created, and where did the money go? The opposition is calling for such an audit, and some members of the ruling party would support it. Those who object are largely people with something to hide. Unfortunately, they are a powerful constituency in Angola. It remains to be seen whether Mr Lourenço has the will and the wherewithal to defeat them.

The ruling party is no longer Marxist, but it still seeks to control too many aspects of Angolan life. A growth-blocking forest of licences and regulations enriches those with the power to grant or waive them. It should be slashed. Political meddling in Angola’s courts grants impunity to the mighty. It should end. And assaults on press freedom shield the elite from much-needed scrutiny. Rafael Marques de Morais and Mariano Bras, two graft-illuminating journalists, are on trial—behind closed doors—for insulting the former attorney-general. The cases against them should be dropped, and the media unmuzzled. Mr Lourenço once promised to root out corruption even among the most powerful, adding that “the law is for everyone.” Angola can escape from his predecessor’s long, dark shadow only if he means it.

Letters

Letters

Letters to the editor

On Donald Trump, Poland, Singapore, funerals

May 3rd 2018

Letters are welcome and should be addressed to the Editor at letters@economist.com

Reporting on Trump

Lexington's column on the FBI raiding the office of President Trump's lawyer did not mention some salient facts (April 14th), notably the issues associated with attorney-client privilege. If lawyers can have their offices ransacked and then be subject to prosecutions for what is discovered, what effect will this have on representation for difficult cases? Nor did the column mention the asymmetry of how attorney-client privilege was used in the FBI's timid investigation of Hillary Clinton's e-mail server, specifically in the case of the testimony of her chief of staff. Finally, there was no discussion of how far afield Robert Mueller, the special counsel, has taken the focus of his investigation compared with the original remit of Russian influence.

If you don't like this president, fine. Lots of us don't and there is plenty of legitimate ammunition to discuss. Now, however, you are feeding the narrative that the mainstream media is just hopelessly biased. This leads to a general discounting of your reporting. People just stop watching or reading what you write. There is also something worse. What goes around eventually comes around. What will you say when the attorney's office of a politician of whom you approve gets ransacked by his political opponents?

STEPHEN ARBOGAST
Professor of the practice of finance
University of North Carolina at Chapel Hill

Your lament for what the Republican Party has become was, if anything, too mild ("How the elephant got its Trump", April 21st). It has become the party of lies and xenophobia, of irresponsibility and moral corruption, fetishising blind loyalty to a very bad man. Beseeching responsible Republicans to resist this misses the mark, when you indicate that the party is irredeemable. What they should do is quit, as I did after 53 years of active commitment. I cannot associate myself with today's Republicanism. I am heartbroken.

FRANK ROBINSON
Albany, New York

Poland's government

Your leader on the Polish government read in places like an election pamphlet from the opposition Civic Platform party ("A Polish pickle", April 21st). The governing Law and Justice (PiS) party received an overwhelming mandate from the Polish people in 2015, including a clear instruction to rebalance a judiciary, which had been stacked with allies by the former government without any complaint from the European Union.

To counter its weakness at home, Civic Platform is seeking to Europeanise what are essentially domestic issues and fight its battles in Brussels rather than Warsaw. By imposing an agenda of ever increasing centralisation and trying to force a mythical European identity on member states (the same policies that contributed to Brexit), the EU is behaving, in the eyes of many in Poland, like the former Soviet Union.

ASHLEY FOX, MEP
Leader of the Conservatives in the European Parliament
Brussels

Poland's Mazowsze region is as "gorgeous as a Chopin concerto" ("Change of state", April 21st)? The maestro's two piano concertos have been called many things including, rather unkindly, bad pieces for orchestra. But now we are invited to think of them as "an undulating quilt of cereal fields". Corn?

MICHAEL KNIGHT
Geneva

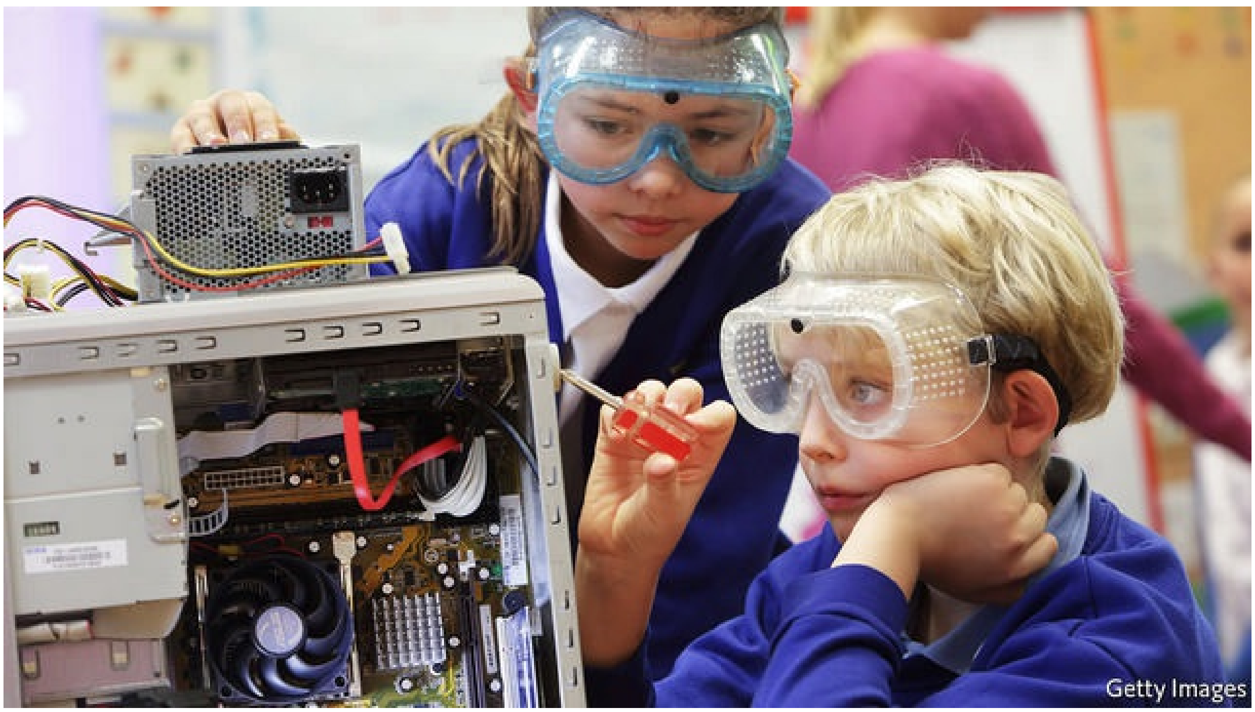
Singapore's politics

The People's Action Party has retained power in Singapore not because the electoral system is "manicured" ("Not much leeway", April 28th), but because it knows and expects that if it does not measure up it will be voted out. We have had 14 general elections since 1959, all free and fair and robustly contested by many parties.

The Public Order and Safety (Special Powers) Act and the Select Committee on Deliberate Online Falsehoods have nothing to do with keeping "unruly critics" in check or the government in power. The act applies to serious incidents affecting public order, including terrorist attacks. The London riots in 2011 started out as a peaceful demonstration that degenerated into violence, fuelled by social media. We drew lessons from this and other incidents in formulating our act. The committee hearings looked into serious issues similar to those which *The Economist* has decried.

As for political succession, the next generation of leaders is following the same process as previous generations. They are working as a team and taking the measure of one another. They will agree, in good time, who among themselves will be *primus inter pares*. Ultimately voters have the final say, because whoever becomes prime minister must convince the electorate to give him and his party the mandate to govern, as in the Westminster model. Our variant may not be rambunctious enough for *The Economist*, but it has worked well for Singapore.

FOO CHI HSIA
High commissioner for Singapore
London



Factory model schools
* Much of the "evidence-based gospel" of school improvement ("The big education experiment", March 31st) is in fact driven by faith rather than evidence. You state that studies suggest that freedom from local-authority control improves results. But schooling systems in East Asia, hailed for their "results", are characterised by tight local authority control, just the opposite

of “autonomy”.

Then again, what do these “results” actually indicate? Are schools simply skills factories for maximising productive efficiency? Or are they also communal institutions, tasked with socialising children? And what of their role in inculcating an appreciation of the intrinsic value of learning itself and a fuller consciousness of our shared humanity?

The premises of England’s evidence-based gospel are extremely narrow. Mastery of the basic skills of literacy and numeracy is crucial for children’s life chances. But foreign languages, art, music and drama have been severely squeezed. Where is the evidence that this is necessary, let alone beneficial?

Advances in artificial intelligence are among several factors that should prompt us to rethink a model of schooling informed by an ethos of relentless competition that values students primarily as units of productive capacity. Unless we can do so, we risk marching like an army of preprogrammed robots towards a distinctly dystopian future.

PROFESSOR EDWARD VICKERS
Co-ordinating lead author of the UNESCO report, “Rethinking Schooling for the 21st Century”.
Fukuoka, Japan

The grateful dead

"Funerals of the future" (April 14th) looked at the increasingly expensive business of disposing of the dead. One way to reduce costs is to rehearse a funeral. Death often comes unexpectedly and inconveniently, causing friends and family to have to plan suddenly for the funeral. A funeral rehearsal, flexibly scheduled, so that all can attend, including the soon-to-be-departed as a participant in the flesh, is more satisfying. He or she could lie in comfort and listen to the encomiums. If they are not sufficiently positive, one could rise up and glare.

THOMAS CALHOUN
Bethesda, Maryland

My wife, Mary, died in February. Her body will train student doctors in anatomy through a not-for-profit consortium of local medical schools, the Humanity Gifts Registry. The removal of my wife's body was done caringly. There is a memorial service for families and students and the ashes are returned.

LEONARD FINEGOLD

Media, Pennsylvania

When I was a criminal investigator I participated in 20 exhumations of coffins buried in concrete vaults. Fancy and expensive caskets. Without exception, after only a few years each casket had failed in some way, most often because of the so-called hermetic seal. The end result were contents which in no way resembled a sleeping loved one. From soupy flotsam to giant mould blooms, the interiors were hideous. Bottom line is, do not waste your money.

MIKE POST
Los Angeles

I am reminded of “The Big Lebowski”. Reacting to the expense of a funeral urn, Walter Sobchak (played by John Goodman) shouts at the undertaker that “just because we’re bereaved doesn’t make us saps!” But as the urn is the funeral parlour’s “most modestly priced receptacle”, he instead places his friend’s ashes in an empty coffee tin.

AUGUSTUS HANEY
New York

* Letters appear online only

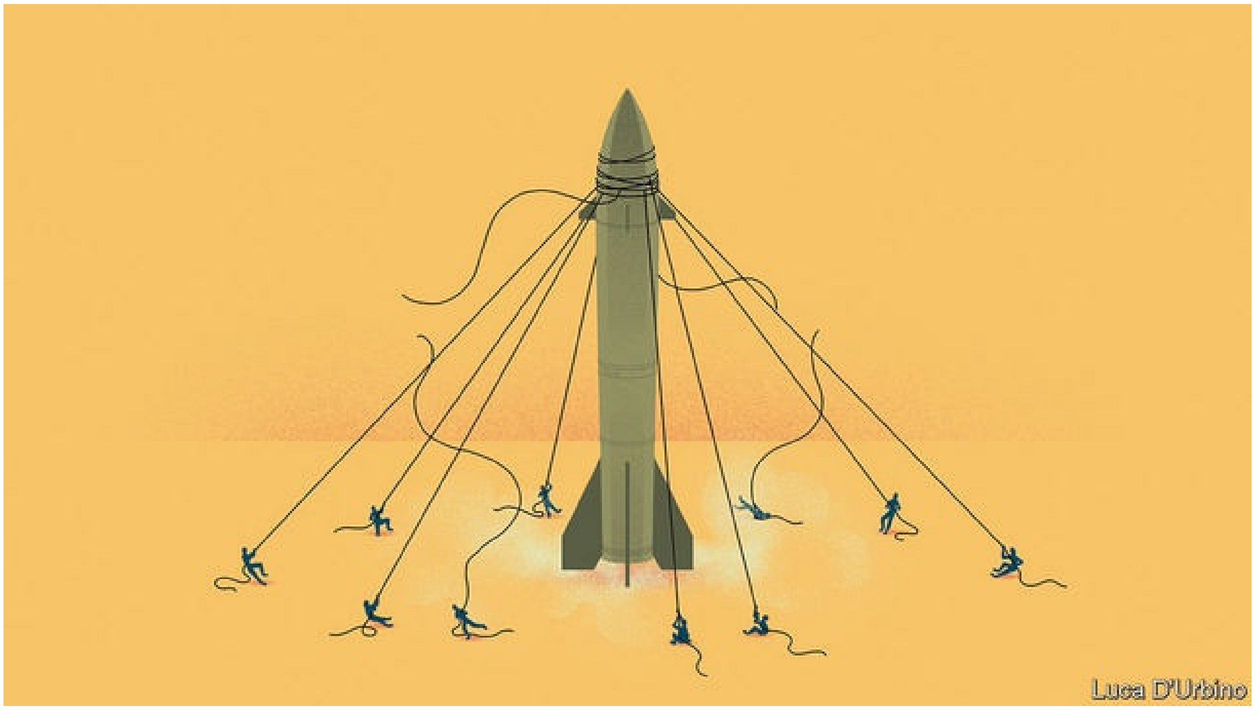
Briefing

- **Global security: A farewell to arms control** [Fri, 04 May 05:01]

A farewell to arms control

Old deals to limit nuclear weapons are fraying. They may not be repaired

Politics and technology make arms control harder than ever



May 5th 2018

SINCE 1972, when the first Strategic Arms Limitation Talks (SALT I) agreement was signed, there have always been negotiated constraints on the nuclear arsenals controlled from Washington and Moscow. In three years, if nothing is done, that half-century of strategic arms control will be over. In 2021 the curbs on warhead numbers and the protocols for exchanging information provided by the New START (Strategic Arms Reduction Treaty) of 2011 will lapse unless it is extended. The consequence of the treaty's demise could be a dangerous and expensive new arms race.

It is far from the only reason for such nuclear worries. Both President Donald Trump and Vladimir Putin, the president of Russia, revel in a form of nuclear braggadocio that would have been anathema to their predecessors. Mr Trump boasts about the size of his nuclear button and promises to return America's nuclear arsenal to “the top of the pack”. Mr Putin made the central set-piece speech of his recent re-election campaign an extended riff on Dr Strangelove, gloating over a slew of novel, blood-curdling weapons, including one that appears to boast the most powerful warhead ever created, the better to drench coastal cities with irradiated tsunami.

The deal that constrains Iran’s development of nuclear weapons is being systematically undermined by the Trump administration. Summitry with North Korea is more likely to result in grudging recognition of it as a nuclear-weapon state than to lead to the dismantling of its arsenal of missiles. If the talks break down the peninsula could become even more unstable. The main bulwark against the spread of nuclear weapons, the Nuclear Non-Proliferation Treaty, is holding up; but it is in worse shape than at any time since it entered into force in 1970.

You can’t fight in here

It seems a long time since Barack Obama’s Prague speech, in which he talked about working towards a world free of nuclear weapons. In 2010, a year after setting out that goal, Mr Obama’s administration negotiated the New START agreement with Dmitry Medvedev, Mr Putin’s more emollient sidekick and placeholder. The treaty obliged both sides to field no more than 1,550 strategic nuclear warheads with no more than 800 missiles and bombers to carry them. Like SALT I and most arms-control deals since, New START contained detailed verification and monitoring arrangements. These not only ensured that the two parties were doing what they had said. They also provided insights into how they ran their nuclear forces which improved confidence on both sides.

Since then things have got steadily worse. To get New START ratified by the Senate, Mr Obama had to show that the limited number of nukes it allowed would be of tip-top quality. Thus he embraced a sweeping modernisation programme which calls for the refurbishment of warheads and new intercontinental ballistic missiles (ICBMs), submarines and bombers; the Congressional Budget Office expects it to cost about $1.2trn over the 30 years from 2016. The Russians began their own ambitious nuclear upgrades, too. Bob Einhorn, a former arms-control negotiator now at the Brookings Institution, a think-tank, fears that “the dynamics of nuclear modernisation” could lead to new technologies and therefore new strategic uncertainties which increase risks even if the limits of New START are adhered to.

If all this were going on during a period when relations between Russia and America allowed for the conduct of normal business, including follow-on arms-control agreements, there might not be too much to worry about, other than the expense. They aren't. In 2013 Mr Obama floated the possibility of the two countries cutting the number of their deployed nuclear warheads by a further third. But Mr Putin made it clear, according to Mr Einhorn, that he had "zero interest" in the proposal. For Mr Putin, nuclear weapons are not just the ultimate guarantor of Russia's security but a symbol of national pride that demands respect (and fear) from adversaries.

Just a few months after Mr Putin's rebuff, in January 2014, Rose Gottemoeller, then under-secretary for arms control at the State Department and now deputy secretary-general of NATO, informed America's allies that Russia appeared to be in violation of the Intermediate Range Nuclear Forces (INF) Treaty of 1987, in which the two superpowers agreed to give up ground-launched nuclear weapons with ranges between 500 and 5,500 kilometres (310 to 3,400 miles). The INF Treaty marked a thaw in the cold war and led to the destruction of 2,700 missiles.

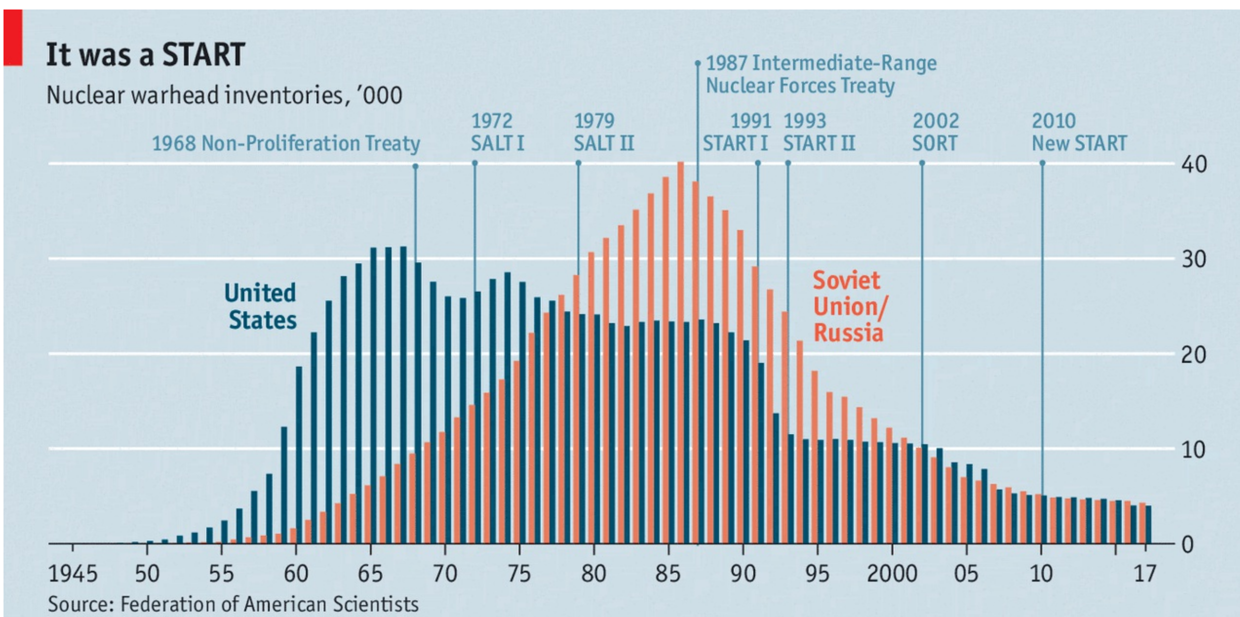
Russia's alleged breach lies in testing and possibly deploying a ground-launched cruise missile, known as the 9M729, with a range of more than 500 kilometres. The Russians, characteristically, deny that it can fly farther than allowed. For their part they have accused the Americans of being in breach; they say launchers for American SM-3 "Aegis Ashore" anti-missile interceptors in Romania can be used to fire prohibited cruise missiles.

The dispute could easily be settled, says James Acton, a nuclear-policy expert at the Carnegie Endowment for International Peace. If inspectors were allowed to, they could verify the 9M729's range by measuring its fuel tank. They could also say whether the SM-3 launchers are or are not capable of launching banned weapons, too. But the verification agreements that were part of the INF have lapsed. If America has suggested joint inspections, Russia has shown no willingness to comply.

Invalidating the policy

The Nuclear Posture Review published by the Trump administration in February recommends trying to strong-arm Russia into compliance with work on a new American ground-launched cruise missile that would only be put into production if the Russians continued flouting the INF Treaty. Another option would be to deploy JASSM-ER, a new air-launched cruise missile, in Europe. Mr Einhorn is sceptical. He believes that Russian violation was not "casual": "The Russians feel constrained by INF. They won't walk that back now." Gary Samore, a former arms-control adviser to Mr Obama, agrees that "The INF is dead."

Many arms-control professionals would like to preserve the INF because the weapons it eliminated from Europe were inherently destabilising. But it is not just the Russians who are chafing under its restrictions. Jim Miller, a former under-secretary of defence, thinks the INF Treaty is worth saving. But he concedes that, having seen China and North Korea build large ground-launched intermediate-range nuclear missile forces, some will argue for deploying similar systems from bases in the Pacific, such as Guam.



Economist.com

One such is John Bolton, Mr Trump's new national security adviser. In 2011 Mr Bolton wrote a *Wall Street Journal* op-ed which called for either "multilateralising" the INF—that is, getting other countries to abide by its strictures—or abandoning it. The Russians have suggested something very similar. Like Mr Bolton they are being disingenuous: multilateralising the agreement is an impossible goal.

Nor is Mr Bolton much of a fan of New START. He fought hard to prevent its ratification, describing it as a form of “unilateral disarmament”. His main concern was the limitation on delivery systems, such as submarine-launched ballistic missiles. He believed this would “cripple” a concept known as “prompt global strike”, in which such missiles were to be used for very precise non-nuclear bombardments of any point on Earth, however distant and however well defended.

Mr Bolton compared New START unfavourably with the 2002 Treaty of Moscow (also known as SORT—the Strategic Offensive Reductions Treaty), the treaty’s superseded predecessor, which he had helped to negotiate. Seen without the benefit of progenitive pride, though, SORT is not much cop. It had no monitoring or verification regime. It did nothing about launchers, and the warheads it eliminated needed only to be mothballed, not destroyed. It would be harsh to say that SORT was hardly worth the paper it was written on. But it is telling that not much of that paper was required. The detailed provisions of START I, signed in 1991, and New START both made good-sized books: SORT barely filled two pages.

Mr Bolton at least knows what New START is. It is less clear that his boss does. In a call between them in early 2017, Mr Putin sounded Mr Trump out on extending the agreement. Pausing to ask aides what Mr Putin was talking about, Mr Trump came back on the phone to declare that it was just one of several terrible deals negotiated by his predecessor, so probably not.

His administration is not dead against extension. The Nuclear Posture Review is guardedly non-committal about it. Losing the insights into its opponent’s strategic forces provided by the treaty’s verification regime would be a serious setback for the Pentagon—as it would for its Russian counterparts. But the odds on extension are lengthening. Sir Lawrence Freedman, a British nuclear strategist, argues that arms control tends to follow rather than lead politics. “A degree of trust is needed. Unfortunately, the Russians don’t seem able to tell the truth any more.”

If arms control does indeed follow politics, could better relations between the big nuclear powers, at some later date, re-energise arms control? Alas, probably not. The problem is potentially destabilising technologies, notably those of missile defence and cyberwarfare.

Condemning a whole programme

In 1972 America and the Soviet Union signed the Anti Ballistic Missile Treaty. It limited the defences both sides could employ so that they would remain vulnerable to a counter-attack, thus assuring continued deterrence. In 2002, when Mr Bolton was, improbably, under-secretary for arms control at the State Department, America withdrew from the treaty so that it could deploy defences designed to protect the homeland from limited attacks, a project on which it has spent $40bn so far, to uncertain effect. Work on the exotic weapons Mr Putin bragged about in his recent “Dr Strangelove” speech started shortly thereafter. The “boost-glide” system which would allow an incoming weapon to fly and manoeuvre, rather than just fall; the cruise missile with an intercontinental range; and the nuclear-armed long-range underwater vehicle are all designed to defeat future American missile defences.

Russia has never believed America’s assurances that its national anti-missile system is intended solely to guard against a limited attack from the likes of Iran and North Korea. It also claims to believe that more modest “theatre” systems, like the SM-3s in Romania, could be used to lessen the deterrent power of its own missiles—a stance that China echoes. Both countries fear further advances in American missile defence, brought about either by more capable interceptors or, just conceivably, directed-energy weapons that zap their targets from a distance using microwaves or laser beams—a feature of the “Star Wars” anti-missile shield that Ronald Reagan proposed in the 1980s, which the Soviets took more seriously than they needed to. Such defences could be very destabilising if they were able to deal with the diminished forces with which an attacked adversary might fight back. It is on that second-strike capability that deterrence rests.

Theoretically, says Michael O’Hanlon, a strategist at Brookings, arms-control agreements could cope with some of these worries. A New START follow-on could, for example, allow each side to field an extra offensive weapon for every ten interceptors deployed by the other. He concedes that energy weapons, if eventually shown to be effective for more than point defence, would be much more complicated to account for. Mr Samore, however, reckons that any missile-defence limitations would be “politically toxic” in America. And if energy weapons were to work, he says, entirely new ways of delivering nuclear warheads will be needed, such as the ones Mr Putin is so excited about. Mr Miller worries that some in the Trump administration, for which read Mr Bolton, may want to push missile-defence technologies further; if they do, the certain response from Russia and China would be to make their warheads more numerous and more nimble.

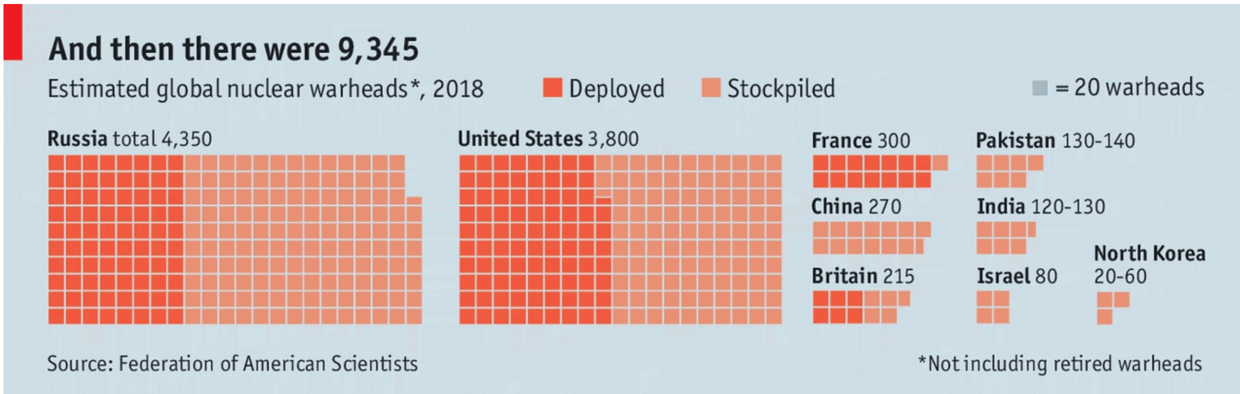
Another big concern is cyber-weapons. Daryl Kimball of the Arms Control Association, a think-tank, says that cyber-attacks on nuclear command-and-control systems could “vastly increase crisis instability”. Yet nobody has any good ideas about how an arms-control agreement can cope with such a possibility. Mr Einhorn says any weapon that is defined by software is almost impossible to verify. Mr Miller suggests that when it comes to cyber, deterrence may be the only option: “It is a regime of self-help,” he says.

Most arms-control experts think that the best that can be hoped for are new talks with the Russians, possibly drawing in other nuclear-weapons states, on enhancing crisis stability, and the establishment of international norms banning the use of cyber in specific circumstances, such as disabling an adversary’s strategic command-and-control systems.

A little funny in the head

Unfortunately, if bilateral arms control is in bad shape, so too is its multilateral equivalent. The Comprehensive Test Ban Treaty, adopted in 1996, has yet to come into force. Three of the 44 designated “nuclear-capable states” which have to ratify it, India, Pakistan and North Korea, have yet even to sign it. Eight of the signatories, including America, have not ratified it.

The Fissile Material Cut-off Treaty, also first discussed in the 1990s, is in a similar state of limbo. It would seek to stop the production of weapons-grade uranium and plutonium by the five recognised nuclear weapons states (America, Russia, China, France and Britain) and the four that are not members of the nuclear Non-Proliferation Treaty (NPT)—the three mentioned above and Israel. Pakistan, though, has been blocking negotiations on the basis that the treaty does not deal with the large stockpiles of uranium and plutonium that other countries have.



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The NPT itself remains, 50 years after it was first signed, the bedrock multilateral nuclear-arms control agreement. It is seen by nearly all parties as worth preserving. But the last review conference in 2015 was a fractious affair; the next one, in 2020, is shaping up to be even worse. The gulf between the nuclear-weapon states (and their close allies) and the rest has widened. The nuclear-weapon states pay lip service to the incremental nuclear disarmament the treaty asks of them while at the same time modernising their forces to face the next 50 years; this makes the nuke-nots ever angrier.

A consequence of their frustration is that some 130 states—about two-thirds of the NPT's membership—last year combined to create, under UN auspices, a new treaty on the Prohibition of Nuclear Weapons (known also as the Nuclear Ban Treaty). The nuclear-weapon states boycotted the discussions leading up to the treaty's adoption in July, arguing that it is a distraction from other disarmament and non-proliferation initiatives, such as the Comprehensive Test Ban Treaty and the Fissile Material Cut-off Treaty. They also have a reasonable concern that countries might choose to move from the NPT to the new treaty and thus avoid the NPT's rigorous safeguards against illicit fissile-material production.

A more immediate threat to the NPT is the high probability that Mr Trump, goaded by Mr Bolton and his hawkish new secretary of state, Mike Pompeo, will on May 12th refuse to renew the presidential waiver needed to prevent nuclear-related sanctions on Iran from snapping back. Should he do so, America will be in violation of the 2015 deal that curbs Iran's nuclear programme, the Joint Comprehensive Plan of Action (JCPOA). The deal is between Iran and the five permanent members of the UN Security Council—America, Britain, China, France and Russia—plus Germany. Detractors such as the president complain that it is time-limited and that it fails to stop Iran's regional meddling or its ballistic missile programme, and that these are fatal flaws. Israel's prime minister, Binyamin Netanyahu, eggs on such criticism. On April 30th he made much play of evidence that Iran had lied about the military part of its nuclear programme.

This line of attack does not hold water. Iran's near-nuclear capability was not a secret: it was the reason for acting. The world had to choose whether to accept it as a nuclear-weapon state, or one perched on the threshold; to go to war; or to negotiate an arms-control agreement. That agreement is meticulously crafted for very specific purposes: backing Iran away from the nuclear threshold; blocking all its pathways to building a nuclear device for at least ten years; and hindering it from doing so thereafter without being caught.

If Mr Trump pulls America out of the deal the other parties will try to save it. But the blow, not just to the Iran deal but to any future attempts at multilateral arms control, could be fatal. As well as enlightened self-interest and rigorous verification, arms-control agreements depend on a degree of trust that the parties to them will honour their commitments even when governments change. Persuading North Korea to give up its nuclear weapons in return for sanctions relief and security guarantees was never very likely. Pulling America out of the Iran deal, when there is no evidence that Iran has broken its undertakings, just a few weeks before a summit with North Korea's leader, Kim Jong Un, seems certain to make it less likely still. As Sir Lawrence says of Russia, "A degree of trust is needed."

Arms control, Mr O'Hanlon says, "often gets a bad rap, but it is an extraordinarily valuable tool." And it is one that the nuclear powers risk losing through a mix of complacency, neglect, ignorance and malice. It is within Mr Trump's power to do something about it. He could make a start by holding his fire on the Iran deal while his European allies work to meet some of his concerns, and by indicating a willingness to extend New START—something which would require little more than the stroke of a pen. “Presidents can and do turn on a dime,” Ms Gottemoeller says, more in hope than expectation. There is no sign yet that this one will.

United States

Pedagogic protests

Behind the teacher strikes that have roiled five states

Why non-union states have seen the most unrest

May 3rd 2018 | PHOENIX

FROM a block away, the striking teachers camped out around Arizona's capitol at first looked like a solid sea of red, the colour of their T-shirts and tents. On closer inspection, they distinguished themselves the way the teachers have always distinguished their classrooms—with handmade signs. Leah Falcon ("Arizona exports: Cotton, copper, teachers"), who teaches middle-school maths, said she was "fighting because my kids deserve better than 34 students in a class." Megan Marohn ("Arizona Spending per Student: $9,000. Per Inmate: $24,000") is a classroom aide and lifelong Republican who frets that Arizona's Republican legislature and governor "put the value of corporations above students". Jay Bertelsen ("Christian Non-Union Conservative Teacher Fighting for Funding") has taught computer science outside Tucson for 25 years; his children qualify for Arizona's state-subsidised health care for poor families.

Grievances such as these have motivated teacher strikes in five states. They look likely to continue—galvanising public-sector workers in states where Democrats hope to make gains in this autumn's midterm elections.

The strikes began on February 22nd, when teachers in West Virginia walked out. Two weeks later the state's Republican governor gave them a 5% pay rise—bringing the average high-school teacher's salary to just under $48,000. Kentucky's legislature approved a sizeable increase after teachers there walked out. A threatened strike in Oklahoma prompted legislators to boost education funding and teacher salaries (the teachers struck for nine days anyway). Last week teachers in Colorado and Arizona walked out to protest against low salaries and stagnant funding.

Those conditions are widespread. The average American teacher earns less than 60% of what a similarly educated professional makes. In inflation-adjusted terms, teachers' salaries have fallen by 1.6% over the past two decades. But the acute crisis in public education dates back to the recession of 2008, which hit many states' property-dependent tax receipts.

Most states cut school funding; in some, it has yet to return to its level before 2008. In inflation-adjusted terms, teacher salaries are almost 5% lower than they were a decade ago, even as teachers' retirement contributions and health-insurance premiums have gone up. Some teachers even pay from their own pockets for classroom supplies that state funding fails to cover.

And some states have continued to cut taxes and education spending. According to Michael Hansen of the Brookings Institution, school funding in Arizona remains 35% below pre-recession levels. So the offer from Doug Ducey, Arizona's governor, of a 20% salary increase by 2020 and a funding increase until 2024 has left teachers nonplussed. Joe Thomas, who heads the Arizona Education Association, the state's main teachers' association, wants not just more money but a new dedicated revenue stream. That is a hard sell in Arizona, home to waves of tax refugees from California and pensioners reluctant to spend their fixed incomes on other people's children.

North Carolina may be the next domino; teachers there plan to demonstrate in the capital on May 16th, when the state's legislature convenes. As in most of the other strike states, unions in North Carolina have weak collective bargaining powers. Some suggest that this explains low levels of pay; if states were forced to bargain with teachers’ unions, they would pay them more. But a new paper from Agustina Paglayan, a political scientist at the University of San Diego, suggests that this formulation is the wrong way round. Teachers gained good collective-bargaining rights in states that already paid them relatively well. Collective bargaining did not lead to increased salaries or funding.

The result, paradoxically, is that states where teaching unions are weaker now have more politically active teachers. Ms Marohn, one of the demonstrators in Phoenix, says that when parents ask her mother, also a teacher, what they can do to help, she tells them to vote. That should worry Republicans. There are 3.2m public-school teachers in America. Giving them a financial reason to head to the polls could spell trouble for some Republicans running in states with teacher unrest. Arizona, North Carolina and Colorado are all battleground states. Republicans had also fancied that they could flip the West Virginia Senate seat held by Joe Manchin, a conservative Democrat. For want of more chalk could the Senate be lost.

Serve and predict

Violent crime is down in Chicago

The city’s police department thinks predictive-policing software has played a part in the decline

May 3rd 2018 | CHICAGO

RAHM EMANUEL is an expensive date for Ken Griffin. Encouraged by Chicago’s forceful mayor, after he complained about the overcrowded lakefront trail, the billionaire hedge-fund manager donated $12m for a separate bicycle path in 2016. He gave $3m for soccer fields in poor neighbourhoods in December. Mr Emanuel, a Democrat, even persuaded Mr Griffin, a Republican, to pony up $1m for his re-election campaign. And at a recent tête-à-tête, he persuaded Mr Griffin to part with $10m to bankroll the joint effort by the Chicago Police Department (CPD) and the University of Chicago’s Crime Lab, a research centre, to use data-analytics programs to predict and prevent violence in the crime-plagued city.

Mr Griffin’s latest gift to his hometown will mostly go to the CPD’s Strategic Decision Support Centres (SDSC), where civilian analysts and cops crunch data from gunshot detection-systems, surveillance cameras and computer programs with the aim of identifying the places where violence is likely to break out. Starting with six last year, the city has set up such centres in 13 of its 22 police districts. Some of Mr Griffin's money will also finance mental-health care for officers; some will go towards evaluating complaints against them.

Policing software such as Predpol or HunchLab, their makers claim, is able to forecast where crime is likely to be committed. Certainly the numbers are intriguing. After 2016 turned out to be the deadliest year for two decades, with 762 murders and 3,550 shootings, the following year, which coincided with the establishment of the first SDSC, was less bloody, with 650 murders and 2,785 shootings. The decline in crime in police districts with the new data centres was steeper than in those without. This could just have been reversion to the mean. But the Chicago police department thinks that HunchLab, the particular program it bought, has something to do with it.

To see why this might be the case, consider Englewood. A hard-up, predominantly black neighbourhood on the South Side, Englewood saw a decline in murders of 44% in 2017 compared with 2016. Shootings fell by 43%. A byword for concentrated poverty, rampant crime, drugs, guns and gangs, Englewood seems to have taken everyone by surprise with its progress.

Laura West, an officer working at the district's SDSC, which is staffed by two officers at all times, spends her days surrounded by screens. One shows a program called ShotSpotter, which uses the sound of gunfire to pinpoint shootings; another shows where surveillance cameras are (the city has more than 40,000); and a third displays HunchLab software. This blends data on crime statistics, population density and weather patterns with fixed points such as liquor stores and highway exit-ramps, to identify patterns of crime that may repeat themselves. (Predictive policing software also takes into account the phases of the moon and the schedules of sports games.) At-risk sites are marked with boxes colour-coded according to the type of crime. Patrol officers are encouraged to check them frequently.

The key to Englewood's improvement has not been more aggressive policing, says Kenneth Johnson, the district commander. "We cannot arrest our way out of our problems," he says. Instead, as he tells it, the change is the result of targeted interventions, combined with improved relations with the local community. The CPD's relationship with black Chicagoans in particular has long been fraught. Its recent nadir was a white officer's seemingly wanton firing of 16 bullets into Laquan McDonald, a black teenager, as he was walking away. The officer, Jason Van Dyke, who is about to be tried for first-degree murder, had been the subject of numerous complaints. Changing such a culture will take time. In Englewood, Mr Johnson tells his 350 officers to attend community meetings, to build relationships and to avoid behaving like an occupying force.

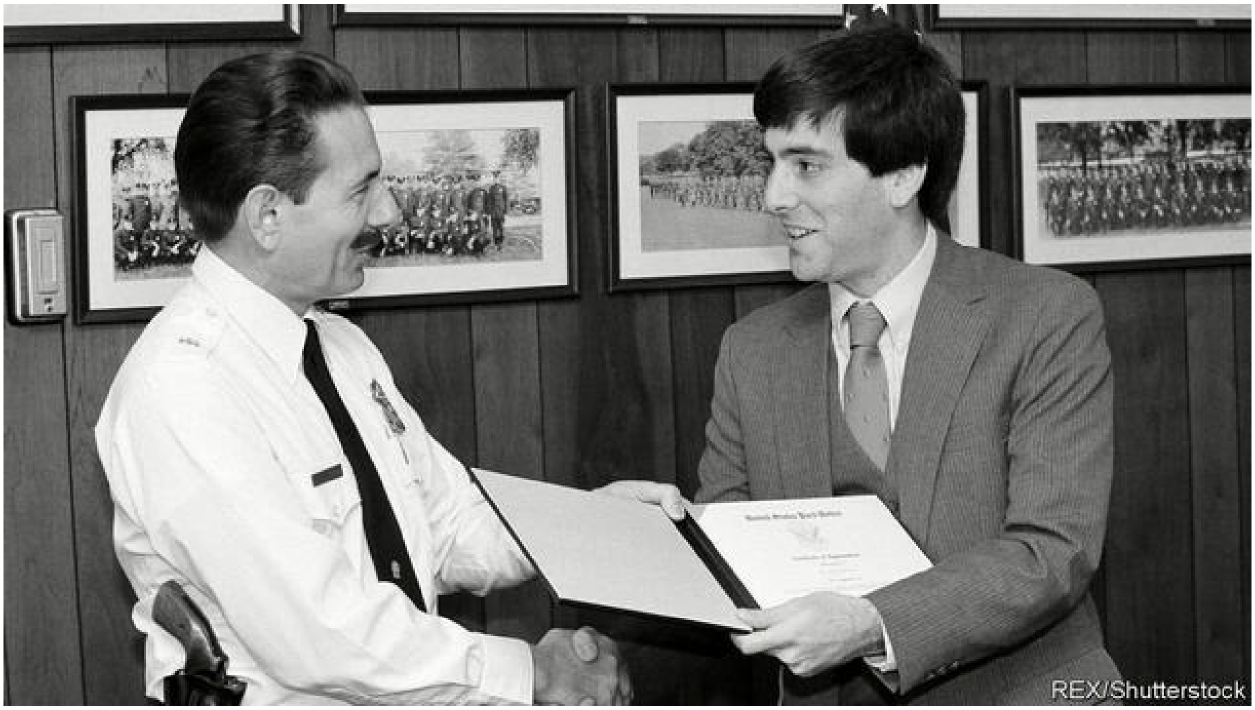
The risk with policing software is that it amplifies existing racial bias. "Technology is far from neutral," says Kade Crockford of the American Civil Liberties Union. when police officers feed predictive policing algorithms with their data on past stops and arrests, so they can reinforce the bias that police across the country stand accused of, says Ms Crockford. For example, whites and blacks consume and sell drugs at pretty much the same rates, but far more blacks are arrested for drugs than whites.

Used carefully, though, more data are better than fewer, says Andrew Papachristos of Northwestern University, and anyway HunchLab does not use arrest records. It is too early to say whether the new tools caused the decline in crime in Englewood and other districts, though the evidence suggests a correlation. This is good news for Mr Emanuel who is running for re-election next year and is already facing a crowded field of opponents. One of the contenders for the city's top job is Garry McCarthy, whom Mr Emanuel sacked as boss of the CPD in the wake of the Laquan McDonald scandal. Mr McCarthy is likely to run mainly on crime—until now, one of Mr Emanuel's biggest weak spots.

Marmot for lunch

Steve Komarow, editor of CQ RollCall, died on April 29th

"Always look like you belong there," he advised



May 3rd 2018

JOURNALISTS who become prominent covering wars or politics are generally eulogised for scoops scored or prizes secured. Steve Komarow's four-decade career was most accomplished, but his main achievement was something even rarer in the often cut-throat worlds of Washington bureaus and foreign corresponding. His calmly intense confidence as a reporter, and clear-eyed equanimity as an editor, produced widespread respect with no lasting enmity.

After Mr Komarow died at 61 from brain cancer, tributes focused on the preternatural calm, intellectual range, high standards, low volume and cockeyed grin that secured his stature in all four newsrooms where he played a pivotal role. The last was CQ, part of The Economist Group, where he was executive editor from 2015.

His approach earned wide notice when he was a cub reporter for the Associated Press. On the morning of December 8th 1982, an anti-nuclear protester called Norman Mayer drove a lorry, which he claimed was rigged with 1,000lb of dynamite, to the base of the Washington Monument, demanding to negotiate with an unmarried and childless reporter. Mr Komarow volunteered, and by nightfall secured the release of nine hostages inside the obelisk.

Covering a Congress just starting its descent into partisan gridlock, Mr Komarow's countervailing courtesy led the press corps to choose him as their negotiator over access. Hired by *USA Today*, he went to Bosnia, Kosovo and Haiti, and was the first to cover a cruise-missile launch from inside a B-52. After September 11th 2001 he decamped to Afghanistan, where his best work, he thought, was smuggling a rescue dog out of the country over the Khyber Pass. Then posted to Iraq, he was among the first to report from the hole where Saddam Hussein was captured.

He returned to AP for four years as deputy Washington bureau chief, helping to manage election coverage in 2008. Then came five years at Bloomberg, directing its reporting on Barack Obama's White House, followed, for the final 29 months of his life, by nurturing a staff of mostly younger journalists covering Capitol Hill for CQ Roll Call.

"He was adventurous—who else would want to try the marmot for lunch in Macedonia?—and he was wise," said Dan Rubin, a fellow foreign correspondent. "He always wore a sports coat when flying in case the airlines were overbooked and needed to upgrade someone for business class. He counselled: 'Always look like you belong there.' And of course he always did."

Mother's money

Does growing up poor harm brain development?

A team of scientists undertakes an ambitious experiment which could change thinking about welfare

May 3rd 2018 | PROVIDENCE, RHODE ISLAND

FEDERAL Hill House is a squat building in central Providence, within earshot of the city's main highway. On a recent rainy Monday, a school holiday, the building was full. Older children lounged in front of a film, while toddlers roamed around the soft play area. Some regularly spend more than ten hours a day here, on top of school hours, while their parents work. The charity provides essential support for low-income families: it picks up children from home before school starts, and looks after them long after it ends. It accomplishes a lot on a tight budget. In several places, the ceiling lets through water from the grey Rhode Island sky.

The youngest group of children at Federal Hill House are between 18 months and five years old. There are 12 of them, with a waiting list to join. The executive director, Kimberly Fernandez, says some cannot name any colours when they first arrive. Some come to the centre hungry (it provides meals) or speaking no English. Others arrive with behaviour problems. Parents' work schedules are often so inflexible that Federal Hill must cover basic logistics beyond school pick-up and drop-off. Ms Fernandez says she had to use her own car after some children took the wrong bus home from school and wound up stranded at the depot. Their mother was unable to leave work to fetch them.

Plenty of evidence suggests that growing up poor, living through these kinds of scrapes, has a detrimental impact on child development. Children from rich families tend to have better language and memory skills than those from poor families. More affluent children usually perform better in school, and are less likely to end up in jail. Growing up poor risks the development of a smaller cerebral cortex. But these are associations between poverty and development, not evidence that poverty causes these bad outcomes, says Kimberly Noble, a neuroscientist at Columbia University in New York. She is part of a team of researchers running a three-year experiment which will, for the first time, search for causal links between parental income level and a child's early development.

The team will start recruiting the first of 1,000 low-income mothers next week. They will be invited to join the study, which is called Baby's First Years, shortly after giving birth at one of ten hospitals in four cities across the United States (to avoid influencing the experiment, the researchers asked *The Economist* not to publish details about the cities). Of that 1,000, roughly half will be randomly selected to receive an unconditional $333 a month, while the others will form a control group that will receive $20. The money, which is completely unconditional, will be loaded onto a pre-paid debit card every month for 40 months, on the date of the child's birthday. The hypothesis is that this steady stream of payments will make a positive difference in the cognitive and emotional development of the children whose mothers receive it.

The first data gathered will be baseline interviews with the mothers just after recruitment. This will reveal the various backgrounds from which the mothers come (all will have incomes below the poverty line, roughly $23,000 for a family of three). The researchers will conduct phone interviews with all

1,000 mothers around their child's first birthday, then visit them in their homes when their children turn two. When they turn three, they will be invited with their mothers to a research lab in their city, where their child's cognitive skills will be tested and the electrical activity of their brains studied.

Living experiment

The interviews will also measure mothers' stress, mental health and employment patterns. They will ask how the amount of time mothers spend with their child is changing, and gather data on the quality and cost of child care and other child-related expenses. The researchers will also have a record of transactions made with the debit card. The unconditional nature of the cash transfer is inviolable: even if mothers choose not to take part in the follow-up studies, for which they are paid extra, they will still get the income for 40 months. The 1,000 mothers, minus potential dropouts, will provide enough statistical power to detect effects equivalent to two months' worth of development in early childhood, says Greg Duncan, an economist on the team from the University of California, Irvine.

A real-world experiment of this magnitude comes with challenges. It has been six years in the making, and the team has spent years raising some $15m for it. About $5.8m will be given away over the next four years, to which must be added the cost of recruiting and monitoring 1,000 people over that time. The researchers worked to get new legislation passed in two states in which the experiment will be carried out, in order to make sure that those taking part remain eligible for public benefits while they receive the extra income. The entire experiment has been assessed by the Institutional Review Board (IRB) at Columbia University's Teachers' College, with separate IRB boards at all nine hospitals either verifying those terms, or drawing up their own, before the experiment starts. Ethical approval has been particularly complex, since mothers will be both research subjects and medical patients recovering from childbirth when they sign up.

The experiment is unique in two aspects. One is its exclusive focus on the impacts of income, unrelated to employment. The other is its focus on the first three years of a child's life. "We know virtually nothing about the causal effects of income in years zero to three," says Lisa Gennetian, who studies the psychology of poverty at New York University.

Ms Gennetian, one of several collaborators on Baby's First Years, says its closest analogues were carried out in Minnesota in the 1990s. There parents were randomly assigned to a different mix of welfare policies which altered their incomes, and their children's development was monitored. The Minnesota studies suggested that about $4,000 a year is enough to see significant effects on a child's development, but because the extra money was connected to parents' work, they did not control for other factors that might also have influenced the children's development. In contrast, mothers in the new experiment are free to leave their jobs to look after their new child, if they want to.

How to spend it

Dr Noble, Ms Gennetian and their colleagues are not alone in their ambition to study the impact of cash on well-being. Y Combinator, a startup accelerator in Silicon Valley, has formed a research arm to investigate the more general impacts of direct cash gifts of this kind. That experiment, which has not yet started, plans to give $1,000 a month to a randomly selected third of 3,000 people from two American states, monitoring any changes in health, time-use and crime induced by the cash.

Part of the Baby's First Years study will be about seeing how the extra cash is spent, but signs already suggest where it might go. In a pilot study of just 30 mothers, run in New York in 2014 to work out the logistics of handing out cash, the money was usually spent within three days of receipt, mostly at supermarkets and department stores. Ms Fernandez says nappies are a particular problem for new mothers on low incomes, as they often cannot afford the upfront membership fees required to shop at large discount supermarkets in the suburbs, or the costs of travelling to get there, and so have no way around paying a premium at nearby corner shops. "Food, diapers and travel," says Ms Fernandez, is what this money will go towards. "You know what you do when you can't afford to buy diapers? You change your baby less often. You let them walk around in a dirty diaper," says Katherine Magnuson, the team's poverty expert at the University of Wisconsin-Madison.

Ms Fernandez suggests that the experimental money will not so much transform new mothers' lives, as make it possible for them to take advantage of what they already have. For example, many young parents would like to rely on their own parents for child care, but cannot afford the travel costs to drop their children off. In American cities, where public transport is often scarce and connections are slow, having the money for an extra tank of fuel, or even a lease on a cheap car, might save new parents tens of hours every week. That extra time might be spent with their children, earning extra money, or just improving an otherwise stressful life.

The results of the experiment will take years to arrive. If the researchers' hypothesis, that the unconditional handout will have a positive impact on early child development, is confirmed, then old arguments about welfare will get a new evidentiary kick. It would mean that no amount of reflexive bootstrap-tugging could make up for the disadvantages that poverty casts over a child's developing brain. In the meantime, families like those at Federal Hill will keep struggling to get by.

Sikhs in semis

An all-American industry changes the all-American way

Sikhs are taking over trucking

May 3rd 2018 | EUGENE, OREGON

SURJIT KHAN'S "Truck Union" is part of a new crop of trucker songs hitting America's highways. Like the 1970s classics, Mr Khan's ditty is all blue jeans, work boots and American-dream fulfilment. Unlike those classics, though, the music video features turbaned dancers in flashy kurtas belting out Punjabi lyrics while gyrating to bhangra beats, before a stage-set of lorries.

Mr Khan's is one of a growing chorus of Indian trucking songs, the soundtrack to a shift in the freight industry. Gurinder Singh Khalsa, the chairman of Sikhs PAC, a Sikh political organisation, says there are approximately 150,000 Sikhs in trucking, 90% of whom are drivers. Those numbers are growing rapidly, with 18,000 Sikhs entering the industry in 2017 alone. The North American Punjabi Trucking Association (NAPTA) estimates that Sikhs control about 40% of trucking in California (Sikhism is closely associated with Punjab, a region that straddles India and Pakistan).

This is an extension of a trend that began farther north; Sikhs already play an outsize part in Canadian trucking. NAPTA, which is based in California but seeks to represent Sikh truckers in both America and Canada, was formed this year. Last October, Sikhs PAC joined other organisations to protest against new trucking regulations. This is not the only way Sikh truckers are making their presence felt. A network of Indian truck stops is spreading along the main routes, serving some fine daal and naan bread.

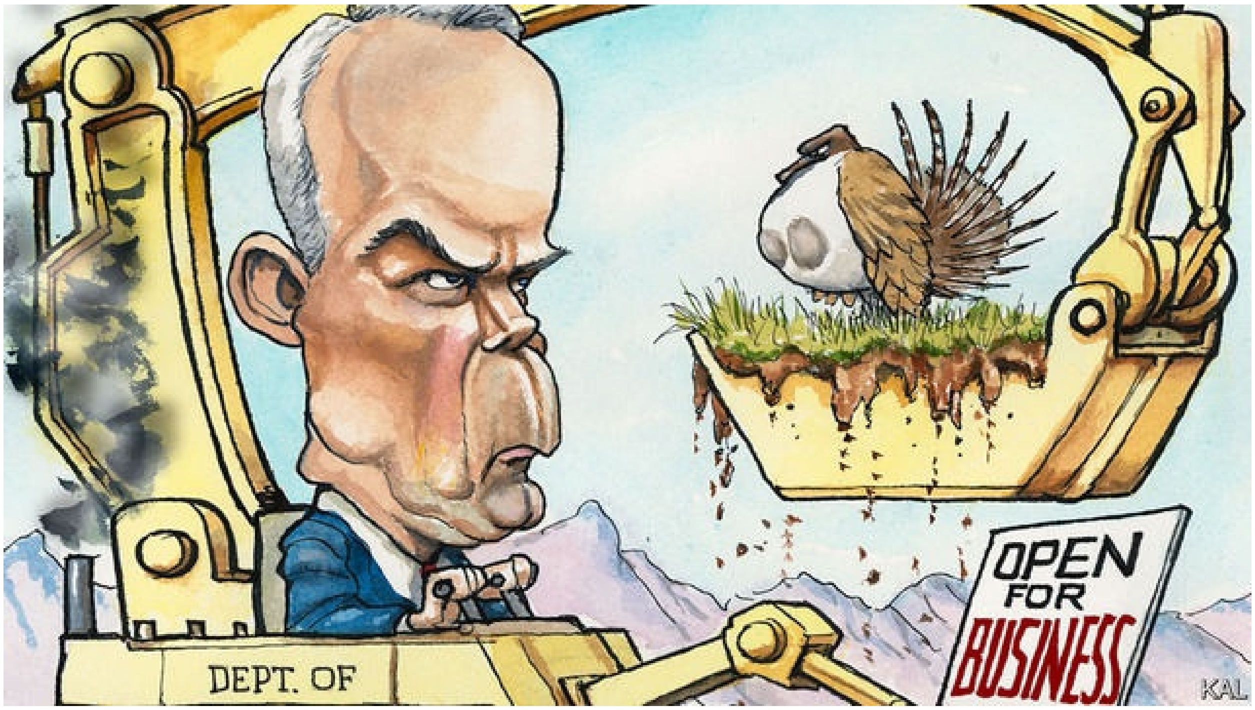
Before deregulation in the 1980s, trucking was a blue-collar route to the middle class. Since then, pay has stagnated, and the job has lost much of its appeal. The Bureau of Labour Statistics reports median earnings of $42,000, or about $20 an hour, a sum that may dwindle after expenses. Annual turnover rates within firms hover around 90%. The American Trucking Associations warned of a shortage of 50,000 drivers by the end of 2017, rising to 174,000 by 2026. The median age of the private-fleet driver is 52; many younger would-be drivers refuse to take on a job with a gruelling, erratic schedule and long stretches away from home.

Yet, though most Americans may not think highly of trucking, Sikhs regard it as a prestigious career. Many Sikh drivers come from trucking families in India, where Sikhs are also prominent in the industry. In February, for the first time, *Overdrive* magazine, the self-described “Voice of The American Trucker”, featured a Sikh driver on its cover.

Lexington

The parable of the sage grouse

A row over an avian exhibitionist suggests how badly Ryan Zinke is serving America



May 5th 2018

ANYBODY worried about America's ability to settle political arguments should consider the greater sage grouse. Better still, as the May sun warms the western plains where it lives, go and watch it dance, as Lexington recently did in Wyoming. There are few stranger sights in nature.

After spending the winter huddled in sage brush, a twiggy shrub that carpets the plains and is the backdrop to a thousand Westerns, male grouse gather on patches of open ground known as leks. There, for several hours a day, starting at sunrise, they fan their tail-feathers into a speckled halo and emit a peculiar warbling sound by dilating air-sacks in their feathery breasts. The unearthly chorus this makes—think of a mobile orchestra of chicken-sized didgeridoos—rises up from the vast and glorious Wyoming steppe. In the lee of the snow-covered Wind River Mountains, it is a New World Eden, an expanse of yellow and green dotted with distant herds of pronghorn and wild horses.

It is exceptional, however. Over half the sage brush on which the grouse feeds has been lost and much of what remains has been degraded by agriculture, industry and invasive grasses fortified by global warming. From an estimated 16m birds, the grouse has been reduced to fewer than 500,000 across 11 states. A decade ago this almost led to it being listed under the Endangered Species Act, with potentially disastrous consequences. It would have restricted development on grouse habitat, potentially beggaring states such as Wyoming which collects three-fifths of its revenues from energy companies. To prevent that, the state forged a remarkable coalition of ranchers, hunters, conservationists, politicians, scientists, miners and oilmen to devise measures to stop the listing. Other western states followed suit, and in 2015 the Department of the Interior, which controls the public lands that dominate the West, included these and some additional measures in a sweeping new management regime for the western plains, including 98 revised land-use plans, covering 67m acres of grouse habitat. It was one of the most complicated land-management exercises in American history, one of the biggest achievements of the Obama Interior Department. President Donald Trump’s Interior Department may be jeopardising it.

That is not the sort of thing Secretary Ryan Zinke promised during his confirmation grilling last year. The one-term member of the House of Representatives declared himself an “unapologetic admirer” of Teddy Roosevelt’s conservation legacy. He also claimed to be a devotee of the “John Muir model of wilderness” and “Pinchot model of multiple use, using best practices”. His subsequent record suggests that was not true. A former navy SEAL with an excessive fondness for saying so, Mr Zinke has seemed mainly devoted to lekking and grousing. He has aggrandised himself embarrassingly, with secretarial flags, man-of-action publicity shots and a helicopter tour paid for from his department’s firefighting budget. He has denigrated Interior’s 70,000 employees: in a speech to energy executives he said 30% were “not loyal to the flag”. His able deputy, David Bernhardt, a former energy lobbyist, has meanwhile attacked the large areas of conservation and environmental policy Interior controls.

Last month it announced plans to nobble a century-old law protecting wild birds; it was passed a few months before the death of Roosevelt, a keen ornithologist. Last year it eliminated 2m acres of protected area: Muir would have turned in his grave. So would Gifford Pinchot, because by slashing restrictions on oil-and-gas prospecting on public lands Mr Zinke's department is trying to trade multiple use—a public-land management principle enshrined in law as well as tradition—for the "energy dominance" demanded by President Trump.

Like the Environmental Protection Agency, Interior has also deleted references to climate change from its literature. Given the lead role it plays in climate science, through the US Geological Survey and other research divisions, some suspect it could even end up doing more damage to environmental policy than the EPA. That agency's administrator, Scott Pruitt, seems as distracted by personal ambition as Mr Zinke, and until recently had no deputy (he has filled the vacancy with a former coal lobbyist).

In this context, the review of the sage-grouse plans Mr Zinke launched last year, which produced a list of draft revisions on May 2nd, might seem like a minor issue. But there is more at stake in it than the bird.

The draft revisions suggest Mr Zinke wants to promote drilling on grouse habitat and give the states more say in managing it. The second aim, at least, sounds reasonable; one or two of the federally imposed measures seem ill-advised and western states are fiercely independent. But there are two problems with this.

First, putting the onus on state action risks losing sight of the original point of the conservation effort, which was to persuade a federal agency, the Fish and Wildlife Service, not to list the grouse as threatened. Left to themselves, the evidence suggests, states would adopt weaker measures, risking the feared listing.

More grouse than sage

Second, the upheaval Mr Zinke has caused is already a setback to the collaborative, locally grounded approach to land management that the plans, despite their federal imprimatur, represent. Such collaborations, a quiet success of three previous administrations, Republican and Democratic, have proliferated in the western states, especially in forests and watersheds threatened by wildfire and drought. They are one of the most positive recent developments in American politics, a riposte to the dysfunction partisanship has caused. But they do not happen by accident. They require regulatory certainty—in this case, a clear sense that the grouse will be listed failing adequate conservation measures—and a degree of mutual trust. Mr Zinke's cynical stewardship of America's public lands is eroding those conditions.

The Americas

A tropical crime wave

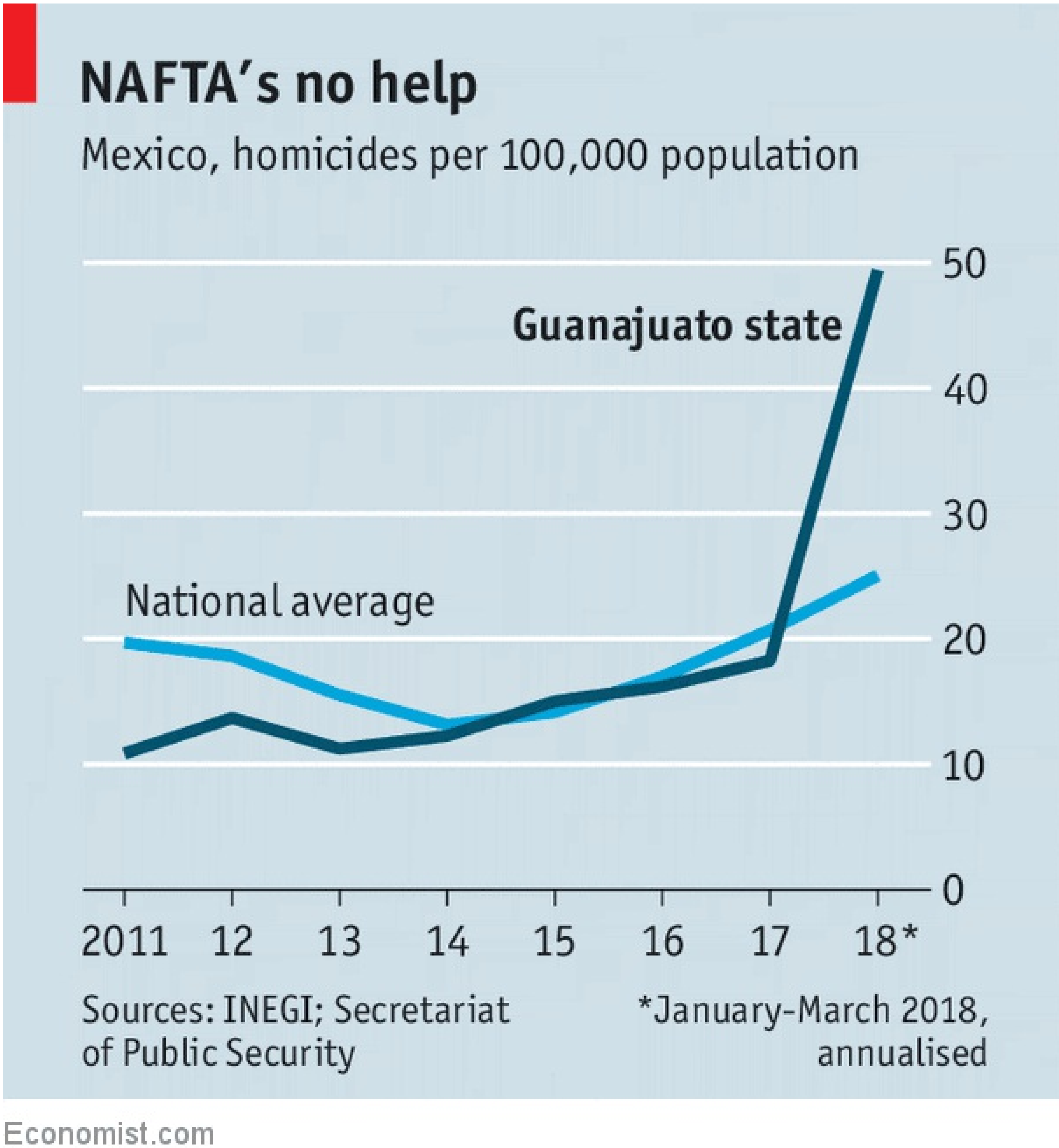
Mexico’s murder rate heads for a new record

The solutions proposed by the main candidates for president are unconvincing

May 5th 2018 | APASEO EL GRANDE

IN APASEO EL GRANDE, a town in the central Mexican state of Guanajuato, the bodies are stacking up. In February gangsters killed a local politician. The remains of another victim were found in four bags scattered across town. Police made a similar discovery in April. In the first three months of this year the municipality of 85,000 people had 43 murders, up from 20 in all of 2016. That is about the same as London, a city 100 times larger and currently panicking about its high murder rate.

A visitor might not notice anything amiss. Shiny cars made in nearby factories cruise the streets and children play in the main square. But residents are frightened. Bouncing a child on his knee in his living room, Efraín Rico Rubio, a former city councillor, now an administrative worker at a university, describes the violence. “Three blocks down they killed someone,” he says, “and three blocks in the other direction.” He sees little prospect of improvement. Schoolchildren “all want to be El Chapo”, a drug baron who became a folk hero by escaping twice from prison. (He was caught again in 2016 and extradited to the United States.)



The town and the state it belongs to are suffering from a double blow. One is a national crime wave, during which the murder rate broke through its previous record of 2011. That peak came after the then president, Felipe

Calderón, deployed the army to fight drug gangs. His tactic of capturing or killing kingpins caused the gangs to split into warring factions and to enter new lines of business. The current president, Enrique Peña Nieto, who took office in 2012, promised to halve the murder rate. Instead, after an initial decline it rose sharply (see chart). By March this year the number of murders during Mr Peña's presidency had exceeded the death toll under Mr Calderón. The murder rate so far in 2018 is around 25% higher than it was in 2011.

Guanajuato's second problem is that it is new to such violence and thus less prepared for it. In 2011 its murder rate was half the national average. Now it has soared to double the national rate.

The rise in violence is among the main issues in the general election scheduled for July 1st. Nearly half of Mexicans say crime is the main problem in their area. The disappearance of three film students in Guadalajara in March, and the discovery that their bodies had been dissolved in acid, sparked large protests last month. The first of three debates among five presidential candidates, held on April 22nd, began on the theme of security. Their proposals were not encouraging. Andrés Manuel López Obrador, the leftist front-runner, misdiagnosed the problem. His proposed solutions are radical but, at best, part of the answer. His two main rivals were vague.

Guanajuato's prosperity, once thought to deter crime, now seems to be attracting it. The state's south is part of an industrial corridor that stretches from Aguascalientes to Querétaro. Factories in the region produce cars and other goods for tariff-free export to the United States and Canada under the North American Free-Trade Agreement. A quarter of Guanajuato's workforce is employed in manufacturing.

Gangs from nearby Jalisco and Michoacán moved into the state from 2015. They are not led by El Chapo-style narcos. They make most of their money from theft and extortion. Some of the loot, including grain, car parts and furniture, is hijacked from trains bound for the United States. The biggest money-maker is fuel theft. Nearly a fifth of recorded cases occur in Guanajuato. The country-wide cost of this to Pemex, the state-controlled oil firm, is more than 30bn pesos ($1.6bn) a year.

Huachicoleros, as the thieves are called, fight each other and oil-industry workers for control of pipelines, just as drug gangs war over highways, border crossings and street corners. A politician in Guanajuato claims that 80% of murders in the state are related to fuel theft. In January the head of security at an oil refinery in the city of Salamanca was killed. Car theft can also be lethal. In 2011 less than 2% of the state's vehicle thefts involved violence, according to government data; last year 26% did.

Mexico's location, between South America's coca fields and the United States' drugs market, makes it vulnerable. But the persistence of violence is the fault of a weak state, and especially of inadequate policing, prosecution and courts. Widespread corruption greatly worsens the problem (see article). Rather than correcting those defects, recent governments have cracked down ineptly.

Police investigate just a quarter of murders. In part that is because there are too few police. The interior ministry has set a target of 1.8 police for every 1,000 people. Only Mexico City and the state of Tabasco have met it. Police and officials are underpaid, and thus tempted to work for criminals rather than against them. They are also poorly trained. In many states, more than 90% of arrests are of suspects caught red-handed, which shows that police have little capacity to investigate crimes more than an hour or two after they happen.

Another problem is co-ordination. Mexico has municipal, state and federal police forces, plus the army, which Presidents Calderón and Peña pressed into service against criminals. In many states municipal and state-level police do not use the same radio frequencies and therefore cannot communicate. The army resents being asked to chase domestic criminals, a job it thinks the police should do. Municipal police, used to issuing traffic tickets and pursuing burglars, find themselves investigating fuel theft, which is a federal crime.

Areas where violence has surged recently are especially unprepared to deal with it. Guanajuato has one forensics specialist per 10,000 crimes; the national average is 18. Police numbers there are less than a quarter of the interior ministry's standard. While the number of murders in Apaseo El Grande has risen tenfold since 2015, the number of municipal police has increased by just ten, to 100. Ricardo Ortiz, the mayor of nearby Irapuato, says that many policemen are threatening to quit to earn more than their miserable average wage of 14,000 pesos a month.

Mr Peña's efforts to improve policing have largely failed. He proposed creating a 40,000-strong force that would establish control over areas infested by crime. But the government cut back its funding and the army refused to let civilians command it. The force now has fewer than 5,000 troops. Both Mr Calderón and Mr Peña tried to raise standards and solve the co-ordination problem by introducing "*mando único*" (single command), the takeover of the country's 1,600 municipal police forces by the 32 state forces. But congress blocked Mr Peña's plan to make this compulsory. States have adopted it in piecemeal fashion, with mixed results. In Apaseo El Grande, where 30 state and 33 military police showed up at the turn of the year to cope with the surge in murders, patrols stopped briefly because of a mix-up over the force's fuel budget. More worryingly, frets the mayor, Gonzalo González, the state and federal police don't know the region.

A more promising initiative is a reform of the criminal-justice system, which is taking place gradually across the country. This shifts courtroom procedures away from document-based decision-making by a judge to argumentative methods used in the United States. This makes it harder for prosecutors to obtain a conviction (in the few cases that go to trial). In the long run it should improve law enforcement by obliging police to work harder to obtain evidence. But politicians complain that the new procedure, plus a new law that prevents police from locking up people caught with illegal weapons, is allowing more criminals onto the streets.

The presidential candidates have presented plans that are old, vague or inadequate. The two main moderate candidates, Ricardo Anaya of the conservative National Action Party and José Antonio Meade, the nominee of Mr Peña's Institutional Revolutionary Party, see the need to improve law enforcement but say little about how they would do it. In the debate Mr Anaya criticised the priority that Mr Peña and Mr Calderón (a member of his party) gave to capturing kingpins. He promised to "dismantle and not just decapitate" criminal organisations. Mr Meade would "quadruple the state's investigative capacity".

Mr López Obrador, the strong favourite, regards criminal justice as a branch of economic justice. The root cause of violence, he argues, is a lack of opportunity. But that explains neither its nationwide rise nor its surge in prosperous Guanajuato.

The candidate’s new idea for reducing crime, apart from fighting poverty, is to offer an amnesty to low-level drug traffickers. In the debate he spoke of inviting Pope Francis to mediate between gangs and the state. “We cannot put out a fire with fire,” said Mr López Obrador. His rivals accused him of blessing the impunity that plagues criminal justice. “You want to forgive the unforgivable,” Mr Meade said.

Conciliation of some sort could help as part of a well-designed law-enforcement strategy. Benjamin Lessing, a political scientist at the University of Chicago, argues that gangs have no incentive to behave better if the state subjects them to “full, unconditional pressure”. The state should crack down hard when gangs overstep defined boundaries, he says. Using data to focus policing on the most violent areas, as Colombia has done, would also help. But such tactics require sophistication as well as toughness. It is not clear that Mr López Obrador has either quality.

In Guanajuato, still shocked by the recent spike in murders, his velvet-glove ideas are met with scepticism. “We cannot solve this in a nice way,” says Mr Ortiz, Irapuato’s mayor. Three-quarters of voters oppose the idea of amnesty. But in areas with bloodier histories they may be more receptive. “It is very different if you live in Tamaulipas, Guerrero, Michoacán or some state that is very affected by drug-trafficking,” said Francisco Abundis, a pollster, in a recent television interview. Mr López Obrador thinks he can persuade gangsters to lay down their arms, and voters to forgive them. After the bungled crackdowns by previous governments, Mexicans may give him a chance.

Open season

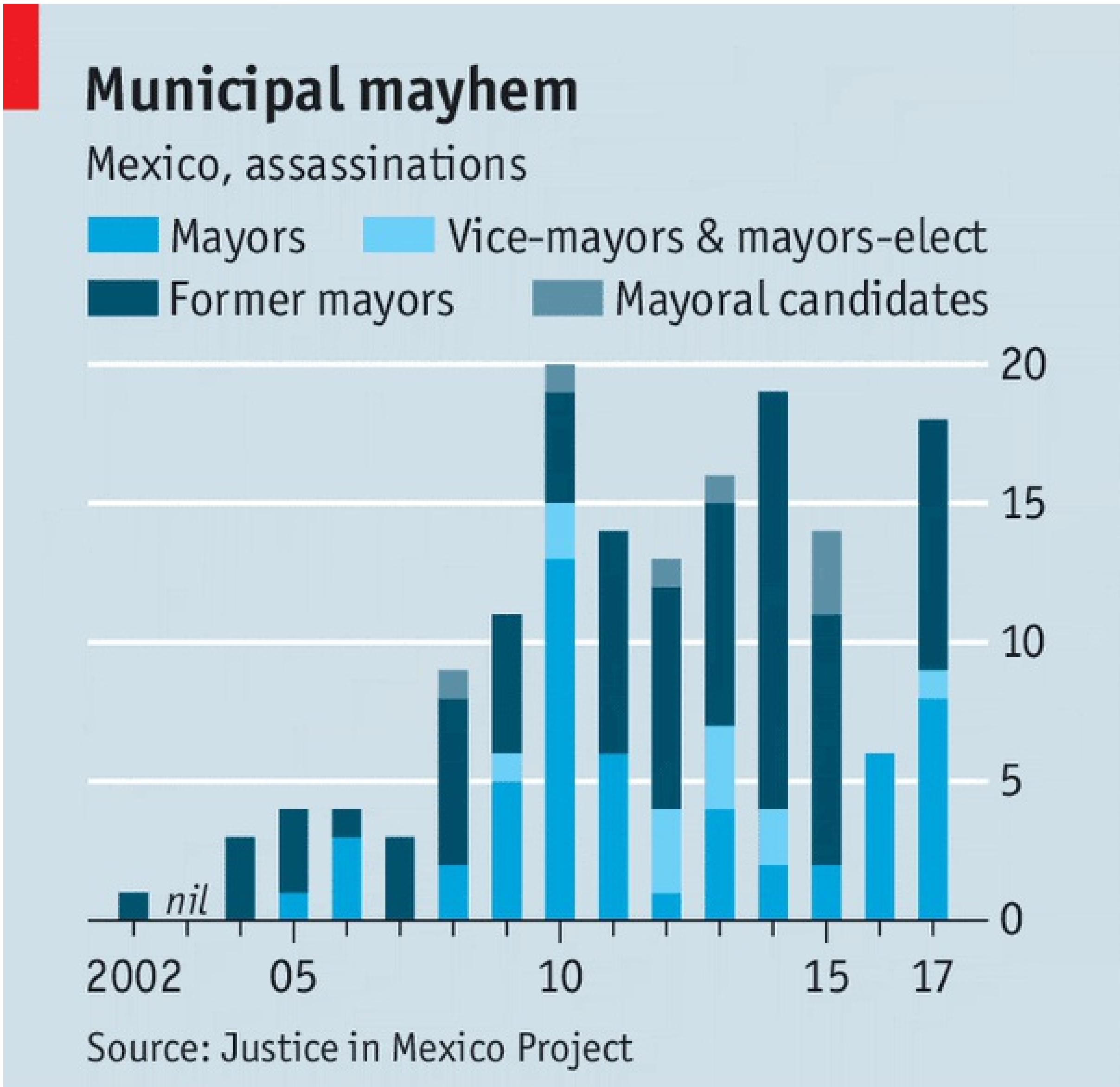
Why being a mayor in Mexico is so dangerous

Local officials have become more powerful, which makes their jobs riskier

May 5th 2018 | OAXACA

ON A sunny day in Oaxaca, the capital of a southern Mexican state with the same name, the mayor of a nearby village was due to meet *The Economist* to talk about doing the job after his predecessor was murdered. He did not show up. The night before a bullet had smashed a window of his house. “I’m scared,” he said in a message.

Between 2010 and 2017, 42 mayors were murdered in Mexico (see chart), 12 of them in the state of Oaxaca. A further ten mayors or ex-mayors have been killed this year. A mayor is 11 times more likely than an ordinary citizen to be a murder victim, says David Shirk of the University of San Diego in California.



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Some perish because they fight corruption and organised crime. Others die because they side with a gang, becoming targets of its rivals. In 2008 an ex-mayor of Hidalgo, north of Monterrey, was killed by his son, who discovered they were sleeping with the same woman. In Oaxaca, a rural state where drug gangs are weak, many mayors have been killed in disputes over land between villages.

The murdered predecessor of the no-show mayor had been making improvements such as providing drinking water. This angered a *cacique* (local boss), who thought the mayor was muscling in on his turf. His successor dropped some of the projects.

Mayors' growing power, and gangs' new business activities, have increased the risk. Mayors gained control over local finances in the 1980s and 1990s and greater autonomy after Mexico became a democracy in 2000. Old-style gangs worry about shipping drugs along motorways and across borders, both areas of federal responsibility. As they branch out into extortion and local drug-dealing, they come up against mayors. These are more vulnerable than federal and state officials, who have better protection.

Enrique Vargas, head of the country's association of mayors, wants to change that. He has asked the federal government to provide armed bodyguards for mayors who have been threatened, and to set up an emergency telephone line to the secretary of the interior. That might help. About 1,600 towns will choose mayors in a general election scheduled for July 1st. These mayors will do a better job if they don't have to worry that a contentious decision will get them killed.

Bello

The crisis of Argentine gradualism

The world economy makes Mauricio Macri's job harder

May 3rd 2018

WHEN he was unexpectedly elected Argentina's president in 2015 Mauricio Macri faced a task that was about as simple as walking a tightrope across the Iguazú falls while grilling a steak. His predecessor, Cristina Fernández de Kirchner, had bequeathed a make-believe economy. Inflation of 30-40% a year was officially covered up. The peso was wildly overvalued, exports were taxed and many imports were banned. The government provided energy and transport almost free. The resulting fiscal deficit was financed by the central bank, which printed money to the tune of 5% of GDP. In a country traumatised by past economic shocks, Mr Macri promised to straighten all this out gradually.

He has done a pretty good job. The economy has grown at an annual rate of around 3% for the past 18 months, even while the government has ended most of Ms Fernández's distortions. It has gradually trimmed the fiscal deficit, partly by raising energy and transport prices. The central bank now only hands over money worth 1% of GDP. The government has bought itself time by issuing debt.

The problem is that stabilising the economy is taking longer than the government had hoped and investors have become more reluctant to lend to Argentina. This first became apparent in December, when the government changed its inflation target for this year from 12% to 15%. It put off from 2019 to 2020 its goal of reducing inflation to 5%. The original targets were fixed in 2016 amid much uncertainty. The new ones are supposed to be more realistic. Even so, this year's target is unlikely to be met. Inflation has run at a rate of 25% over the past 12 months, and the market consensus is that it will end the year at 20%. In hindsight, it might have been wiser to have delayed introducing inflation targets until the economy was closer to being stable. But that is academic.

Fairly or not, the change in the targets hurt the credibility of the central bank. It came as the rise in interest rates in the United States is prompting investors to pull money out of riskier assets. The spread on Argentine bonds (the premium over the yield on United States Treasury bills) has risen from 3.4% to 4.2% this year, and the peso has depreciated steadily. The government responded by saying that it will raise domestically the $8bn it still needs to cover this year's deficit.

Nevertheless, in the last week of April money flooded out of Argentina. After the central bank spent $4.3bn in five days to prop up the peso, on April 26th it unexpectedly jacked up its minimum interest rate by three percentage points, to 30.25%. This week the peso kept falling; further interest-rate rises may be needed.

It was responding to a fact of political life: Argentines worry even more about the price of the dollar than about inflation. That is why in recent decades the peso has so often been overvalued, killing the competitiveness of many businesses and stunting the country's exports. It doesn't help that a severe drought this year has cut exports of soyabeans and maize. A weaker peso will curb the current-account deficit, which has expanded to 5% of GDP. But it will add to the cost of servicing the government's foreign debt, and in the short term will boost inflation.

The government is trying to control inflation while also trimming the fiscal deficit and keeping the economy growing. Doing all three things at once is hard. For example, eliminating energy and transport subsidies is essential for reducing the fiscal deficit. But hikes in regulated prices added eight points to inflation last year. And the interest-rate rise may dampen growth as well as inflation.

The rise in energy and transport prices has hit the middle class hard (the poor are largely protected). That has taken a toll on Mr Macri's approval rating, which stands at around 40%, the lowest since he was elected. The rumblings of discontent are starting to alarm his coalition partners. The biggest worry is that stubbornly high inflation expectations will keep inflation from falling, and that only a recession can bring it down to the target level.

April's rise in regulated prices is expected to be one of the last. Officials are confident that inflation will now start to recede. They are also likely to try to placate investors by slashing non-essential spending in order to lower the primary fiscal deficit (ie, before interest payments) to below this year's target of 3.2% of GDP.

Even if the economy slows, their calculation is that economic growth and the real value of wages will pick up again next year ahead of a presidential election in October. They are probably right, and Mr Macri still has a good chance of winning a second term. But it is a closer-run thing than it looked a few months ago.

Asia

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Give peace a chance, redux

An outbreak of summitry is a relief for South Koreans

Yet it is hard to see it ending with a nuke-free North

May 5th 2018 | SEOUL AND WASHINGTON, DC

MOON JAE-IN is an optimist with an eye for symbolism. When the South Korean president travelled to Berlin in July 2017 to outline his strategy for easing tensions on the Korean peninsula, he insisted on speaking in a place that was associated with German unity. Only two days earlier, Kim Jong Un, the North's leader, had tested his first intercontinental ballistic missile. But Mr Moon made an impassioned case for peace, hoping the room where officials from East and West Germany had negotiated the unification of their countries in 1990 would convey his dream of a united Korea.

The plan that Mr Moon outlined in Germany was easy to dismiss as rosy-spectacled. It included inviting a North Korean delegation to the Winter Olympics in South Korea, reviving reunions of separated families and possibly arranging a meeting between himself and Mr Kim. If that did not sound wishful enough, he also called on North Korea to give up its nuclear and missile programmes. In the ten months since then, however, much of what Mr Moon envisaged has become reality. Well, sort of.

On April 27th Mr Kim and Mr Moon met in the demilitarised zone (DMZ) between the two Koreas. Threats by North Korea to turn Seoul into a "sea of fire" were all but forgotten as Mr Kim made history—and melted South Korean hearts—by stepping over the dividing line, making him the first North Korean leader to enter the South since the end of the hot phase of the Korean war in 1953. The summit—only the third of its kind and the first in a decade—allowed many in the South to engage in a willing suspension of disbelief and see Mr Kim as an ebullient charmer, rather than a despot who runs the world's most reclusive and repressive regime. The encounter, broadcast live, drew applause and tears of joy from South Koreans.

And there was more than just theatrics, or so it seemed. Days before the meeting Mr Kim had declared an end to his testing of long-range missiles and the closure of his nuclear test site at Punggye-ri in the north of the country. At the summit he told Mr Moon that South Korean and American experts—journalists even—would be invited to check that the Punggye-ri facility had indeed been closed. And North Korea would move to the same time-zone as the South. A peninsula that recently had seemed perilously close to a resumption of war was beginning, in the eyes of many observers in the South, to move closer to lasting peace. A poll conducted after the summit suggested that 65% of South Koreans trusted the North, up from just 15% before the meeting. A different poll found that Mr Moon's approval rating had hit 86%, up from 73%. On social media, people began referring to Mr Kim as "cute".

But experience has taught American officials harsh lessons about North Korean promises. The first and most basic: to cheer only concrete, verifiable actions by that country's regime, and never its words. Veterans of talks with the North winced, therefore, when Donald Trump, America's president, used a Rose Garden press conference on April 30th to ponder aloud where to fete his historic achievement, should his planned summit lead to peace.

Some aides had suggested neutral venues for the summit like Singapore, the president noted. But Mr Trump likes the DMZ because "if things work out, there's a great celebration to be had, on the site." To explain his showman's sense that a "big event" could be in the offing, Mr Trump pointed to Mr

Kim's words, and specifically to the young dictator's recent talk of ending nuclear testing, ballistic-missile launches and related research. He said Mr Kim had "lived up to that for a longer period of time than anybody has seen".

Never mind the trivia

Actually, during previous cycles of promise-making and -breaking North Korea has sometimes gone two-and-a-half years between nuclear tests. Its most recent blast was less than six months ago. But details cannot slow Mr Trump when he senses a win in the offing for which he can take credit. And there yawns a great analytical divide between aides who serve Mr Trump today and veterans of previous talks with North Korea. When Team Trump contemplates the upcoming Trump-Kim summit, they see a historic event that will begin as a win for their boss—a vindication of his unprecedented toughness.

Asked on Fox News TV whether America can possibly trust Mr Kim, Mike Pompeo, the newly confirmed secretary of state, preferred to discuss a happier thought: that the young North Korean leader only "wants this meeting" because of Mr Trump and the international coalition he has assembled to put pressure on him. The same thought was echoed by Mr Trump's hawkish new national security adviser, John Bolton. Reminded that he used to scorn the idea of deal-making with North Korea, Mr Bolton listed world leaders who have credited Mr Trump's maximum-pressure campaign with bringing about the summit.

Other Americans who have lived through previous rounds of talks fear that the summit begins as a win for Mr Kim, not Mr Trump. Daniel Russel, a former senior diplomat and veteran of talks with the North, believes that the Kim regime's goal, as so often before, is to seek acceptance from the world that North Korea is now a nuclear state. "For Kim Jong Un, summit day is his payday. He has landed a seat at the table as a peer," says Mr Russel, now at the Asia Society. There are ways for a summit to lead to something worth celebrating, but they are slow and arduous, involving such steps as Mr Kim listing all of his nuclear and ballistic missile sites and agreeing a timetable for their inspection and eventual destruction.

Trump-sceptics worry that his hunger to strike a deal could lead him to accept far flimsier terms. Mr Trump insists that he will walk from the table if unsatisfied, and continue his policy of maximum pressure. But the coalition that created that pressure is crumbling. China rolled out the red carpet for Mr Kim in March, thawing relations after a deep chill. It fears being left out by Trumpian deal-making. As for last year's American vows not to tolerate the development of North Korean nukes that could hit American cities, it is hard to imagine South Korea co-operating with pre-emptive American military strikes against the North, should the Kim-Trump summit end badly. Mr Trump is wondering where to celebrate a triumph. He will need luck and skill to avoid a debacle.

Don’t mention 1MDB

Malaysia’s 92-year-old opposition leader makes a final challenge

But racial preferences may hand victory to the ruling party

May 5th 2018 | PASIR GUDANG

AT POLITICAL rallies the hungry have been enjoying exotic fare—guavas, macaroons, avocado juice—as they gather on a sticky night in Johor, a southern state that is a battleground between the ruling Barisan Nasional (BN) coalition and the opposition Pakatan Harapan (PH). They all want to hear Mahathir Mohamad. “I follow him everywhere!” chirps a local cleaner. “Whatever he does, whatever he says, we support him,” gushes a group of students. Dr Mahathir, a former prime minister who is 92, now leads PH, although he once ran Malaysia on behalf of the United Malays National Organisation (UMNO), which has been in power for more than six decades and is the BN coalition’s main party. Whether he can persuade voters to switch allegiance on polling day, May 9th, hangs in the balance.

The election is for the 222-seat parliament and for 12 of the 13 states’ assemblies. Two-thirds of seats are reckoned to be tight contests, up from about half in the previous election in 2013. The current prime minister, Najib Razak, says it will be “the mother of all elections”. He is probably less popular than any other Malaysian leader has been just before an election. Dr Mahathir expects it to be the “dirtiest” ever.

Racial politics will prevail. About 69% of the population of 32m are Malay or belong to other indigenous groups known as *bumiputra* (“sons of the soil”). About 24% are ethnic Chinese and 7% Indian. The *bumiputra* favour UMNO because a system of racial rules it created in the 1970s gives them handouts and preferential access to universities and government jobs. These preferences were initially described as temporary but have become impossible to abolish. They win votes: at the last election 64% of Malays voted for UMNO, while 80% of ethnic Chinese backed the opposition.

Freebies and quotas may matter more to Malays than anything else. Since the last election journalists have revealed that a stunning $4.5bn disappeared from a state development fund, while almost $700m entered Mr Najib’s personal bank account. He denies any wrongdoing, saying the money was a gift, eventually returned, from an unnamed Saudi prince. The scandal seems scarcely to bother voters. Dr Mahathir blasts corruption, though he did not exactly stamp it out while in power.

Voters worry more about the cost of living, even though the economy has grown robustly in recent years. Housing and fuel costs, creeping inflation through much of last year and an unpopular goods-and-services tax of 6% introduced since the last election all irk them. The price of *kembong*—Indian mackerel, a staple—is more than twice what it was three years ago. Mr Najib says the country must stick with the GST since it brought in 45bn ringgit ($10.5bn) last year; the opposition says it would replace it with an alternative. Mr Najib has offered big voting groups, such as civil servants, billions of ringgit in bonuses and other goodies to soothe them.

Mr Najib has been crafty, too. His government has gerrymandered electoral boundaries to enhance the BN’s chances. Opposition voters in the Malayan peninsula can find themselves packed into constituencies of more than 100,000 people. Government loyalists are typically in far smaller ones of fewer than 30,000. And just before parliament was dissolved, it passed a bill against “fake news” that could criminalise criticism of the government during the campaign if a court finds it contains errors.

Shenanigans over the registration of parties have affected both sides. Dr Mahathir founded his own party, Bersatu, in 2016. Last month the Registrar of Societies, a government agency, temporarily halted its activities, saying it had not provided the proper paperwork. Bersatu sued the agency and persuaded the court to block the suspension on April 23rd. Meanwhile 16 members of UMNO sought to declare their own party illegal because it had failed in recent years to hold internal elections for the leadership; a similar case saw an earlier incarnation of UMNO dissolved in 1987—on Dr Mahathir's watch.

The government must reverse a trend of dipping support if it is to win again. A decade ago BN lost its two-thirds majority in parliament; at the election in 2013 it lost the popular vote too. This time around, the ruling coalition has cosied up to an erstwhile foe, the Pan-Malaysian Islamic Party (PAS), which has long denounced UMNO. PAS governs the poor rural state of Kelantan and wants to impose more caning and other traditional Islamic punishments. It says it will run candidates in 158 seats; the ensuing three-way fights could split the opposition vote in BN's favour. The government may also be boosted by wrangling within PH. Anwar Ibrahim, a PH leader now in prison on flimsy evidence for sodomy, once led the opposition to Dr Mahathir, who had him jailed. Disagreements between such new allies may hamstring PH.

The tricks and traps of the electoral system disgust many Malaysians. Youngsters are particularly appalled by the dirty horse-trading. Both sides are trying hard to woo them, for the simple reason that Malaysians aged between 21 and 40 make up more than two in five of the almost 15m eligible to vote. "Rebranding is a must for UMNO," admits Azril Sarit, a youth chief for the party in the state of Pahang. A PH counterpart in Johor says he arranges talks in 24-hour eateries and on Facebook Live to bring young people over to Dr Mahathir's side. "Only we can provide a new alternative to the Malays," he reckons.

Turnout may be crucial. Dr Mahathir reckons that if 80% vote, that could tip the contest in favour of his PH coalition. But the short campaign and a mid-week election may discourage a surge to the polls. Last-minute legal, bureaucratic or logistical obstacles may yet hurt his lot. So could irregularities at polling stations. Salleh Said Keruak, the government minister for communications, says Dr Mahathir is warning of foul play only because he knows he will lose. But the government's devious election ploys suggest failure may have crossed Mr Najib's mind too.

The hard-hat president

Indonesia's leader, Jokowi, is splurging on infrastructure

Where will all the money come from?

May 5th 2018 | MAKASSAR AND MEDAN

LIKE many politicians, President Joko Widodo of Indonesia (known as Jokowi) enjoys being seen in a hard hat. On April 23rd he tweeted a photo of himself resplendent in a gleaming white one to his 10m followers while visiting the site of a future airport in Central Java. The previous week he posted several photos of his trip to another airport being built, this time in West Java, complete with a hat and an orange construction vest. (Pictured is Jokowi on yet another such outing, to a mass-transit railway project in Jakarta last year.) More surprisingly for a head of state, many responses to these tweets have been broadly positive. The overwhelming impression among Indonesians is that their president gets shovels into the ground, as well as inspecting their use before cameras.

After years of relative neglect, the amount Indonesia spends on roads, railways, energy plants and the like has surged. Jokowi's predecessors promised much but delivered little. But after he took office in 2014, Jokowi took advantage of a fall in the oil price to put a cap on an expensive fuel subsidy provided by the government. This gave him more fiscal leeway to splurge on infrastructure projects. In that year 178trn Indonesian rupiah ($15bn) were allocated to infrastructure in the state budget. By 2017 the amount earmarked was more than double that. Jokowi's government has plans for 222 "national strategic projects" involving roads, railways, bridges, power stations and much else. Of these, 127 are under construction and over 20 have been completed. This year's budget calls for 856km of new roads to be built across the archipelago.

The spending, sorely needed, has boosted Jokowi's popularity. According to a survey in 2017 by the ISEAS Institute in Singapore, nearly three-quarters of Indonesians approved of his efforts, with rural dwellers particularly keen on them. Sometimes he gets credit where it is not due. In Medan, the capital of North Sumatra, a new railway line between the city's main station and the airport has turned a journey that can take several hours by car to one of only 55 minutes. The railway opened in 2013 under the previous president, but a banner in the station shows a white-shirted Jokowi going through the ticket gates. On the train, a video shows him shaking commuters' hands. People waiting at the station express approval of Jokowi and say the railway is an example of what he has done.

It is easy to see why Jokowi's projects are so popular. Many of the roads on and between Indonesia's 13,000 islands are still terrible, having been all but ignored for decades under the highly centralised government of Suharto, Indonesia's president for three decades until 1998. In parts of rural South Sulawesi, for example, endless potholes make for bone-rattling bus rides. The capital desperately needs work on its sewer system. In 2016 the city's head of planning estimated that only 4% of Jakarta's 10m residents had access to it. The rest flush into drains through which the waste flows untreated.

But even if Jokowi wins a second term as president in 2019, which looks likely, it may be hard for him to ensure that these ambitious projects get finished. Complex regulations do not help. Each sector—roads, energy and so on—has its own laws and regulatory bodies related to procurement and drawing up contracts, says Jeffrey Delmon, an infrastructure specialist at the

World Bank. So each has a different way of doing things.

Indonesia also suffers from a shortage of skilled labour and poor safety on construction sites. On April 17th two people were killed by the collapse of a bridge in East Java and of an overpass being built in North Sulawesi. Earlier this year an internal footbridge in the Jakarta Stock Exchange caved in, injuring over 70 people. In Jakarta alone there were 10% more construction accidents last year than in 2016. Acquiring land is tricky, too. Plans for a China-backed high-speed railway between Jakarta and Bandung, a city in West Java, have been held up for two years, partly because it is costly and complicated to move so many people on one of the most densely populated islands in the world.

The government's big hand

Jokowi's eagerness to get projects off the ground has also introduced another problem: an over-reliance on state firms. Although China and India in particular appear eager to invest in the archipelago, many private investors only want to back projects in Java, the most populous island, rather than in rural parts. Despite Jokowi's pledge to ensure that only a third of infrastructure is publicly funded, government money is still being used extensively. By one estimate, state enterprises are currently involved in 80% of the projects in some shape or form. According to data from the World Bank, private investment only made up 9% of total investment in infrastructure in 2011-15, down from 19% in 2006-10.

At the mayor's office in Medan, Ridho Siregar, an employee there, praises Jokowi's infrastructure binge. In the past few years new highways, bridges and dams have helped to transform the city, the fourth-biggest in the Indonesian archipelago. But the official admits there is an awful lot to do. "Especially for the highways, it's a bit late," he says.

Southern booty

Elections in Karnataka will be closely watched in Delhi

They are more than a bellwether for India’s national polls next year

May 3rd 2018 | BANGALORE

IN THE first half of next year India will notch up the usual array of superlatives when the world’s biggest democracy stages the largest voting event on the planet. The parliamentary polls will also be among the most expensive staged anywhere. The Centre for Media Studies in Delhi estimated that campaign spending in the elections that brought Narendra Modi and his Bharatiya Janata Party (BJP) to power in 2014 was nearly $5bn, more than twice as much as in the previous general election and eclipsed only by the amounts involved in America.

In Karnataka, a southern state of 64m people (about as many as in France), parties have been loosening their purse strings for a crucial limbering-up. On May 12th voters there will vote in elections for the state legislature, which is currently controlled by Congress, the country’s main opposition party. If Congress wins in Karnataka, many analysts will conclude that it might have a chance of performing at least respectably in next year's national polls, even if the odds remain in Mr Modi's favour. Victory for the BJP in Karnataka would make Mr Modi a surer bet.

A study by the Association for Democratic Reforms, a non-partisan group advocating transparency in campaign finance, has found that in the year to March 2017 the BJP has raised almost five times as much as Congress for the national campaign. And that is only the amount declared. Candidates commonly exceed official spending limits by ten to 100 times. Congress will find it all the more difficult to fill its campaign war-chest if it loses in Karnataka—the only big Congress-held state with a humming economy.

The BJP has a chance in Karnataka. It is the only one of the five southern states where the party has ever succeeded in capturing power (it did so in 2008, before losing again to Congress in 2013). The state's unique mix of religions, castes and linguistic groups has proven surprisingly amenable to the appeal of the BJP, a Hindu-nationalist party which normally enjoys strongest support in the Hindu "cow belt" of western and northern India. In rural and coastal regions of Karnataka that have sizeable Muslim populations, the BJP's local bosses have tried to rouse Hindus' resentment against their "jihadi" neighbours. Mr Modi has asked them to desist and focus on his preferred themes: fighting corruption and boosting the economy.

But the BJP has nominated a controversial figure for the post of chief minister in Karnataka (the winner will be chosen by the new legislature). He is B.S. Yeddyurappa, who held the post during the last period of BJP control of the state. Mr Yeddyurappa's government was accused of involvement in illegal mining operations that led to his criminal indictment and resignation in 2011. (He was acquitted in 2016.) Amit Shah, the party's national head who is Mr Modi's right-hand man, inadvertently reminded his audience of this at a rally. "If there were a competition of the most corrupt government then the Yeddyurappa government is number one," he said. He had meant to say the government of Siddaramaiah, the current chief minister (who has only one name).

The BJP, however, believes Mr Yeddyurappa can win votes for the party. He is of the Lingayat faith, which accounts for about one-sixth of Karnataka's electorate. But Mr Siddaramaiah, a non-Lingayat, has skilfully sided with a

Lingayat faction that wants the tradition to be treated as separate from Hinduism. In recent polls Lingayats have mostly voted for the BJP. Some may now turn to Congress.

Whichever side emerges victorious when counting is finished on May 15th will claim that the outcome is a harbinger of the national fight to come. The barely concealed anti-Muslim rhetoric of some BJP candidates, and the hypocrisy of the party’s efforts to wage an anti-corruption campaign, may prove to be leading indicators of uglier battles ahead.

Giggles and gaffes

Some tribunes of the Indian people love to talk tosh

Who’d have thought the internet was invented aeons ago, in India?

May 3rd 2018

FOR a novice politician from one of India’s smallest and most remote states, Biblap Deb has made a big name for himself. Since assuming the leadership of Tripura (population 4m) in March, Mr Deb—who belongs to India’s ruling Bharatiya Janata Party—has so often hit national headlines that journalists now hang on his every word. Alas this is not because of bold new policies, but rather the silly things he says.

Earlier this month Mr Deb told some computer trainees they should be proud that Indians invented high-tech communications “lakhs of years ago“ (a lakh is 100,000). Drawing on a passage in the Mahabharata, an ancient Hindu epic, he asked how Sanjaya the charioteer could have relayed a blow-by-blow account of the progress of the battle of Kurukshetra to his master, the blind King Dhritarashtra, without internet and satellite links (the scene is pictured).

Scarcely had a storm of social-media ridicule died down before Mr Deb stirred it again with some impromptu remarks on beauty pageants. He lamented the victory of an Indian woman in the Miss World contest of 1997 who, he suggested, failed to match classical ideals of feminine beauty as represented by Laxmi and Saraswati—the goddesses of wealth and wisdom. (Women should eschew make-up and bathe in mud, he said.) Soon after apologising for that, Mr Deb was back to gaffe-making. Most recently he has threatened that his critics should have their nails cut off, because they are like people who spoil vegetables in the market by poking at them.

Numerous higher-ranking members of his party have had similar lapses. Earlier this year Satyapal Singh, India's minister of state for human resources, declared that the theory of evolution was "scientifically wrong" because no one had ever witnessed an ape turning into a man. Mr Singh has also said that students should be taught that a Vedic scholar called Shivkar Babuji Talpade invented a flying machine eight years before the Wright Brothers. Narendra Modi, the prime minister, says his party's politicians should cease to "give masala to the media" with such utterances. But Mr Modi himself has form. Before he became prime minister, he suggested that the elephant-headed Hindu god Ganesha furnished proof that ancient Indians had invented plastic surgery.

China

The bitter generation

In China's cities, young people with rural ties are angry

They are one of the biggest threats to the country's social stability

May 3rd 2018 | BEIJING AND GUANGZHOU

WANG FENG is a 28-year-old cook in Beijing. But he was not born in the capital so, under China's household-registration (*hukou*) rules, he is not treated as an official resident, even though he and his wife work there and have a four-year-old daughter. One freezing night last November, he returned home to discover that the city government had declared many of their area's tenement blocks unfit for residential use and had given the inhabitants 24 hours to get out.

The event quickly became notorious. The overnight eviction of Beijing's "low-end population" (a term used in official planning documents issued by some of the city's districts) attracted worldwide condemnation. Queues of young families snaked away from the condemned blocks, heading back to the towns and villages where they were born. But Mr Wang (a pseudonym) and his wife balked at returning without jobs to a village where they had neither the experience nor the desire to farm. Instead they headed to another part of Beijing to start over again. He says his monthly rent is now far higher: “I can’t save anything. But at least I have a job and will stay as long as I can.” If he leaves, he says, it will be because he wants to, not because the government has told him to go.

Mr Wang belongs to a new generation of people from the countryside who have moved to work in cities. Over the past 40 years, hundreds of millions have done this, providing the blood, sweat and tears of China’s economic miracle. The Communist Party has often congratulated itself that such a vast movement of people has happened without mass unrest. But those such as Mr Wang who have left rural areas more recently challenge the party’s sense of security. They face a wider range of problems than earlier participants in the rural exodus. They are dissatisfied with their lot and have little to lose. They may prove less quiescent than their predecessors.

When observers of China think of threats to the party, they often focus on the rapid growth of the country’s new middle class. At some point, surely, China’s wealthier millions will demand a more open, accountable and even democratic government, just as middle classes in other countries have done. But many Chinese analysts worry less about the kind of instability that occurred during the student-led protests of 1989. Rather, they fret about turmoil created by members of a social underclass: poor workers in the cities whose family ties are rural.

After 1978, when Deng Xiaoping started to open up the economy, huge numbers of farmers began flocking to fill new labour-intensive jobs, first in towns and later in cities. Their cumulative numbers reached 280m in 2017 (the rate of growth is now tailing off). In 2010 party documents began referring to a “new generation of migrants”: those born since 1980. Some are offspring of earlier migrants and have lived in cities all their lives. Others have left the countryside in the past decade. This group has more than 90m members.

The two generations are very different. Many of the early migrants were born at a time of mass starvation and were raised during the chaos of the Cultural Revolution (1966-76). Their determination to make good in the cities was intensified by childhood memories of poverty and suffering. And if they did not succeed, at least they still had land in the countryside and experience of farming so they could return to scratch a living in the fields.

Aiming high

Members of the younger generation are children of Deng's reforms. They have never worked the land. A study published in 2009 in the Beijing-based *Economic Research Journal* said the younger migrants wanted "personal development", unlike their parents who were focused on more basic needs. The new generation, it concluded rather snobbishly, "is no longer willing to stay in the dirtiest jobs, is not frugal enough to save money to send home and not able to earn enough to build a married life." Its members are less stoical and unwilling to suffer in silence.

Young migrants share four characteristics that worry the party. Like their parents, they are not well educated. The men face more of a "marriage squeeze" than their fathers did, ie, a shortage of women of marriageable age from similar backgrounds. They similarly earn low wages and face official discrimination as a result of the *hukou* system that shuts many of them out of subsidised urban services such as education and health care. But they are more dissatisfied and pessimistic than their parents were. Their hopes of carving out a future in big cities are being wrecked by high living costs, demographic change and the hostility of local governments.

In September 2017 a study in another Chinese journal, *Sociological Studies*, by Tian Feng of the Chinese Academy of Social Sciences (CASS), took a detailed look at the new migrants. To flesh it out, *The Economist* conducted its own (admittedly unscientific) poll of 90 migrants between the ages of 18 and 33 in six areas of Beijing and Guangzhou, a large southern city. Combined with earlier studies, these surveys build up a detailed portrait of a slice of Chinese society roiled by change.

Mr Tian's study is based on five surveys of social conditions, conducted by CASS between 2006 and 2015. It shows that migrants born in the 1960s and 1970s had ten or fewer years of formal education, but those born after 1980 had 12 or more years. While the quantity of education received by the new generation is higher, the quality is not. The *hukou* system makes it difficult for many migrants in the biggest cities to secure places for their children in state-run schools, so they send them to ramshackle private ones that are often forced to close. A study from 2010 found that only 17% of migrants with children in such schools in Beijing thought their offspring were getting a good education. Matters have not improved. A cleaner in Beijing who sends her son to a private kindergarten told *The Economist* that “the quality of education is nothing like as good as in state schools.”

Not much to smile about

Many members of the new generation were educated in villages, separate from their migrant parents who worked in the cities. A study by the Second Military Medical University of Shanghai found that such children did worse than average academically and were more likely to be depressed. Despite such problems, many parents feel they have no choice but to leave their children in the care of relatives in the countryside. “I haven’t thought about bringing my kid here,” says a cook in Beijing, “because I can’t afford to.”

The younger generation are products of China’s one-child policy, which went into force nationwide in 1980 (although in the countryside, families were sometimes allowed two). They are among the first to suffer its unintended consequences. The one-child policy contributed to a drastic change in the sex ratio because female fetuses were aborted by parents who wanted their only child to be a boy. The ratio of boys to girls at birth soared in the 1980s, peaking in 2005, when there were 122 baby boys for every 100 baby girls, one of the most distorted ratios ever seen.

The average age of first marriage in China is 26. The first of the new-generation migrants are reaching that age. Already, the marriage chances of migrant men are falling. Wang Chunguang, another scholar at CASS, found that three-quarters of the new-generation migrants he studied were unmarried. The group he looked at included some 18-to 25-year-olds, who may have been single because they were too young (in China, women must be at least 20 to get married and men at least 22). But that does not fully explain the low overall rate. In *The Economist*'s sample, two-thirds of migrants were unmarried. Only two said they had any wedding plans. A 25-year-old manager of a food company in Beijing admitted, "I would need to have a much better-paid job or promotion before thinking about getting a girlfriend."

The marriage squeeze is about to tighten. By 2020, the government says, there will be 30m more men of marriageable age than women: six brides for seven brothers, in effect. Young migrant men will suffer all the more because of a preference among Chinese women for marrying men with more money or education (a practice known as hypergamy). According to Yue Qian of Ohio State University, 55% of college-educated Chinese men marry someone with less education, whereas only 32% of university-educated women do the same. Hypergamy happens at every level of society. As a result, two groups find it hard to get spouses: women with a lot of education (known derisively as *sheng nu*, or left-behind women), and men with only a little schooling. Young male migrants usually belong in the second category.

No wheels, no deal

Among Chinese men generally, a common response to the shortage of women is for prospective grooms to buy an apartment and car before marriage—a sort of reverse dowry. One survey found that three-quarters of young women in big cities took this into account before accepting a man's offer. Alas for migrant swains, they cannot afford such a bride price, especially in expensive cities such as Beijing and Guangzhou. It is usually difficult for people without a city's *hukou* to buy government-subsidised housing there. Young migrants are therefore at a threefold disadvantage.

There are fewer women of marriageable age. Those who come from their own background tend to marry richer rivals. And the men cannot compete in the marriage market by buying property.

Another problem is income. Rural people migrate to cities for money, and usually get far more of it than they would if they had not moved. Migrants' wages rose from around 1,700 yuan ($205) a month in 2000 to over 3,000 yuan in 2016. But the rate of increase fell from almost 17% a year at the start of 2012 to about 7% at the beginning of this year. Since 2015, their incomes have been rising more slowly than those of urban residents generally (see chart).

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The earnings of the youngest ones have deteriorated the most. Mr Tian looked at earnings by age. He found that the highest earners are those in their mid-30s (between 32 and 36). That remained constant in all his surveys. But there was a significant change among workers in their mid-20s (22 to 26). In 2008 these younger migrants were earning almost as much as the best-paid. By 2015, they were earning much less.

This may be connected with changes in the nature of migrants' work, caused by an economic transformation that is making China's growth more reliant on services and less on manufacturing. The earlier migrants typically found jobs in construction or on production lines. According to Mr Tian, 60% of migrants in 2008 worked in such "secondary industry" sectors. That share fell to 52% by 2015. Meanwhile, demand for migrants' labour in the "tertiary sector", ie, in services, has taken off. For the less well-educated this often involves insecure work in areas such as food delivery and cleaning.

The best-laid plans of migrants…

One result of this shift into shorter-term or part-time work has been a fall in savings. In the past almost all migrants used to save a third or more of their income to send back to their villages. But in *The Economist*'s sample a third of respondents saved nothing. Most younger migrants "will not make the sacrifices of frugality in order to save money", harrumphs CASS's Mr Wang. "It is a far cry from their parents' generation."

The upshot is that the new generation appears to be one of the most dissatisfied segments of Chinese society. Because the country has no reliable opinion polls, this judgment must be tentative. But a proxy measure, the way people view their own achievements, suggests it is accurate.

Mr Tian's survey includes a question about where respondents place themselves in society on a scale from top to bottom. Between 2006 and 2015 the migrants he questioned gave, on average, ever lower assessments of their social position. Initially, the younger ones (aged between 22 and 26) were the most likely to describe themselves as being in the top half of society. By 2015 they were more inclined than older migrants to put themselves in the bottom half. Mr Tian concludes that those born in the 1990s are the most disappointed of the migrants he has studied.

The Economist's survey bears him out. Most migrants want to stay in the big city but few feel welcome there. "There is no sense of belonging," complains a 24-year-old coffee-shop waiter in Beijing. "For the moment I will stay," says a 28-year-old hairstylist who also lives in the capital, "but there's no sense of happiness."

…gang aft agley

In some ways, little has changed. Most of the early migrants, concluded the *Journal of Economic Research* nine years ago “knew they were just passers-by in cities. They came from rural areas and were fated to return there.” But the new generation feels alienated from the countryside even as high living costs, the *hukou* system and social discrimination in the cities “crush their urban dreams” as well. “They are truly marginalised people,” it said.

How serious a threat to social stability are they? They seem unlikely to challenge the party itself (a surprising one in eight of those surveyed by *The Economist* said they were members of it). It is true that some of those evicted last winter in Beijing protested loudly. One group (pictured) chanted about human rights outside a local-government building. By and large, though, these are exceptions. Most migrants are not politically active. Few of those who spoke to *The Economist* were willing to talk about politics. Those who did mostly said they supported the president, Xi Jinping, because of his anti-corruption campaign.

Low-end people” object to being evicted

The party, however, cannot take their passivity for granted. Throughout Chinese history, opposition has seemed muted right up to the point when it has exploded. Yu Jianrong of CASS wrote in 2014 that the social exclusion felt by new-generation migrants could forge a sense of common political cause among them that could even lead to revolution. Mr Yu called this a "colossal hidden threat to China's future social stability". There is little sign of that yet, but there are several reasons for thinking migrants might become more restless.

As the marriage squeeze tightens, it will produce a generation of unmarried migrant men with low incomes, poor education and no tie to the social order that marriage provides in China. It is a recipe for discontent. Mr Tian worries about a vicious cycle developing, with poor education leading to low income that results in anti-social attitudes and disruption to children's schooling.

Migrants form a huge group, roughly as numerous as the middle class. But compared with the middle class, they have little to lose and less to keep them loyal to the party. They revel in subcultures that the party dislikes. Chinese rap music has its roots among young migrants, who were also the main users of Neihan Duanzi, a popular app specialising in bawdy jokes that state censors closed down in April. There are signs that some young migrants are starting to organise themselves. Strikes over pay and conditions have become more common. In April a court in Tongzhou, a district of Beijing (next to the area where the forced evictions took place), said 32% of the labour disputes referred to it involved collective agreements, almost double the proportion in 2016. This suggested there was a link between the number of disputes and the expulsion of migrants.

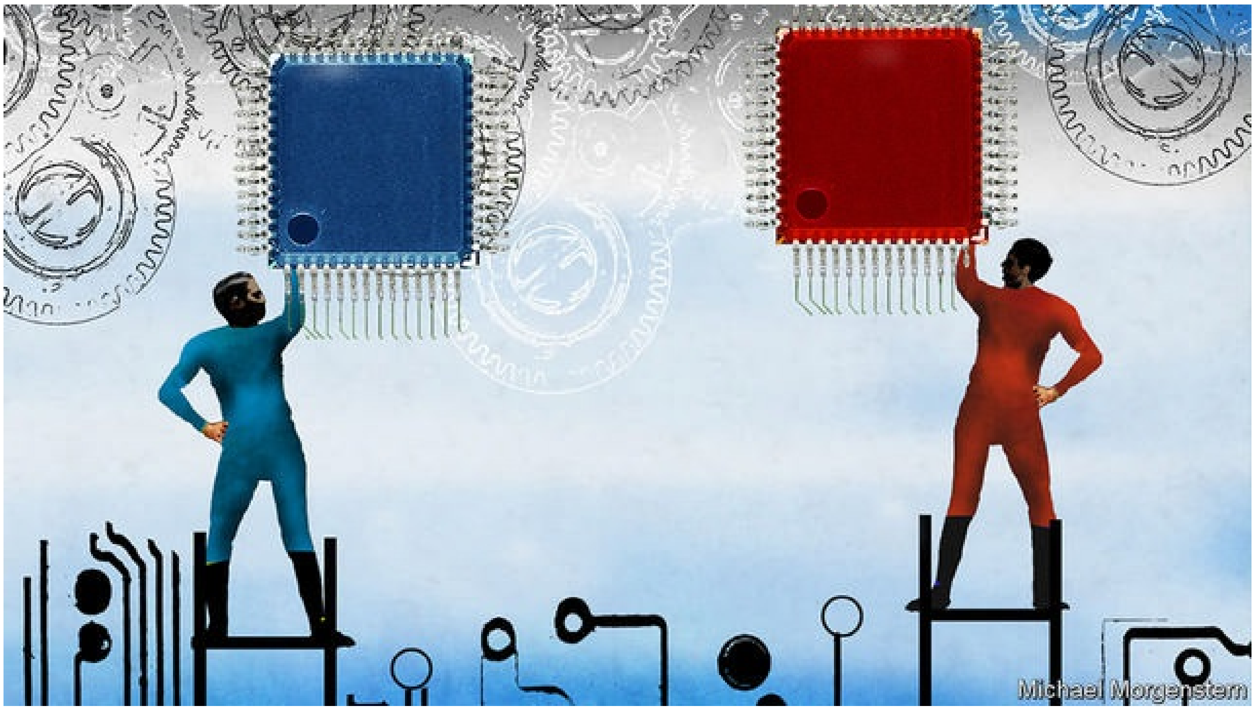
The biggest uncertainty is what will happen if the economy falters. The party does not seem ready for this. The social-safety net is threadbare. The *hukou* regime means migrants cannot get full access to it anyway. Modernisers want to reform the system and allow migrants to live more securely in cities. But change has been slow and patchy. (In Guangzhou only two of the 40 respondents to *The Economist*'s survey had a local *hukou*.) The government is trying to cap the size of giant cities by pushing migrants out. Charles Parton of the Royal United Services Institute, a think-tank in London, says young migrants will not overthrow the party, but if the economy stagnates "they will cause a lot more trouble than they do now."

The new generation is entering a difficult period. Its men will remain unmarried and its children will often be educated away from home. Many will be on low, insecure wages. If the evictions in Beijing are any guide, the party's reaction to any discontent is likely to be greater repression. That would make solving migrants' deep-seated problems harder, and an explosion of rage more likely.

Banyan

When China and America spar over technology, it is about far more

Nearly all high tech has military implications, and stirs national pride



May 3rd 2018

WHEN President Donald Trump threatened punitive tariffs in the spring on $150bn of Chinese goods, some Chinese observers thought this was a trade war that could be finished before it really began. To weaken America's resolve, robust retaliation was threatened against American goods, from soyabeans to bourbon. To overcome it entirely, barriers to certain Chinese markets, such as for cars and credit cards, could be dismantled. China could even offer to cut America's $375bn bilateral trade deficit, over which Mr Trump obsesses, without too much loss of face.

Oh halcyon days! As *The Economist* went to press, Mr Trump's senior economic officials, including Steven Mnuchin, the treasury secretary, Wilbur Ross, the commerce secretary, and Robert Lighthizer, the United States Trade Representative, were about to sit down in Beijing with their Chinese counterparts. The aim was to avert a trade war that now seems increasingly likely. The notion that Mr Trump will declare victory after a few polite Chinese concessions appears less plausible. His beef with China, shared by many American policymakers and business folk, goes deeper.

At issue, in American eyes, is a system of economic governance at odds with the West's. It shuts off whole sectors to foreigners—or allows them in only after they hand over their proprietary know-how. It pumps money into favoured domestic firms to turn them into global champions. And, when it comes to acquiring Western technology, it encourages Chinese companies to beg, borrow—or steal. "Made in China 2025", a state plan to upgrade industry in sectors from robotics to electric vehicles, seems to others like an underhand play for world domination.

The risks involved for China were driven home on April 16th when the Commerce Department punished ZTE, a Chinese telecoms giant, for shipping equipment to Iran and North Korea in breach of sanctions, and lying about the remedies it had promised when it pleaded guilty to this in 2017 (see Schumpeter). The penalty is a seven-year ban from buying American components.

For ZTE this is a body blow. It relies upon American parts: four-fifths of its products contain them, including its smartphones, which use Qualcomm chips. As for China's biggest telecoms firm, Huawei, it has long come under attack in America over how it has acquired know-how, and whether it helps China spy. Now comes the news that the Department of Justice is investigating it, also over possible sanctions-busting in Iran.

Back in China, a report by the regulator of state-owned assets castigated ZTE after the American ban for its "short-sightedness and dishonesty" and for harming the country's image. Yet the reaction was very different in other quarters. Netizens leapt to ZTE's defence. The editor of the *Global Times*, a jingoistic state tabloid, tweeted that Chinese were "all ZTE people".

More pertinently, Xi Jinping has redoubled calls for greater self-reliance in the quest for China's "great rejuvenation". On a recent visit to the Yangzi river town of Yichang, site of the giant Three Gorges dam, China's autocrat declared that "in the past we tightened our belts, gritted our teeth, and built the two bombs and a satellite." (Every Chinese patriot knows that the two bombs refer to China's first atomic and hydrogen ones.) Pursuing advanced technologies, Chinese must "cast aside illusions and rely on ourselves," Mr Xi said. In official pictures, it looked almost as if he were about to dive into the river and swim across, as Mao Zedong had done during a period of autarky 52 years earlier.

Given the way Mr Xi has been ratcheting up his tech-nationalist rhetoric, it is hardly likely that he will back away from "Made in China 2025", as Mr Trump's negotiators want him to. At a seminar in Beijing over the weekend, reported by the *New York Times* and attended by senior Chinese economic policymakers, officials insisted that "Made in China 2025" was not up for negotiation. (They also stressed that a one-party state can take more pain from a prolonged trade war than can a democracy.)

When Chinese policymakers argue that the policy is misunderstood, as they did at the seminar, they have a point. During their industrialisation, Japan, South Korea and Germany all had industrial policies to protect domestic sectors—and arguably still do. "Made in China 2025" is as much aspiration as fixed programme. But, crucially, every advanced technology these days has a military dimension. Because China and America see each other as military as well as economic threats, an "undeclared cold war" over technology is under way, says Kevin Rudd, an Australian former prime minister.

Cold, getting hotter

The worry is that the tech war will only get hotter. Tech-nationalists on both sides argue that China and America, their economies intertwined for so long, must now cleave and go their own ways. In China the propaganda doesn't favour common sense. "Amazing China", currently smashing box-office records for a documentary, extols Chinese technological prowess. And the press likes to talk of high-speed rail, e-commerce, mobile payments and bike sharing as China's "new four great inventions" (to rival the past accomplishments of papermaking, printing, gunpowder and the compass). They are not China's at all. American tech-nationalists also harbour delusions. The Trump administration has flirted with the idea of huge government support for the development of a 5G network. That would never fly politically.

Mr Trump insists that America and China will “always be friends, no matter what happens with our dispute on trade”. There is an echo in that of old-think—of a time when American and Chinese officials believed that no matter how much they disagreed, they would always find a way of getting on because the consequences of falling out would be so devastating for both. The two sides’ techno-sparring is evidence of how hard it is becoming to separate their economic and strategic rivalries. Safe spaces in the relationship are getting worryingly hard to find.

Middle East and Africa

Lourenço's toil

Angola's new president, João Lourenço, has made an encouraging start

But how far will he go in fighting corruption?

May 3rd 2018 | LUANDA

FEW presidents have entered office amid such low public expectations as did João Lourenço, who in September became Angola's first new president in 38 years. His assumption of power did not involve a change of ruling parties. Rather, he was the handpicked successor of José Eduardo dos Santos, who had run the country since 1979, and whose cronies controlled much of the economy. His daughter, Isabel, ran the national oil company, Sonangol, by far the country's biggest source of hard currency. His son, José Filomeno, ran the $5bn sovereign wealth fund. Even in retirement, Mr dos Santos kept his role as leader of the ruling party. Everyone assumed that he would wield power behind the scenes.

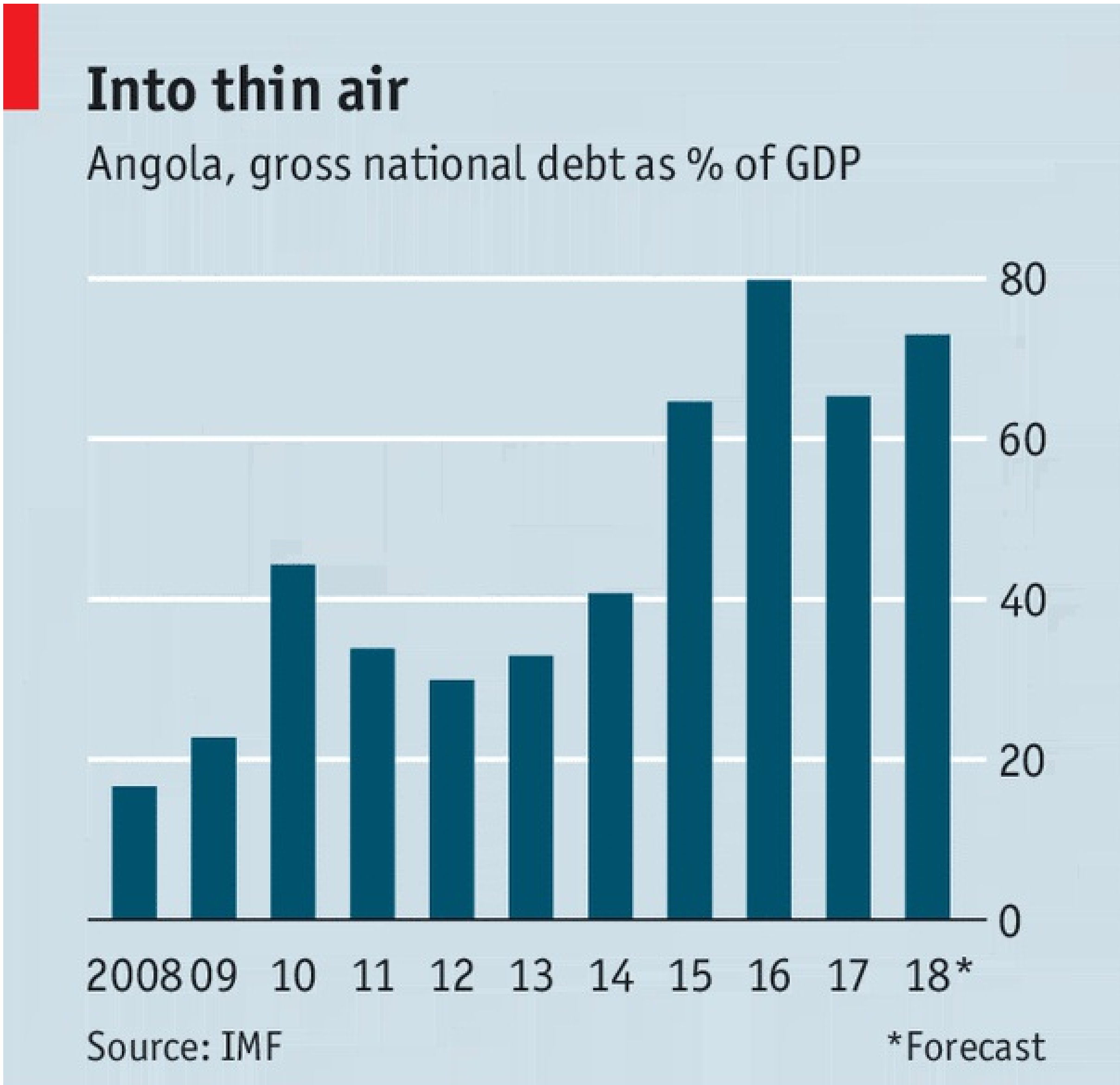
Yet since being sworn in, the soft-spoken Mr Lourenço has unleashed change that seemed unthinkable a year ago. As well as trying to revive an economy battered by low oil prices (which have rebounded), he has mounted a spirited anti-corruption campaign. He is also steadily prising the fingers of the dos Santos clan from the levers of power.

Both Isabel and José Filomeno have been sacked. José junior faces fraud charges (which he denies) over an alleged attempt to transfer $500m from the fund through an account in London. The former president's allies are in the cross-hairs, too. Mr Lourenço has fired the chief of staff of the armed forces (who is also under investigation for fraud), as well as the head of foreign intelligence. The ruling party is expected to ditch the senior Mr dos Santos at a congress in September. Newspapers have swung from sycophantic coverage of the former first family to decrying them.

Yet the question many are asking is whether Mr Lourenço, a former defence minister, is sincerely trying to clean up the country or just showing who is in charge. "We don't know whether he is a real reformist," says Carlos Rosado de Carvalho of *Expansão*, a business newspaper. "We don't know him well enough."

There are some hopeful signs. Mr Lourenço vows to make Angola less nightmarish for investors. Currently the World Bank rates it a harder place to do business than Syria. Mr Lourenço has unpegged Angola's currency, the kwanza, from the dollar, prompting it to fall by 27% since January. And he has made the country more enticing to foreign investors by lifting a law that had required them to have local partners who owned about a third of their business. He is also trying to break up state monopolies, which exist mostly to waste petrodollars, and has asked the IMF for advice.

He certainly needs it. Angola's government is drowning in debt, which is about 65% of GDP (see chart) and rising. Manuel Alves da Rocha, an economist at the Catholic University of Angola, reckons the cost of servicing public borrowing has increased five-and-a-half times since 2014. Opposition parties are calling for an independent audit of the country's public debt. They want to know how the government squandered so much of the hundreds of billions of dollars it earned from oil and diamonds over the past few decades.



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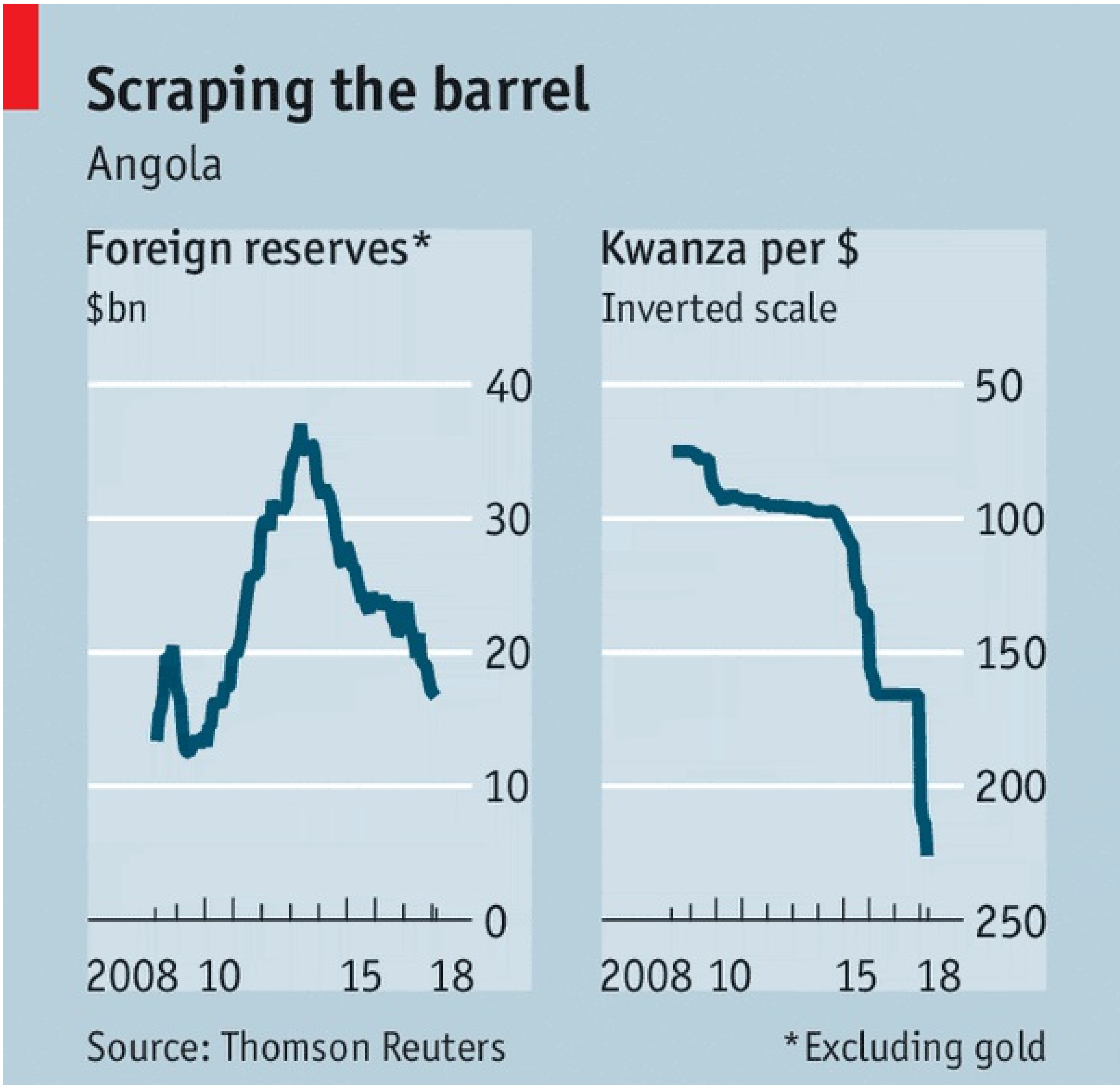
Angolans are used to the powerful growing unfathomably wealthy while the masses forage for scraps. Although the mean income per person is $3,110, twice the sub-Saharan average, about two-thirds of Angolans subsist on less than $2 a day. Child and maternal mortality rates are among the world’s highest, with about one child in five dying before the age of five.

In Cazenga, a shantytown in the capital, residents recently marched down fetid, flooded streets in protest against their living conditions. On Independence Square, demonstrators demanded that public money held abroad be returned to state coffers, decrying Mr Lourenço's offer of amnesty to those who took it. Such dissent would have been crushed by Mr dos Santos. Still, his apparatus of oppression lingers. Rafael Marques de Morais, who investigates graft, is one of two journalists facing jail for their reporting.



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Public anger may affect voting in Angola's first-ever local elections in 2020. Support for the ruling party, known by its Portuguese acronym MPLA, has slumped from 82% in 2008 to 61% in parliamentary elections last year. (The main alternative is UNITA, formerly a homicidal rebel army.)

At Luanda’s glitzy hotels the talk is of Brazil, where a former president now sits in a cell. “We need a kind of *lava jato*—several ones,” says Francisco Viana, an MPLA member and head of the Confederation of Angolan Business Associations, referring to a huge investigation into corruption at Brazil’s state-owned oil company that netted numerous politicians. However, Mr dos Santos granted himself immunity from prosecution before stepping down. And after decades of horrific civil war, few want to risk inflaming tensions. Yet Angola is a young country, and memories of the war—as well as patience—are fading fast.

Still in a hole

Mozambique is back, says its president. Donors are less sure

President Filipe Nyusi must satisfy donors and clean up his party. It won’t be easy

May 3rd 2018

“MOZAMBIQUE is back,” says President Filipe Nyusi, hoping to persuade a recent gathering of fellow Commonwealth leaders that the buffeting his country has faced in the past few years is over. But his compatriots need convincing, too. Some point to dramatic changes in South Africa, Zimbabwe and Angola. Each has a new leader who vows to correct the bad habits of a recently ejected predecessor. Why, they ask, can’t Mr Nyusi, who succeeded Armando Guebuza in 2015, do the same?

Mr Nyusi has three hard tasks. First, he must accommodate Renamo, an opposition party that fought a guerrilla war from 1977 to 1992 and rebelled again more recently against Mr Nyusi’s Frelimo party, which has run the show since independence from Portugal in 1975.

Second, he must revive the economy by coming to terms with the IMF and foreign donors who suspended aid soon after a scandal involving $2bn of secret loans was exposed in 2016. Third, Mr Nyusi must chuck out and in some cases bring to book the old guard around Mr Guebuza, reputed to be one of Mozambique's richest men.

Mr Nyusi has done best with Renamo. He has courageously met its long-serving leader, Afonso Dhlakama, in his hideout. Indeed, he is close to clinching a deal on devolution that would let Renamo share or win power in some provinces. But the two still need to agree on how to demobilise their armed men. Mr Nyusi hopes all will be settled before national elections next year, though some in Frelimo still hanker after a "Savimbi solution": that Mr Dhlakama should just be killed, as was Angola's rebel leader, Jonas Savimbi, in 2002.

On the economic front, Mr Nyusi is shakier. The high hopes that followed the discovery of vast reserves of gas in 2010 are far from fulfilment; large-scale production is not expected before the mid-2020s. The IMF has yet to be reassured that its requested funds will not be squandered. Mr Nyusi waffles about sorting out the mess with the banks involved in the loan scandal.

And he has not done enough to dislodge his party's corrupt old guard, as his counterpart in Angola seems to be doing. He has brought a few allies into the ruling politburo and sacked the head of the army and the intelligence service. But he is somewhat hamstrung by his lack of pedigree among the generals; he is the first president of an independent Mozambique not to have fought in the liberation war. "Mr Dhlakama is not our enemy, he is my brother," he says. "Our enemy is corruption." If that is indeed the case, victory is still a long way off.

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New premier, new hope

Can Ethiopia and Eritrea make peace?

Twenty years after a pointless war over a town no one had heard of, Ethiopia ponders rapprochement

May 3rd 2018 | ADDIS ABABA

“LIKE Sarajevo, 1914,” said the late Ethiopian prime minister, Meles Zenawi, of the first gunshots fired on May 6th 1998. “An accident waiting to happen.” Neither he nor his counterpart in neighbouring Eritrea, Isaias Afwerki, imagined that a light skirmish at Badme, a border village of which few had heard, could spiral into full-scale war. But two years later about 80,000 lives had been lost and more than half a million people forced from their homes.

No land changed hands. Two decades on, Ethiopia still occupies the disputed territories, including Badme, having refused to accept the findings of a UN boundary commission. But the conflict’s miserable legacy persists. Thousands of troops still patrol the frontier. Centuries of trade and intermarriage abruptly ceased. Ethiopia lost access to Eritrea’s ports. Eritrea lost its biggest trading partner and retreated into isolationism. It has been on a war footing ever since.

But it is not so lonely these days. On April 22nd Donald Yamamoto, America's most senior diplomat in Africa, visited Asmara, the capital—the first such visit in over a decade. Eritrea has been sanctioned by the UN since 2009, in part for allegedly arming jihadists in neighbouring Somalia. But a panel of experts appointed by the UN Security Council found no evidence of arms transfers and advocates lifting the embargo. America sounds open to the idea. Some reckon sanctions could be removed this year.

Many in Addis Ababa, the Ethiopian capital, are also mulling a change of course. With the appointment last month of a new prime minister, Abiy Ahmed, there is an opportunity for fresh thinking. Abiy, who was an intelligence officer during the war, promised in his inaugural speech to make peace with Eritrea.

He may have more luck than his predecessors. In the years after the Ethiopian People's Revolutionary Democratic Front (EPRDF) seized power in 1991, its policy towards Eritrea was dominated by the Tigrayan faction of the ruling coalition. Tigray shares a border with Eritrea and its people suffered heavily during the war. Abiy's Oromo faction comes with less baggage.

But any rapprochement would almost certainly require withdrawal from Badme. This would be hard to sell in parts of Ethiopia. And Abiy would need something in return, such as access to Eritrea's ports, which Isaias has never shown much interest in offering. Moreover, the threat from Ethiopia allows him to keep smothering democracy at home and maintaining a huge army. "Making peace would be the end of him," says an Eritrean refugee who recently arrived in Addis Ababa. "Why would he?"

Selfie-perpetuating

Lebanon’s prime minister vows to pose for selfies with 6,000 women if he wins

But will the electricity work, or the rubbish get collected?

May 3rd 2018 | BEIRUT AND TRIPOLI

FEW politicians enjoy a selfie as much as Lebanon’s prime minister, Saad Hariri (pictured). On the campaign trail before a general election on May 6th, Mr Hariri has clambered atop cars, posed with fans and cuddled up to children in search of the best snap of himself. At a rally last month he promised some 6,000 women that he would pose with each of them should he win. A recently released mobile-phone app allows supporters to upload their selfies with the prime minister, though most of the shots posted so far appear to be ones Mr Hariri has taken.

It is no wonder he is excited. Lebanon has gone nine years without a general election. One was due in 2013 but postponed three times as MPs failed to agree on a new electoral law, squabbled over the election of a president and debated which side they should back in Syria’s civil war. The political deadlock paralysed decision-making as the economy stagnated. Meanwhile popular anger over a lack of basic services has grown.

Some hope that the new electoral law (agreed to last year), which institutes a partial system of proportional representation, will make it easier for reformers to win seats. A number of candidates want to get rid of the system whereby political power is divided among Lebanon's religious sects, with the president always a Maronite Christian, the prime minister a Sunni and the speaker of parliament a Shia. The reformers' message of secular change and a return to the rule of law goes down well with middle-class families. But the poor, who rely on the patronage of politicians from their own sect, seem unlikely to gamble on relatively unknown outsiders.

So Mr Hariri, a Sunni, is expected to remain prime minister. His personal popularity grew in November, when he was seemingly held against his will in Riyadh and forced to resign by his Saudi patrons. Weeks later he triumphantly returned to Beirut and rescinded his resignation. But his Future Movement may lose seats. The Saudis have pulled their financial support for Mr Hariri, who heads a government that includes Hizbullah, the Shia militia-cum-party that is backed by the Saudis' arch-rival, Iran. That arrangement has also upset some Sunnis at home.

Analysts expect Hizbullah to remain one of the country's most powerful political forces. Its forceful intervention in Syria on the side of President Bashar al-Assad has dented its pan-Arab appeal and left it with less money to spend at home. But the party's political alliances are stronger than those of its rivals. And the debate over whether Hizbullah should be allowed to keep its weapons has died down, even though many Lebanese are uncomfortable with its growing clout.

Even voters in Lebanon's poorest areas seem inclined to re-elect the politicians who have overseen the country's decline. Few have suffered more than the residents of Tripoli, in the north, but they do not see the election as an opportunity to change the government. Rather, it is a way to boost their meagre incomes. "I will wait to see which politician pays me the most," says Ahmed Haidar, who lost his job at the local steel factory when it closed decades ago.

The end of Yarmouk

Syria is erasing the Palestinians' largest refugee camp

The regime of Bashar al-Assad may redevelop the land—for use by Syrians

May 3rd 2018 | DAMASCUS

WHEN the bombing finally stops, little will remain of Palestine's capital-in-exile. Yarmouk, on the southern edge of Damascus, Syria's capital, was once the Palestinians' largest and liveliest refugee camp, sheltering displaced Iraqis and Syrians too. But two weeks of relentless bombing by the regime of Bashar al-Assad and his Russian backers has reduced it to rubble. Of the 350,000 people who once lived in Yarmouk, only a few hundred remain.

Syria used to treat the Palestinians well. They were provided with health care and education and allowed to own homes. Many worked for the government. Mr Assad gave Palestinian security forces arms and training to police their camps. Khaled Meshal, the leader of Hamas, the Palestinian Islamist movement, had more access to the president than most of the cabinet.

But when Mr Meshal sided with his Qatari financiers, who backed Syria's

Islamist rebels after the uprising in 2011, Mr Assad and his men fumed at the treachery. They blasted Hamas for using its tunnelling skills to dig escape routes for the rebels. Some of its members fought with more radical groups. In 2015 the jihadists of Islamic State (IS) took control of most of Yarmouk. Jabhat al-Nusra, an erstwhile al-Qaeda affiliate, grabbed the rest. When the regime was not fighting them, they battled each other.

The latest combat is on a different level. More has been damaged in a fortnight, say residents, than in the previous four years. Al-Nusra's fighters surrendered to the government on April 30th and boarded buses bound for Idlib, a rebel redoubt in the north. Its arsenal all but spent, IS is negotiating a similar deal, though it does not want to go to Idlib.

Many Palestinians believe the regime wants to redevelop Yarmouk—for use by Syrians. In March the government unveiled the second stage of a plan to rebuild southern Damascus, including areas that run along the camp's edge. Businessmen eye opportunities. Some suggest relocating the Palestinians to distant scrubland.

Mahmoud Abbas, the Palestinian president, has remained neutral during Syria's war and some Palestinian groups even fought with the regime on the camp's frontlines. But there is little hope that things will return to the way they were. "We'll increasingly face a climate in which we cannot continue to live," says a refugee from Yarmouk, now in London.

Tunisia votes

The uncertain promise of local elections in the birthplace of the Arab spring

Municipal councils will have little power to improve the lives of frustrated Tunisians

May 3rd 2018 | BEJA AND KAIROUAN

LOCAL lore holds that seven visits to Kairouan’s imposing grand mosque are equal to the *haj*, the pilgrimage to Mecca that is one of the “pillars of Islam”. The city has been a centre of Sunni scholarship for centuries. Lately, though, it has acquired another landmark: the “road of death”, a rutted highway that slices south-west into the desert. The transport ministry promised to fix it in 2016 after 27 people died in wrecks the previous year. Yet the moniker still fits. On April 18th a pregnant woman was seriously hurt in a crash. She might have lived if the local hospital used paramedics qualified to operate the ambulance. Instead, she died hours later.

Since their revolution in 2011, Tunisians have been stuck with unelected local governments that do little to fix up highways and hospitals. That is meant to change on May 6th, when voters choose municipal councils for the first time. The elections, originally scheduled for 2016, have been postponed four times. They come as many Tunisians are growing frustrated with democracy, which has not yet brought prosperity. Candidates have focused on local grievances. But the campaign has led to a wider debate about the imbalance of power and resources in Tunisia.

Zine el-Abidine Ben Ali, the deposed dictator, steered most of Tunisia's riches to the northern coast. It got 82% of development funds in his final budget. The south and west lag on almost every socioeconomic indicator. Though the interior contains much of Tunisia's farmland, its mineral resources and some of its best tourist attractions, it reaps few benefits. Tataouine, in the south, is the hub of Tunisia's oil industry. But profits are whisked up north. The governorate has the country's highest unemployment rate. "The revolution was supposed to address this imbalance," says Rachid Ghannouchi, the leader of Ennahda, an Islamist party that is part of the governing coalition.

Economist.com

Ennahda is the front-runner in the local elections. It has deep roots in rural areas and was the only party to field lists in all 350 districts. But both it and

Nidaa Tounes, a secular party that leads the government, have lost some of their shine. They have struggled to kickstart the economy. The unemployment rate is over 15% nationally and higher in the countryside, leading to despair. At least 33 people have tried to kill themselves this year in Sidi Bouzid, an impoverished region of around 430,000 people where the Arab spring began.

The politicians in Tunis appear out of touch. They have granted amnesty to corrupt officials and refused to extend the term of a commission investigating abuses by the old regime. But the municipal elections have brought a surge of political newcomers. Thousands of young people are running, many as independents.

In Beja, a town of whitewashed houses in the western hills, the candidates talk about water. The region is Tunisia’s breadbasket. It has the country’s largest dam, which tames the Medjerda river. For the past three years, though, water has been scarce. Shortages last summer left some villages dry for days at a time. Just 72% of homes in the surrounding province are connected to the national water grid, compared with 90% in the capital, according to the 2014 census. Candidates promise to upgrade the infrastructure and improve water distribution when droughts hit.

Campaigning is also in full swing in Gabes, a city best known for two things. One is the world’s only seaside oasis. The other is a phosphate plant that belches pollution into the sky. The fumes have contributed to the deaths of hundreds of trees—and hundreds of people. Candidates from all parties say they will enforce environmental laws and stop the urban sprawl that threatens to overrun the oasis.

This all looks promising: diverse campaigns focused on local issues. The fear is that these promises will go unfulfilled. For decades local officials were unable to do anything without approval from the capital. Days before the election, parliament passed a long-debated law that grants them greater autonomy. But implementing it will require a major change from Tunisia’s notoriously centralised bureaucracy. Even with a wider mandate, the councils will have limited resources. Tunisia allocates just 4% of its budget to municipalities, compared with 10% in nearby Morocco, a richer country.

There are also signs the election will be a damp squib. Polls suggest that barely one in five Tunisians plans to vote (compared with nearly 70% in the most recent parliamentary election). This is the first election in which soldiers and police officers may cast ballots. They did so on April 29th, since they will be deployed on election day. Turnout was just 12%. In the capital, some politicians fear the vote will only cause more anger—directed at them. “We should postpone local governance,” says Mohsen Marzouk, the leader of Machrouu Tounes, a secular party. “With what we have now, we can only share misery.”

Europe

Haters gonna hate

Anti-Semitism in Europe may not in fact be rising

But it is much more visible because of social media

May 3rd 2018 | AMSTERDAM, KIEV AND WARSAW

IN GANGSTA rap, cartoonish threats of violence are routine. So fans of the German rappers Kollegah and Farid Bang were hardly shocked that, on their latest album, they bragged that their torsos were "better defined than an Auschwitz inmate's" and vowed to "make another Holocaust" (against whom was unclear—possibly rival hip-hop artists). But when, on April 12th, the duo won German music's highest honour, the ECHO prize, other musicians and critics were outraged. German music publishers decided to stop awarding the prize in order to prevent future controversies.

It was part of a busy month for European anti-Semitism. On April 8th Viktor Orban, prime minister of Hungary, won re-election after a campaign in which he demonised George Soros, a Jewish financier and philanthropist, as a shadowy billionaire secretly controlling the opposition for nefarious purposes. In Berlin on April 17th, a young Israeli was assaulted while wearing a *kippah*, or Jewish skullcap; the alleged attacker was a Syrian refugee. (Ironically, the victim was an Israeli Arab who was trying to prove to a friend that wearing a *kippah* was not dangerous.) The assault underscored fears of anti-Semitism within the 1.2m Muslim refugees who have arrived in Germany since 2015.

In Poland on April 17th Ruch Narodowy, a far-right party, filed a complaint against Reuven Rivlin, the president of Israel, for allegedly violating a new law against saying that the Polish nation bears any guilt for the Holocaust. The following Sunday in France, *Le Parisien*, a newspaper, published an open letter from 250 bigwigs denouncing a "new anti-Semitism" among Muslims. Noting the murder in March of an elderly Holocaust survivor, the letter demanded that religious authorities renounce anti-Jewish verses in the Koran. Meanwhile in Britain, the Labour Party continued a long-running row over anti-Semitism in its ranks.

Many people worry that anti-Semitism is growing in Europe. Since the early 2000s, murders motivated by hatred of Jews have occurred with dismal regularity; the terrorist attacks on the Jewish museum in Brussels in 2014 and a kosher supermarket in Paris in 2015 were only the most deadly. In Britain 145 violent anti-Semitic incidents, from punching Jewish schoolchildren to egging pedestrians, were recorded last year, a 34% increase over 2016. In France there were 92, a rise of 26%.

Yet other countries experienced no such increase. And until last year attacks in France had been declining; in most countries the figures tend to bounce around. Statistics can sometimes be misleading. In the Netherlands a startling 41% of all criminal incidents of discrimination last year involved anti-Semitism, but of those three-quarters were related to football. The Amsterdam team, Ajax, is nicknamed “the Jews”, so the chants of opposing fans are sometimes hateful, which can be a crime in the Netherlands.

Measures of underlying anti-Semitic prejudice are also equivocal. Surveys by the Pew Global Attitudes project and by the Anti-Defamation League, an American Jewish watchdog, find that in Europe negative feelings towards Jews have mostly declined over the past 15 years. Lars Rensmann, who studies anti-Semitism and populism at the University of Groningen, thinks anti-Jewish hatred has not proliferated so much as grown more visible with the rise of social media. He adds that the rise of fake news and conspiracy theories about globalisation feed anti-Semitism, “the quintessential conspiracy myth”.

Antagonism towards Israel often spills over into anti-Semitism, particularly on the political left. And European Muslims are much more likely to have anti-Semitic beliefs than non-Muslims. But it is debatable whether this “new anti-Semitism” has supplanted the traditional variety. A study by London’s Pears Institute for the Study of Anti-Semitism found that because Europe’s Muslim minorities remain small, most anti-Jewish prejudice is still of the old-fashioned nationalist kind.

To judge by the ceremonies on April 19th commemorating the 75th anniversary of the Warsaw ghetto uprising, one might have thought that tension between Jews and European nationalists had been put to rest. Andrzej Duda, Poland’s president, who hails from the nationalist Law and Justice (PiS) party, lauded the suicidal heroism of the Jewish fighters who battled Nazi troops for nearly a month. Israeli-Polish relations have been in crisis since the PiS government passed the Holocaust law, which many Jews consider an attempt to whitewash history, and the ceremony gave Mr Duda a chance to mend fences.

But Mr Duda also claimed the Jewish fighters’ sacrifice as part of Poland’s own story. “They died fighting for dignity, for freedom, but also for Poland, because they were Polish citizens,” he proclaimed. This touched a sore spot: many Jews feel that Poland historically did not consider its Jews to be fully Polish.

Across much of eastern Europe, portions of the population still entertain doubts on that score, according to Pew figures. In Lithuania 23% say they would not be willing to accept Jews as citizens; in Romania it is 22%, in Poland 18%. This is not surprising. Historically, eastern Europe has been the main staging ground of modern anti-Semitism and genocide, not just during the Holocaust but in events such as the revolt of Bogdan Khmelnitsky, a Cossack *hetman* (military commander) in the 17th century, and the pogroms of the Black Hundreds, a Tsarist militia in the 19th century.

Yet curiously, in Ukraine, where the history of anti-Semitism is as bloody as anywhere, just 5% are unwilling to see Jews as citizens. Unlike Catholic Poland, Ukraine is multi-religious (though mainly Orthodox Christian) and has a substantial Jewish population, of around 300,000. Vyacheslav Likhachev, a sociologist who monitors anti-Semitism, says that apart from a fad for neo-Nazi youth subculture a decade ago, it has not really caught on. Radical-right parties with anti-Semitic ideologies have rarely won more than 1% of the vote. More recently, he points out, “because of Russian aggression they have a real enemy. They don’t need conspiracy theories about the Zionist Occupation Government.”

Indeed, in most countries, anti-Semitism rises or falls in concert with nationalism and identity politics. David Feldman of the Pears Institute notes the importance of “competitive victimhood”, in which claims of oppression by Jews, Muslims and other groups step on each others’ toes. Dariusz Stola, head of the Polin Museum of Polish Jewish History, says the same is true in Poland, where the national story is one of victimisation by Germany and Russia. It is more accurate, he thinks, to see anti-Semitism as part of a general wave of chauvinist sentiment since the migrant crisis of 2015; levels of hostility to Muslims, gays and Roma have risen too. Says Mr Stola: “Xenophobia is not selective.”

Velvet for now

Armenia’s revolution continues, as its opposition leader nears power

Russia seems sensibly wary of interfering

May 3rd 2018 | YEREVAN

IT LOOKS more like a carnival than a revolution. Instead of burning tyres and mounting barricades, young people wrap themselves in Armenian flags, dance in the streets and block the roads by playing volleyball or simply sitting on carpets. On the morning of a general strike, a five-year-old boy drove a toy car with an Armenian flag through an empty street. In the evening, vast construction trucks loaded with students drove and hooted through Yerevan.

But behind the street theatre lies a velvet revolution led by a young generation of Armenians against an old guard who have controlled the country since its independence in 1991. Their victory is not yet complete, but their anticipation of success seems likely to be self-fulfilling. On May 1st, in an attempt to hold out, the ruling party blocked the election as prime minister by parliament of Nikol Pashinian, the leader of a three-week-old protest that has galvanised the entire former Soviet republic of some 3m people. A dozen pro-government MPs desperately tried to discredit him as a dangerous anti-Russia candidate, unacceptable to the Kremlin, which has a tight economic and military grip over Armenia. But Moscow was silent, confident of its strategic hold on Armenia and unwilling to back the losing side.

That evening Mr Pashinian addressed tens of thousands of people who filled in the main Republic square. “Beloved nation, proud citizens of Armenia. People in parliament have lost the sense of reality. They don’t understand that 250,000 people who came onto the streets in Armenia have already won. Power in Armenia belongs to you—and not to them.” His words sparked jubilation. To prove his point and his strength, Mr Pashinian called a general strike paralysing the city and the country.

A few hours later, on May 2nd, the ruling party appeared to cave in, implying it would back him in next week’s parliamentary session. It may still spring a nasty surprise, but is unlikely to regain control over the country—at least not for now. Mr Pashinian has led a textbook velvet revolution, made possible by textbook mistakes by the government, which tried to hang onto power after losing its legitimacy.

Mr Pashinian managed to personify Armenians’ resentment against a corrupt elite. Donning Che Guevara-style fatigues, he went around the country on foot, preaching non-violent protest. By doing so, he decentralised the revolution, making it virtually impossible for the authorities to quash. In the capital he appealed to students and young people with no memories of the Soviet past, but a strong sense of dignity and justice. Mr Pashinian’s brief detention doubled the size of the crowds in the streets, leading the prime minister to resign last week and perhaps making Mr Pashinian unstoppable.

Crucially, the challenger avoided any subject such as ideology or geopolitics that could divide the country and antagonise Russia. Unlike the revolutions in Georgia in 2003 and in Ukraine in 2004 and again in 2014, which were fought under the slogans of joining Europe and NATO, Mr Pashinian talked strictly about internal matters like corruption and justice, which everyone can agree on. He made populist promises and pledged that Armenia will remain with Russia’s security arrangements. Not a single European flag was waved in Yerevan and no slogan pronounced Armenia’s European destiny. But the fear of mentioning Russia-related subjects only highlighted Russia's importance.

While Moscow clearly distrusts revolutionaries, it has so far decided not to interfere in Armenia, hoping that inflated expectations and lack of money will do their own damage. "It has been the smartest Kremlin policy I've seen for years," says Alexander Iskandaryan, the head of the Caucasus Institute, a think-tank. Armen Grigoryan, one of the revolution's leaders says, "All the stars were aligned, and even Saturn moved into the same position it was in 1988." That was when protests in Armenia provided the first rumblings of the storm that was to bring down the Soviet empire three years later.

Brought to book in Bucharest

Romania’s ex-president, Ion Iliescu, goes on trial

Romanians hope to learn what really happened during the revolution

May 3rd 2018

TO THIS day, Romanians remain baffled by what actually happened during the violent spasm which rid the country of its communist dictator in December 1989. Seeking to give them a definitive answer, on April 17th prosecutors indicted Ion Iliescu, the first post-communist president of the country, for crimes against humanity allegedly committed during the revolution he was instrumental in leading.

If the trial of the 88-year-old two-time president succeeds in settling the record that would be a fine thing. It probably will not happen, though. In the rest of eastern Europe, the end of communism was a mostly peaceful affair, but in Romania things were different. The revolution started in the western city of Timisoara, where dozens were shot. Nicolae Ceausescu, the communist dictator, then called a rally in Bucharest. But when, on television, people could be heard shouting, “Down with the dictator,” the game was up. He fled in a helicopter but was arrested, and executed alongside his wife on

Christmas Day.

The drama of those days was, literally, indescribable. No one appeared to know what was happening. A few Ceausescu loyalists held out, and arms were distributed to civilians to resist mysterious “terrorists” who turned out not to exist. Much of the shooting was done by units of the security forces and military firing at each other. Mr Iliescu, who has been indicted along with three others, has always maintained that there was no secret plan. He and others simply stepped in to fill the power vacuum, he says. The indictment, however, accuses them of creating “diversions”: that is, giving contradictory orders to different units which inevitably led to people being killed.

Mr Iliescu is a divisive figure. Detractors despise him for his communist past and for, as they believe, hijacking the revolution. Former communists did prosper after the revolution; but that was true from Prague to Vladivostok. The former president is already on trial for his alleged role in orchestrating violence committed by miners he called to come and crush anti-government protests in Bucharest in June 1990, a far less murky case.

Since the indictment Mr Iliescu has said nothing. But on April 13th he wrote on his blog that he was proud of what he did, that it was ridiculous to pretend that democracy and its institutions should have been established the second the Ceausescus fled, and that he is being made a scapegoat. Many victims’ families will be relieved when he goes on trial, as they have never had clear answers as to why their loved ones died. Valentina Radu, aged 85, a retired teacher, said: “He may not go to jail, but history has to know the truth about Iliescu and the revolution.” After so many years, however, it probably won’t be the whole truth, or even wholly true.

The shadow of ’68

Why French students are protesting again

Selection, then and now

May 3rd 2018 | NANTERRE

A GIANT banner at the entrance to the University of Nanterre advertises official events to commemorate the May ’68 student uprising. There are seminars on “counterculture” and “revolutions”, and a conference on the intersection between art and politics. Around the corner, past partially obscured graffiti reading “Macron we’re going to hang you”, today’s generation is staging its own historical tribute to the *soixante-huitards*. Inside an amphitheatre blockaded by a pile of chairs and upturned tables, over a thousand students are voting to continue a sit-in. Fifty years on, as the country looks back at one of its most iconic post-war moments, the lines between history, drama, politics and art feel strangely blurred.

The 1968 events first broke out on the Nanterre campus, in an unfashionable suburb west of Paris, before spreading to the Sorbonne in the Latin Quarter. Daniel Cohn-Bendit, or Dany the Red, led a student occupation, partly in protest at dormitory rules outlawing male visitors to female dormitories. But it was the prospect of selection at entry for undergraduates that set off the wider rebellion. This reform never took place. Half a century on, students are resisting a new challenge to their right to sign up for any degree they like.

"Equality of access to university is a right," declares a student at Nanterre, on her way to the amphitheatre to vote. Ever since Napoleon devised the school-leaving *baccalauréat* as an entrance ticket to university, all those who pass it can apply for any undergraduate course, regardless of their suitability. So a student who has not studied the maths-heavy *bac* 'S' (for "scientific") can nonetheless enroll for a maths degree. The result is overcrowded amphitheatres, and a high drop-out rate. Jean-Michel Blanquer, the education minister, points out that a staggering 70% of undergraduates fail to complete their degree within three years.

A new application process, put in place this year under President Emmanuel Macron, makes a small but important change. For the first time, universities have access to a pupil's school reference, and will be able both to assess their suitability and make offers conditional on ill-prepared applicants' agreeing to take catch-up courses. As far as selection goes, it is minimal. But many students suspect it is the start of an insidious slide towards Anglo-American-style selection. "The government refuses to use the word selection because it knows it's illegal," claims one at Nanterre.

Similar sit-ins have taken place at over a dozen campuses. Riot police have been sent in to evacuate some. Resistance has spread to unlikely corners. Students at Sciences Po last month staged a sit-in against selection out of "solidarity". Sciences Po is a highly selective *grande école*—a university for the elite, to which the rules for the masses do not apply. "Here are trained those who select" read a banner. Some critics of the new procedure point less to the principle than to the stealth. Mr Macron is usually upfront about his reforms. Yet the government has not explicitly used the incendiary word "selection". "The process will de facto involve selection," argues Marc Ivaldi of the Toulouse School of Economics, but "it is hidden selection, and this is why it's a bad law."

Back at Nanterre, surrounded by so many historical echoes of 1968, the talk is all about continuing the struggle. Mr Macron, who himself studied philosophy at Nanterre, is not popular here, at least among those protesting. But he does not look ready to cede ground. And it will not have passed students by that one of those who backed him for president last year was none other than a fellow Nanterre alumnus, Mr Cohn-Bendit.

So long, and thanks for all the fish

Chinese investment may help Greenland become independent from Denmark

Islanders think rare earths and tourism will make them self-reliant

May 3rd 2018

SHORTLY before the start of UN climate talks in Paris, in December 2015, giant blocks of ice were shipped in from Greenland and left to melt outside the Panthéon, reminding conference-goers to get serious about global warming. Ironically, a mere 48 hours after the talks concluded, Greenland, a self-governing part of Denmark, said it wanted to opt out of the climate agreement that had just been reached. The melting of Greenland's ice sheet, which covers 80% of the island, has turned out to be an economic blessing for most of its 56,000 residents, 90% of whom are Inuit. The territory boasts a tenth of the world's known deposits of rare-earth metals, and the receding ice is making more minerals accessible for the first time. More bits of the island are also being opened to tourists.

Greenland is over-reliant on fishing; some 90% of its exports taste good with butter and lemon juice. Danish subsidies keep its economy afloat. Last year the annual block grant from Denmark was 3.8bn kroner ($610m), more than a third of Greenland's budget. Many Greenlandic politicians reckon that new revenue streams from mining and tourism can help to wean the territory off Danish handouts. "We want to rid ourselves of the block grant because we want independence," says Kim Kielsen, the prime minister, whose ruling centre-left Siumut party won the most votes in an election on April 24th. More radical pro-independence parties did well. One such party, Naleraq, wants to see Greenland become independent by 2021.

Unlike mainland Chinese, whose anger would undoubtedly boil over were Taiwan ever to declare independence, most Danes would be "fine, maybe a little sad" if Greenland left, says Jon Rahbek-Clemmensen of the Royal Danish Defence College. Denmark's government, however, is less sanguine about a potential separation, even though it accepts that Greenland has the right to secede if it wants to. That is because Denmark uses Greenland to punch above its weight, notes Mr Rahbek-Clemmensen. In 2014 Denmark laid claim to some 900,000 square kilometres in the Arctic, including the North Pole, citing its association with Greenland. And Denmark has been able to get away with skimping on NATO's defence-spending target of 2% of GDP, many suspect, because it has long allowed America to operate a military base in Greenland. (Greenlanders were not consulted.)

In recent years Chinese state-backed firms have been pouring money into Greenland's rare-earth mines. One Chinese-financed mine in Greenland's south is reckoned to contain the world's second-largest deposits of rare earths.

Greenland is open to investments regardless of where they come from, explains Mr Kielsen. Chinese money is helping Greenland to reduce its reliance on Danish subsidies, thus boosting the pro-independence cause. That is also why Mr Kielsen is keen to attract Chinese tourists. In October he led a delegation to China and gave an impassioned pitch about Greenland's natural wonders. As Greenland drifts away from its old colonial master, it might need to worry about becoming a vassal state of another.

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tourism-will-make-them-self-reliant-chinese-investment-may-help

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Reaping what it sews

Georgia is the new Black (Sea fashion hub)

The Caucasian nation that pioneered “anti-fashion”

May 3rd 2018

DELIVERY guy or trendsetter? These days, it’s hard to tell. Vetements, a Zurich-based fashion house, showed off a T-shirt inspired by DHL, a courier firm, in 2015. For a mere $200 a shirt, the young and ironically chic can look almost but not exactly like the chap who brings boxes to their parents’ doors. The T-shirts sold out in an instant.

This is called “anti-fashion”: tweaking mundane items and sending them down the catwalk with eye-watering price tags. Vetements makes a packet out of it. The label’s founder, a native of Georgia named Demna Gvasalia, is also the creative director of Spain’s Balenciaga, a fashion house which sells something like an IKEA blue carrier bag for $2,145. Youthful hypebeasts can’t get enough of them.

Mr Gvasalia fled the Georgian civil war as a child and studied design in

Antwerp. Now his homeland is latching onto his success. Georgia once made drab clothes for the victims of communism; its garment industry collapsed with the Soviet Union. Now it serves fashion victims everywhere. Western stylists, buyers and journalists flock to the Caucasus to spot the next big thing. Georgian designers sell their wares in London, Paris and New York. Clients include Rihanna and Lady Gaga. Tbilisi hosts not one but two fashion weeks.

Fashion is hardly a mainstay of the Georgian economy. Duller exports such as nuts and copper ore are far bigger. But the beauty buzz puts Georgia on the map, where tourists and investors can find it. Last year 7.5m people visited—twice Georgia's population, and up almost sixfold since 2008.

Financial aid from the European Union has helped local businesses update their equipment and meet the quality standards needed to sell kit in Europe. In 2017 exports to the EU totalled $646m, 13% higher than the previous year. Some 70% of Georgians want to integrate more with the EU, and the country has had an association agreement to do just that since 2016. Flashy frocks will not make Georgia rich, let alone defend it against Russian aggression. But being on the minds of the global jet-set surely can't hurt. The Black Sea is the new black.

Charlemagne

The EU’s budget is being dragged into the 21st century

A little less for farmers, a bit more for pan-European issues like defence and migration

May 5th 2018

SPAIN’S recession ended in 2013, but in Extremadura, a scenic, sparsely populated region in the country’s south-west, you would be forgiven for not noticing. Last year unemployment stood at 26.3%, among the highest rates for any region in the EU. At the People’s University, a municipal college in Cáceres, the region’s second town, a dozen youngsters studying tourism declare the local situation hopeless; most are resigned to seeking jobs elsewhere once they get their diplomas. A nearby fast-food joint offers a lunchtime “Menu Anticrisis” (roast chicken, baguette, packet of crisps and a soft drink). Extremadura’s woes render it, in the bloodless jargon of the European Union, Spain’s only “less developed region”.

You might think this is a tag politicians would be keen to shed. But losing it would be a “disappointment”, says Rosa Balas, the regional government’s head of external action. Why? Because that classification helped put Extremadura in line for EU subsidies worth €3bn ($3.6bn) between 2014 and 2020. Such “cohesion” funding, stumped up by other governments, has revolutionised infrastructure across the poorer parts of the EU. (It also helps pay for those tourism classes in Cáceres.) In some eastern European countries it makes up the vast bulk of public-investment budgets.

The EU’s budget has often been a byword for mindless subsidy and unnecessary centralisation. To examine its make-up is to delve into the grand bargains of European negotiations past. The Common Agricultural Policy’s subsidies were granted to France in exchange for opening its markets to West German goods; Margaret Thatcher, swinging her handbag against the CAP, secured a juicy rebate for Britain, which in turn spawned “rebates on the rebate” for other rich countries. All this led to waste, rigidity and unbearable complexity. But powerful lobbies and stubborn governments make reform difficult.

As countries grow richer and the EU confronts new issues, like migration and global warming, the shape of its budget is at last changing. On May 2nd the European Commission proposed a €1.28trn budget for the seven years from 2021 to 2027. That fired the starting-gun on painful negotiations between governments that could last two years or more. Günther Oettinger, the budget commissioner, acknowledges that his proposal is not revolutionary. It contains the usual bungs and barnacles—including €700m to fund jolly rail holidays for youngsters, even if they can afford to pay. And cross-border infrastructure and energy schemes, which ought to be central to an EU budget, still look like afterthoughts. If you were building the budget from scratch, you would not devote 60% of spending to farming and cash transfers.

Yet there are tentative signs that the budget is growing up. The commission urges big increases (albeit from a low base) to research and education, and a small fund to protect investment in the euro zone during downturns. Much more is earmarked for areas that demand European co-operation, like migration and defence. Such schemes will be funded in part by modest cuts to cohesion funding and the CAP. To the delight of countries like Germany, aid to poorer countries will be linked to economic-reform efforts. Even the cherished rebates are on the chopping block, although they will have to be prised from the cold, dead hands of countries like the Netherlands.

During the last septennial negotiations, in 2012-13, a backdrop of austerity drove the first ever real-terms cut to the EU's budget. A different cluster of problems will shape the next round of talks. Brexit will mean a shortfall of around €10bn-12bn a year. The refugee crisis demands spending on border protection, integration programmes and development aid, especially in Africa —and a more nimble budget capable of responding to emergencies. Most controversially, the commission wants the right to suspend payments to countries with compromised judiciaries. This is one answer to the rise of soft authoritarianism in Hungary and Poland, but it will make for bruising talks. "The atmosphere is more emotional this time," says one veteran of EU budget negotiations.

What does this mean for Extremadura? Cuts to the CAP and cohesion will hurt, but the region has other uses for European money. At an agricultural-research facility near the Portuguese border, scientists use EU funds for clever schemes that exploit local crops, such as a biodegradable lacquer for tin cans created from tomato skins. Santiago Ortega, the centre's European project manager, says EU programmes have opened the door to collaborative opportunities with partners across Europe. One took him to Anfield stadium in Liverpool, where, he says with delight, he got to pose for a photo with the Champion's League trophy.

I'm alright Günther, keep your hands off my stack

Mr Oettinger spoke warmly of the EU's "added value" this week. Not everyone agrees that Brussels manages subsidies more efficiently than national capitals, but its budget is tiny. The commission's proposal amounts to 1.11% of EU gross national income, around a fiftieth of most average governments' spending. But this will be forgotten in the fierce debate to come. Governments quickly lined up to take potshots at the commission's proposal. Most will take the Micawberian approach: the greater their receipts and the smaller their contributions, the happier they will be. And although Britain's departure thins the ranks of the budget hawks, those that remain, including the Austrians, Dutch and Nordics, will fight that much harder to rein in spending.

And that is the rub. Every government must consent to the budget, a rule that creates incentives for deals that may sand away the proposal’s harder edges. Past experience proves the budget’s inertia; change creates losers, and losers mobilise to resist. The European Parliament, a reliable champion for more spending in good times and bad, must also have its say. So dragging the EU’s budget into the 21st century will not be easy. But there are quiet signs that change is afoot.

Britain

Big bother

Britain’s Windrush mess revives support for ID cards

Establishing who does and doesn’t have the right to be in the country might be easier—and fairer—with a national register

May 3rd 2018

IN THE end, Big Brother was brought down by a Yorkshireman and a housewives’ league. When Clarence Willcock, a former Liberal Party parliamentary candidate, was pulled over for speeding in December 1950, he refused to produce his identity card, which had been introduced during each world war and kept after the second. “I am a Liberal,” he told the cops, “and I am against this sort of thing.” The High Court ruled against him, but commended his stand. Housewives burned their cards outside Parliament, and by 1952 they were scrapped.

But the “Englishman’s badge of servitude”, in the words of one late libertarian, is back. Tory and Labour politicians have been trying to reintroduce the cards for two decades. About 12,000 Britons were handed them under a phased roll-out in 2009, but the coalition government scrapped them a year later. The hounding of the Windrush generation of migrants who came to Britain legally but could not prove it felled the home secretary this week (see Bagehot). It has also rejuvenated the ID-card debate.

A clutch of ex-home secretaries claim such cards might have prevented the affair. One of them, Charles Clarke, says governments have three options to tackle illegal immigration. They can do little and hope for the best. Like the most recent governments, they can create a "hostile environment" in which landlords carry out immigration checks but citizens who lack paperwork struggle to prove their rights. Or they can plump for identity cards, which require a register of all citizens and would enable Britons to prove their identity and status. "Of the three, I think it wins by a mile," he concludes.

How might a scheme work? There is no shortage of models for ministers to pinch. Every country in the European Union has a card, save for Britain, Denmark and Ireland. So do many others, though not America. Greece and Italy are swapping paper cards for plastic ones. Cards in a handful of other EU countries have no electronic chips. One former home secretary argues that technology has made physical cards obsolete. Instead, Britons could be given a unique number with which officials could access their data, as in Denmark. Some suggest adapting National Health Service numbers, which are already assigned to most people in the country.

European countries that deem plastic fantastic differ over who should carry it and when they should be required to flash it. Most insist every citizen has a card but nine, including France, do not. Belgians must carry theirs at all times, says Michel Poulain, a demographer. "When you go out you take your key, your money and your ID card. You don't forget." Labour's scheme in 2009 would have made the cards voluntary for a decade. By then, most people would have applied for one anyway, reckons Alan Johnson, the home secretary at the time.

What sort of data should be linked to it? Health, tax and biometric data can all be joined. Estonians use their cards to access more than 3,000 e-services. Belgian councils keep more than 90 types of information about each cardholder, including whether they want to be buried or cremated. Ken Clarke, a former Tory home secretary, argues that a scheme might satisfy civil-libertarians if it did not become an "all-singing, all-dancing collection of data”. Safeguards would also help. In Estonia, powerful digital encryption guards against data breaches. In Belgium, civil servants who access data on the registry have their own ID numbers recorded.

Some argue that dishing out cards might in fact create more Windrush-style cases. Would the Home Office have given cards to the people caught up in the scandal? Mr Johnson says the scheme would need a lengthy roll-out period and for mandarins to take a generous, rather than hostile, attitude towards applicants without paperwork. Charles Clarke says a one-off amnesty could follow the launch.

Any attempt to introduce ID cards would be opposed by peculiar bedfellows. Liberty, a pressure group, is as implacably opposed as Jacob Rees-Mogg, an old-fashioned Tory who insists Britain is not “the sort of country that demands to see your papers”. Labour, like the Liberal Democrats, is now against the idea. Satbir Singh of the Joint Council for the Welfare of Immigrants, a charity, is ambivalent. His view partly rests on whether such a scheme would be administered by the Home Office. And he does not think a card alone would deal with the “culture of suspicion” that led to Britons being shabbily treated.

Still, the retired home secretaries’ chorus has won some converts. William Hague, a former Tory leader, agrees that the case for cards is now stronger. “We Conservatives were against this a decade ago, but times have moved on,” he wrote this week. Britain already issues migrants from outside Europe with ID cards in all but name, and might do the same for Europeans who stay after Brexit. Some say it would be fairer for everyone to get them.

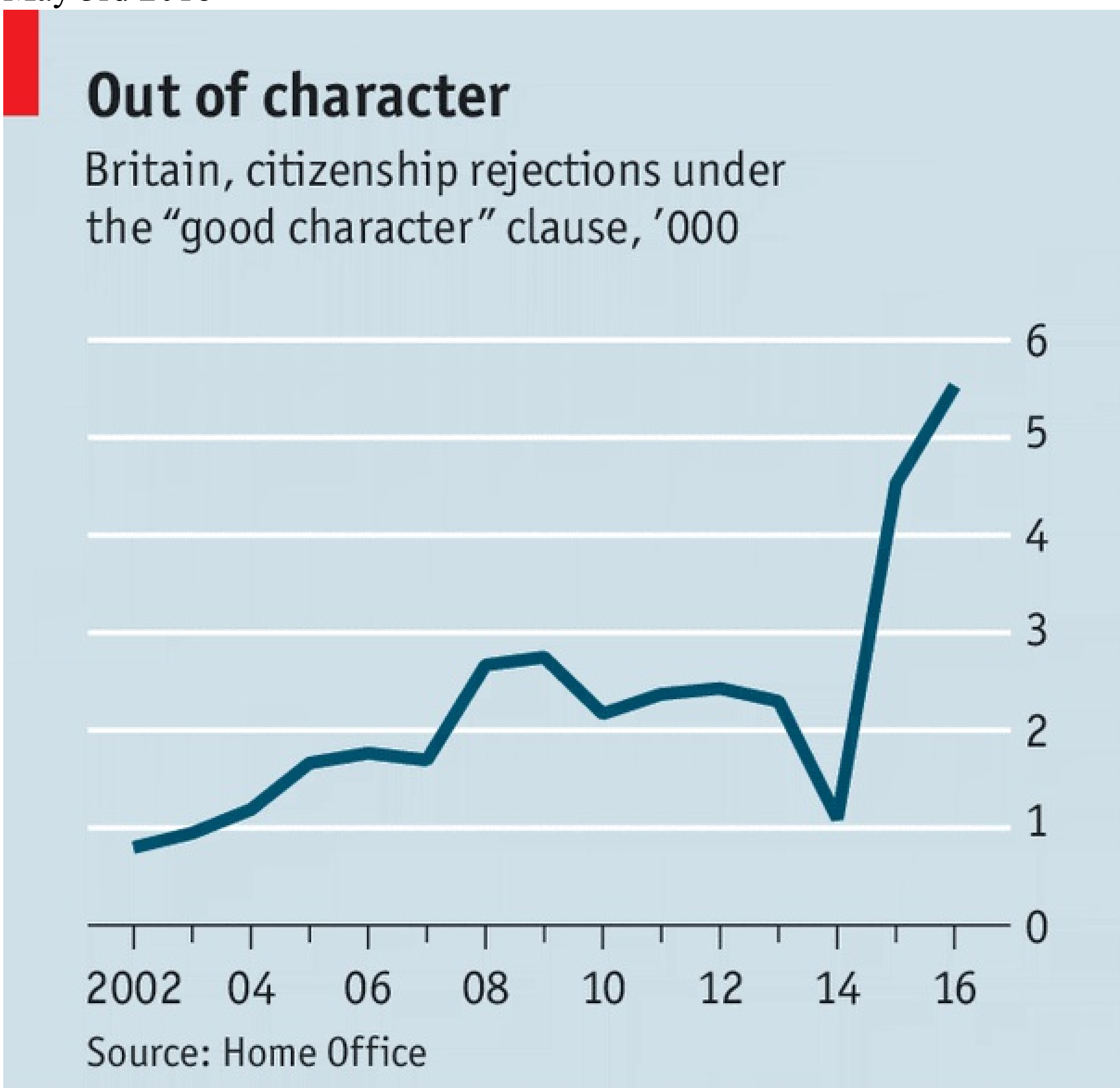
Charles Clarke and Mr Johnson were among those given the cards in 2009. Mr Johnson still carries his in his wallet. Mr Clarke used to produce it at airports “just to prove that I could”. When the scheme was ditched, “they refused to refund me my £30, which I thought was tyrannical.” It could yet prove a long-term investment.

No sex, please, we're the Home Office

Promiscuous? Divorced? Eccentric-looking? You may be denied a passport

An extraordinarily vague "good character" test accounts for a rocketing number of citizenship refusals

May 3rd 2018



Economist.com

IN ITS drive to get net migration below 100,000 per year, the government has made it drastically harder to gain British citizenship. The number of foreigners getting British passports plummeted from 194,370 in 2012 to just 123,229 last year, following a tightening of the rules for bringing over family members and a steep increase in the cost of applying.

The most common reason that submissions are rejected, however, is a rather vague one. Since 2012 the number of applications thrown out under a "good character" clause has doubled (see chart). In 2016, the most recent year for which data are available, this was the cause of 44% of all refusals.

What constitutes bad character, in the eyes of the Home Office? Committing terrorism will do the trick, official guidelines explain. But so might receiving a police caution, skipping a tax bill or "recklessly" accruing debt. Immigration lawyers believe most of the increase in rejections is down to stricter consideration of minor offences. In one case, a Botswanan who had served in the British army failed the character test because he had broken the speed limit on a motorway (the decision was later reversed in court). Solange Valdez-Symonds, head of the Project for the Registration of Children as British Citizens, an advice service, reports an increase in youngsters being turned down because of minor offences committed by their parents.

Yet the definition of bad character is extraordinarily broad. The guidelines list characteristics that "should not normally, of themselves, be relevant", including drinking, gambling, divorce, promiscuity and "eccentricity, including beliefs, appearance and lifestyle". But, they go on, somewhat ambiguously, applicants may be rejected if "the scale and persistence of their behaviour" has made them "notorious in their local or the wider community". The Home Office was unable to say how many of the 5,525 people rejected for their character in 2016 were turned down for being persistently and notoriously promiscuous. Lawyers say notoriety is very seldom invoked.

Still, for a department under intense pressure to get migration numbers down, the vague character clause offers a simple way to increase rejections. Officials can turn down a candidate if they have any unspecified "doubts about their character". For applicants, it can make the process an expensive lottery. And after the events of recent weeks, many might wonder whether the Home Office, of all departments, is well placed to judge others on their good character.

In the money

Sainsbury's and Asda have got a lot of what it takes to get along

But will competition regulators agree to the proposed merger?

May 3rd 2018

WAITING in a studio for a TV interview on April 30th, Mike Coupe, the boss of Sainsbury's supermarket, was caught on camera quietly singing "We're in the money" to himself. Having just announced the biggest deal in the grocery business for over a decade, it is easy to see why the tune might have come to mind.

Nonetheless, he had to apologise quickly, for fear of appearing rather smug—and for getting ahead of himself. Sainsbury's proposed merger with Asda might boost the two supermarkets, but the competition authorities could well rule against it. The proposed deal is another example of the unwelcome and increasing concentration of capitalism in Britain.

Some consolidation in the cut-throat supermarket business had been expected. A tie-up between the second-largest store, Sainsbury's, and third-largest, Asda, owned by America's Walmart, makes a lot of sense for both parties. Combining market shares of 15.9% and 15.5% respectively, according to Kantar Worldpanel, the new entity would leapfrog the current market leader, Tesco, which has 27.6%.

Scale is vital to grocers, giving them more muscle to negotiate with suppliers. Sainsbury's and especially Asda have been hit by the success of Aldi and Lidl. Ten years ago the German discounters had about 4% of the market. Now they have nearly 13%. Mr Coupe says the proposed merger could cut prices across the new group by 10%. Whether this would be enough to compete with the discounters remains to be tested.

Synergies between the two companies could save £500m ($680m). Sainsbury's bought Argos, a home retailer, in 2016 and would roll out Argos stores in Asda as well. Sainsbury's could exploit Asda's advanced logistics systems, while Asda would benefit from Sainsbury's much stronger presence online. In that market they face a new competitor in Amazon, which started selling groceries in Britain in 2016.

The two firms have got a lot of what it takes to get along. But competition regulators may feel differently. There are many places where Sainsbury's and Asda stores are close by. Regulators may thus insist on the sale of one or other. They could even block the deal altogether.

The deal comes in a context of increasing concentration in many industries. In the past decade Britain has witnessed about $2trn-worth of mergers and acquisitions of domestic firms. Our analysis suggests that, relative to the size of the economy, that is over a fifth more than in America over the same period. American economists and politicians are increasingly concerned that their economy has become too concentrated, limiting competition and eroding consumer welfare.

Perhaps Britain should worry more, too. Over the past two decades corporate profits as a share of GDP have been roughly 50% higher than their long-term rate. Profitability, as measured by return on capital, is also near a historical high. Regulators must ask whether companies are in the money a little more than is healthy.

Wait and see, MPC

The case for higher interest rates is weaker than it looks

The Bank of England has taken a hawkish turn. For now, it should stay its hand

May 3rd 2018

IN RECENT years Britain has experimented with extraordinary monetary stimulus. With the onset of the financial crisis in 2008-09, the monetary-policy committee (MPC) of the Bank of England slashed the base rate of interest to 0.5%. After the Brexit vote of June 2016 it cut again, to 0.25%, the lowest in the Old Lady's 324-year history.

Lately, however, the bank has taken a hawkish turn. In November the MPC reversed the post-Brexit cut. At the beginning of this year it allowed a scheme which channelled cheap funding to banks to lapse. On May 10th the MPC could raise interest rates above 0.5% for the first time in a decade. If not, it is expected to act soon. Members of the MPC are making hawkish noises; traders believe that a rate rise before the end of the year is highly likely.

A few factors explain the change in the MPC's outlook. The bank's mandate is to hit a 2% inflation target. Consumer-price inflation has exceeded that rate since February 2017. By increasing the bank rate, the MPC would make it costlier to borrow and more rewarding to save, reducing demand and bringing inflation back down.

Yet on closer inspection, the case for tighter monetary policy looks thin. Above-target inflation was caused by the Brexit-related depreciation of sterling, which raised the cost of imports. The impact of that depreciation is fast falling out of the figures. If the recent relationship between movements in sterling and changes in consumer prices continues to hold, then by the end of the year inflation will be back on target.

The hawks counter that they are less concerned about sterling-related inflation than they are about the domestically generated sort. Lately economists have lowered their estimates of the economy's trend rate of productivity growth. Increasingly the MPC shares the pessimists' view. It believes that Britain's productive capacity can grow at only around 1.5% a year. This ultra-low "speed limit", as Mark Carney, the bank's governor, calls it, has big implications for monetary policy. If GDP growth exceeds 1.5%, it suggests that the economy is overheating. The remedy would be tighter monetary policy.

Some evidence suggests that the economy has been running hot. From the Brexit referendum to the end of 2017, GDP grew at an annual rate of about 1.8%. In the first quarter of 2018 it slowed almost to a standstill. That in part reflects one-off factors such as fallout from the collapse of Carillion, an outsourcing firm, in January, and bad weather in March. The underlying growth rate may be stronger.

But the MPC's view of the economy's potential may be too gloomy. In the second half of 2017 productivity grew at an annual rate of 3.4%, the fastest since 2005. And there is little evidence of domestically generated inflation. Nominal wage growth remains below 3% a year, which is measly by historical standards. Inflation in the service sector, largely generated by domestic activity because fewer services than goods are traded, is low and has been falling.

The economy will need tighter monetary policy at some point. If unemployment continues to fall, wage growth may strengthen. A clear post-Brexit settlement could gee up economic activity. For now, though, the MPC should bide its time.

“Frequent flyers” of the NHS

The patients who dial 999 dozens of times a year

A scheme that refers repeat patients to social services is easing the strain on doctors

May 3rd 2018

SITTING in the dark in his Blackpool bedsit, Harry Harper dialled 999. He told the operator that he had a bread knife at his throat and wanted to kill himself. Within minutes, blue flashing lights cut through the darkness and armed police broke down the door. A few years earlier, Mr Harper had been happily married and running a successful business. But after his wife committed suicide and his firm went bust, his life spiralled out of control. He started drinking and was admitted to a number of psychiatric hospitals. With little support, calling 999 became routine. Over six weeks he visited his local accident and emergency (A&E;) unit 28 times.

Mr Harper is not alone. Many people who feel overwhelmed by their personal problems come to use the emergency services as a crutch. Data from NHS England show that around 5,000 people attend major A&E; units more than 20 times each year. In 2016 they accounted for 0.05% of A&E; visitors, but about 3% of spending, or £53m ($72m). They probably account for a similarly outsized share of ambulance call-outs and hospital-admissions costs. Some doctors nickname them “frequent flyers” (one manager suggests that “power users” might be less insensitive).

Most regions have no strategy for dealing with these patients. Some have cut them off from the ambulance service, or sent letters reprimanding them for wasting NHS money. Patients have even been given anti-social behaviour orders, which result in jail time if broken. The NHS is not geared up to treat non-medical problems, says Mark Sage, a doctor who plays a role in commissioning health services in west Kent. If stress triggers abdominal pain for a patient, say, an A&E; doctor may prescribe pills to relieve the symptom. But he is unlikely to try to fix the cause of the problem.

Now a promising scheme aims to offer more effective help to the most frequent users, reducing their reliance on emergency services. It was started in 2013 by Rhian Monteith, then a paramedic in Blackpool, where health outcomes are among the worst in Britain. She asked local NHS managers for the names of the area’s most frequently seen patients, and was handed a list of 23 people, including Mr Harper. Many, like him, were middle-aged folk with mental-health problems. Between them they had visited A&E; 703 times in the past three months, mostly by ambulance.

Ms Monteith tried to give them a sense of “social inclusion and purpose”, mentoring them on the phone or over coffee. Often they talked of their social needs, rather than medical symptoms. So she arranged community activities, like volunteer work, and help with practical matters such as applying for benefits. Those who often got worked up to crisis point were taught coping mechanisms. All were given Ms Monteith’s phone number and encouraged to call her instead of the emergency services.

The effect was quick and dramatic. Within months, A&E; attendances, 999 calls and hospital admissions all dropped by about 90% among the group. And over time, they came to call Ms Monteith less often. Many began to put their lives back together. Mr Harper attended therapy. He says he is much happier now and plans to become a motorbike instructor.

The model was extended to about 300 patients in Blackpool over the following three years, saving the NHS over £2m. In 2017 it was rolled out by 36 of England's 195 regional NHS commissioning groups. The NHS is evaluating the scheme; if it considers it a success, it may be extended nationwide in the autumn.

Implementing the programme can be tricky. Many of the most prolific users of A&E; have no fixed address or are homeless. And they must agree to their data being shared across government agencies, which is sometimes a hard sell. NHS managers fear that those who run the initiative, like Ms Monteith, may burn out or be bombarded with calls. "It's important to set boundaries," says Jill Whibley, a nurse who leads the programme in west Kent.

But the evidence so far is encouraging. The winter crisis revealed how stretched A&E; departments are. Rerouting frequent flyers to the appropriate services would help besieged doctors and paramedics, as well as the patients themselves.

Power and politics

Robin Hood Energy, the company bringing power to the people

A municipal energy firm offers a snapshot of Labour's Britain

May 3rd 2018 | NOTTINGHAM

JEREMY CORBYN usually grants selfies rather than asking for them. But the Labour leader reversed normal roles when he saw a stand for Robin Hood Energy, a not-for-profit energy company run by Nottingham's city council, at a Labour Party conference. "He made a beeline straight for us and said, 'Can I get a photograph?'" recalls Simon Rhodes, head of marketing at the municipal utility. Mr Corbyn's fanboy moment is easy to explain: under a Labour government, companies like Robin Hood Energy would be rolled out across Britain.

In a sweltering office block off Maid Marian Way in central Nottingham, about 180 staff at Robin Hood Energy have unintentionally provided a Petri dish for Labour's energy policy. The idea for the company dates back to 2011, when Mr Corbyn was still a happily obscure backbencher. Councillors in Nottingham were trying to tackle fuel poverty in the city. Bureaucrats came back with plans for a price-comparison website. Instead, the Labour council demanded the full-fat option: its own gas and electricity company. After four years of planning and an £11m ($15m) loan from the council, it launched in 2015.

Now the company has over 100,000 customers. Only one in ten is in Nottingham. The rest live in areas where other councils offer their own locally branded version of Robin Hood Energy's services, in exchange for commission. (Local brands include Liverpool Leccy and Angelic Energy in Islington.) At the last election, Labour pledged to have at least one such company competing in every region.

Such municipal entrepreneurialism is not risk-free. Robin Hood Energy's initial losses were steep, with the company losing £8m in 2016-17 (it expects to break even this year). Granting big loans to council-owned companies while public services suffer swingeing cuts is politically treacherous. Such a scheme would struggle to be justified now, says Steve Battlemuch, the councillor who chairs the company's board. Other councils may find it harder than Nottingham, which has a history of municipalism. Unlike most councils, Nottingham still owns its bus services. And with 52 of 55 seats on the council held by Labour, there was little prospect of the party being turfed out and the company shut down by a new administration.

To its critics, Robin Hood Energy solves a problem that does not exist. In 2011 Britain had 14 energy suppliers. Now it has nearly 70. Many are de facto non-profits, points out Peter Atherton of Cornwall Insight, an energy consultancy. These companies sell energy at close to cost price, in hope of rapidly gaining customers before hawking themselves to a bigger player. Several therefore offer cheaper tariffs than Robin Hood Energy, though it compares favourably with most firms. For those customers willing to change suppliers, the market already works well.

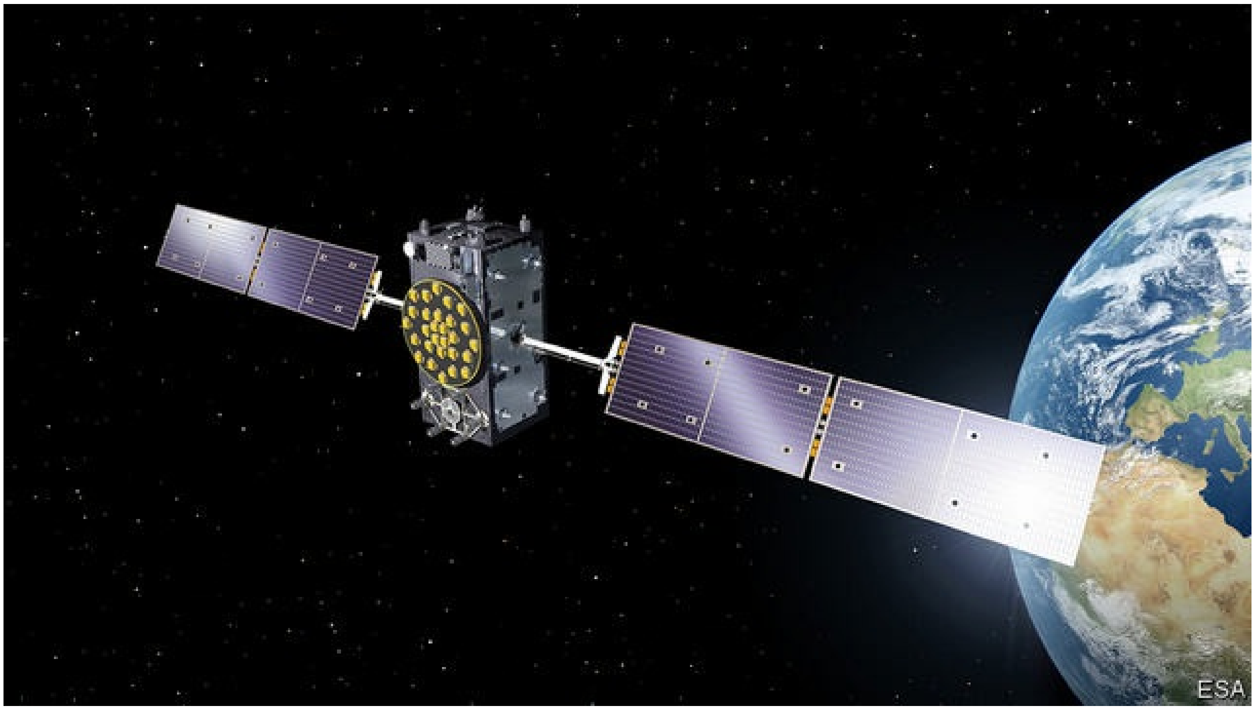
In the long term, Labour's plans go beyond introducing municipal rivals to private suppliers. Eventually, the party would allow municipal companies to control their local power grid. The doyen of Labour's energy policy is not Clement Attlee, the prime minister who nationalised Britain's fractured array of public and private energy suppliers. Its origins owe more to Joseph Chamberlain, the 19th-century Liberal politician and forefather of municipalism, says Laurie Laybourn-Langton of IPPR, a think-tank.

Short-term factors may intrude before then. Energy markets have been benign since Robin Hood Energy's launch, points out Mr Laybourn-Langton. If wholesale energy prices go up, so will household bills. Robin Hood Energy's halo may be dimmed. Yet some customers may prove less price-sensitive than others. And whatever happens, one Robin Hood Energy customer may prove reluctant to move. His name? Jeremy Corbyn.

In Brussels, no one can hear you scream

Britain’s space industry, Brexit’s final frontier

Britain struggles to stay in Europe’s most important space project



May 3rd 2018

FOR a country that has not launched a rocket into space for nearly 50 years, Britain has a booming space industry. According to a government-commissioned report in 2016, it makes up 6.5% of the global space economy. The industry is worth £13.7bn, or $18.7bn (more than half of which is accounted for by satellite broadcasting companies), and employs 39,000 people directly. In some niches, Britain’s contribution is even greater; it makes 40% of the world’s small satellites.

Now the British space industry, which has been closely tied to Europe for decades, risks being knocked out of orbit by Brexit. Already Airbus, a French-headquartered multinational that is the biggest satellite-maker in Britain, has announced that it will move some of its operations from Britain to France before Brexit next March. More may follow. The industry will have to use its considerable commercial nous to hit its growth targets if Brexit provokes a deep rupture with the EU.

Matters have come to a head over Britain's participation in the Galileo navigation project. The €10bn ($12bn) initiative provides the signals for Europe's equivalent of America's GPS. The EU argues that post-Brexit Britain should be excluded from any EU project that involves sensitive information, which includes Galileo's encrypted military-grade service. Britain sees this as a protectionist gambit to win contracts from British firms (see article).

The British government is reportedly threatening to disrupt the transfer of sensitive encryption technology to Galileo unless the EU drops its bid to freeze the country out of the project. People in the industry reckon that a withdrawal of British co-operation could at least slow down the project. Brussels seems unmoved.

The implications are serious. Already, says Graham Peters, chairman of UKspace, the industry's trade association, "work is leaking away from Britain" due to the uncertainty. Airbus, which has been closely involved with Galileo since its inception in the early 2000s, is moving the ground-control system for Galileo that it operates from Portsmouth to France.

Other important bits that Britain contributes to Galileo include the navigation payloads, which provide the system's signals and services, made by Surrey Satellite Technology (SST), Britain's largest manufacturer of small satellites (and part of Airbus). Work for Galileo accounts for half its business. If the company is not allowed to bid for the next generation of Galileo satellites, says Gary Lay, head of navigation systems at SST, "we would be locked out of a decade's worth of production. The company would look very different."

As well as the possible loss of jobs and revenue, Britain could also lose its leading role in areas such as navigation services. This is one of the most lucrative in terms of commercial applications, in everything from drones to autonomous vehicles. Such technical leadership is called "noble work" in the industry. Once gone, it will be very hard to win back, says Mr Peters.

Some think that if the worst comes to the worst Britain could build its own Galileo system. The country has the capacity to do so, but it would be very expensive; better, most reckon, to use Galileo for civil navigation and rely on America for the secure stuff.

Amid the gloom, however, there are some reasons for hope. Unlike countries that have used space projects mainly for national prestige, since the 1980s Britain's industry has had to live on its wits, with little government support. It is thus very commercially minded; Britain has the second-biggest number of space startups in the world, after America. If Britain does lose business in the EU, it would be better placed than most to explore new frontiers, in places like the Middle East.

Does not compute

A row over data privacy may upset Britain’s security relations with the EU

Some countries worry that Britain values security over privacy. Others just want its contracts

May 3rd 2018

AT LEAST one aspect of Brexit should be simple. Everybody agrees that maintaining co-operation on defence and security is desirable. As Rob Wainwright, the outgoing (British) director of Europol, the EU’s police agency, puts it, politics should not be an obstacle, as it may be for trade. Yet fiendish institutional and legal problems over security abound, and there is little time left to surmount them.

Theresa May wants a new treaty on security, to remain in Europol, the European Arrest Warrant and other agencies, and to co-operate in defence and foreign policy. She is keen to retain full access to the EU’s extensive databases for security and intelligence. Indeed, she hopes to stay closer to these than Denmark, which is in the EU and the Schengen frontier-free zone but has opted out of many justice and home-affairs policies.

Achieving this will be hard. Several agencies have no legal basis to admit non-EU members. Some countries will extradite nationals only to other EU countries. All agencies come under the European Court of Justice (ECJ), whose jurisdiction Mrs May insists on escaping.

The biggest issue is data protection. To gain access to EU databases Britain needs a "data adequacy decision" on privacy from the European Commission. Non-members can secure this, but America was denied a full one in 2015.

Britain is seen as keener to share data with America than others. The EU frets that post-Brexit Britain is ditching the charter of fundamental rights, including its data provisions. It has also complained about lax British protection of crime data in the Schengen information system, to which Britain has access. And in 2016 the ECJ ruled against a British investigatory-powers law, forcing the government to amend it. The House of Commons Home Affairs Committee duly accuses the government of worrying complacency about securing a data adequacy decision.

This is where politics may intrude, after all. Several EU countries and the European Parliament believe that when sharing data Britain (like America) gives security and intelligence higher priority than privacy. But some will exploit this for commercial advantage. A good example is the Galileo satellite project. After Brexit, Britain faces exclusion from the most militarily sensitive encrypted part of Galileo. That reflects high-minded worries over data security, but also low-minded hopes of hoovering up lost British contracts. As Sophia Besch of the Centre for European Reform, a think-tank, notes, this shows how petty rivalries risk damaging broader co-operation in defence and security. The stakes could hardly be higher.

Bagehot

Sajid Javid gets to work on a formidable in-tray

The new home secretary is the right man for the job. But what a job

May 3rd 2018

SAJID JAVID belongs to a tribe that is millions-strong in America but vanishingly small in Britain: devotees of the libertarian philosopher-cum-novelist Ayn Rand. Twice a year Mr Javid makes a point of reading the courtroom scene in “The Fountainhead”, in which the hero proclaims that he would rather go to prison than bow down before the will of the crowd. The great theme of Rand’s writings is the ability of heroic individuals to bend the arc of history to their will. Mr Javid will need plenty of the Randian spirit if he is to make a success of his new portfolio.

The home secretary’s immediate task is to contain the panic over the Windrush scandal, in which thousands of Caribbean Britons were misidentified as illegal immigrants. His long-term job is to tackle two festering problems. The first of those is the chronic lack of order in the Home Office. Mr Javid has to “get a grip”, as Tories love to put it. His new department has a justified reputation as the graveyard of government ministers and their agendas. It is a sprawling empire in which thousands of officials administer often contradictory policies that can deprive people of their liberty or their right to stay in the country. The Home Office is currently grappling with the trickiest problem in its recent history: designing a new immigration system for a Brexited Britain, while at the same time dealing with the consequences of Britain's biggest-ever wave of immigration.

The second festering problem is the public's lack of faith in Britain's immigration system. Restoring it will involve striking a delicate balance between compassion and control. Mr Javid needs to reassure those who have been disconcerted by the government's "hostile environment" policy—not just members of the Windrush generation but also EU nationals and other legal residents—that they have nothing to worry about. But he also needs to reassure the majority of Britons who think that immigration is too high and that illegal migrants represent a serious problem. He got off to a good start, with two feisty appearances in the House of Commons, disowning the noxious phrase "hostile environment", outlining measures to safeguard Windrush migrants from further injustice and promising them compensation.

These tasks would probably overwhelm even Rand's hero, Howard Roark. But Mr Javid nevertheless enjoys a couple of important advantages. One is his background. He is the first Muslim to hold one of Britain's great offices of state. His father arrived in Britain from Pakistan in 1961 with £1 in his pocket and made his living as a bus driver while his mother ran a shop. Mr Javid demonstrated that Labour doesn't have a monopoly on anger over Windrush by telling the *Sunday Telegraph* on April 29th (before getting his new job) that "that could be my mum…my dad…my uncle…it could be me."

His other advantage is his distance from the prime minister. Ms Rudd never really freed herself from her predecessor's shadow because she took over at the Home Office when Mrs May was in her pomp as prime minister. Mr Javid is taking over at a time when Mrs May is weak—and weak precisely because of policies that she pioneered as home secretary. Mr Javid also has a history of poor relations with his boss. He was one of the most briefed-against ministers when Mrs May was riding high, and one of the most brutal critics of her Downing Street operation after the election debacle. He belongs to a very different Conservative tradition. Mrs May is a 1950s Tory who hankers after a more homogenous Britain. Mr Javid is a 1980s Tory who has a portrait of Margaret Thatcher hanging in his office.

This could be a recipe for a fractious relationship at the heart of government. Mrs May is as proud as she is rigid, and still likes to start her sentences with the phrase: “When I was home secretary”. But it could be a chance to forge a more realistic immigration policy. Mr Javid needs to start by persuading his boss to abandon her fixation with including students in migration figures. He then needs to go on to change the logic of immigration thinking: forget about the arbitrary targets, like reducing net inflows to the tens of thousands, and focus instead on the country’s long-term needs, particularly when it comes to recruiting highly skilled workers, who can boost productivity, and willing hands who can make up labour shortages in the health service, care homes and the building trade. That is what voters tell pollsters they want. Mr Javid’s job is to bring policy in line.

Sajid shrugged

His promotion brings significant problems with it. In his previous job as secretary for local government he spent two years tackling the severe shortage of housing that is putting home ownership beyond the reach of a generation of Britons. His successor, James Brokenshire, will take time to master his brief and get the measure of the vested interests that have run riot in this area. Meanwhile, Mr Javid will significantly shift the balance of power at the top of the government in a Eurosceptic direction, as Ms Rudd’s replacement in the Brexit inner cabinet. Though he supported Remain in the referendum, he did so more to suck up to David Cameron than out of any conviction. He likes the idea of a small-state, light-regulation Britain forging its own Randian future. Brexiteers are crowing about his intervention on May 2nd against Mrs May’s proposed “customs partnership” with the EU.

The Javid package might not sound like an overwhelmingly attractive one. Mrs May is exchanging the likelihood of regression in housing and EU dealmaking for the mere possibility of progress at the Home Office. But she has probably chosen the right man for the urgent job of preventing the Windrush scandal from consuming her government. In fairy tales told by libertarian philosophers, fire-breathing heroes come along and solve humanity's problems. In Mrs May's all-too-real world, flawed individuals stagger from crisis to crisis in a desperate attempt to stave off complete disaster.

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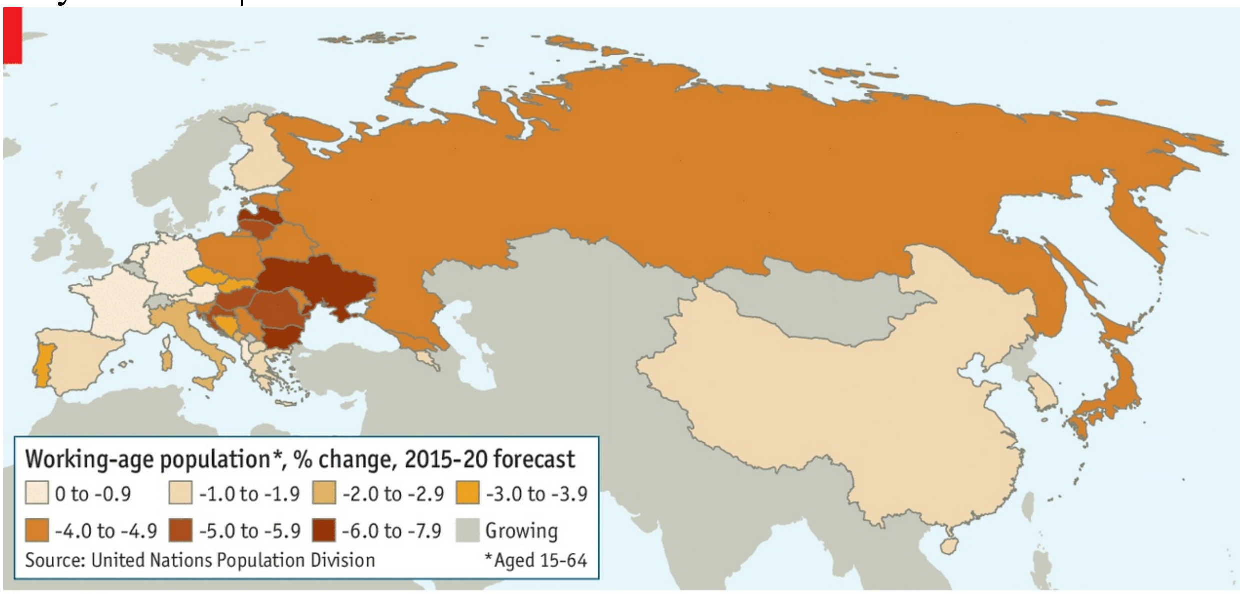
Gone in their prime

Many countries suffer from shrinking working-age populations

There are things they can do to mitigate the dangers

May 5th 2018 | VILNIUS



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MANY developed countries have anti-immigration political parties, which terrify the incumbents and sometimes break into government. Lithuania is unusual in having an anti-emigration party. The small Baltic country, with a population of 2.8m (and falling), voted heavily in 2016 for the Lithuanian Farmer and Greens' Union, which pledged to do something to stem the outward tide. As with some promises made elsewhere to cut immigration, not much has happened as a result.

"Lithuanians are gypsies, like the Dutch," says Andrius Francas of the Alliance for Recruitment, a jobs agency in Vilnius, the capital. Workers began to drift away almost as soon as Lithuania declared independence from the Soviet Union in 1990. The exodus picked up in the new century, when Lithuanians became eligible to work normally in the EU. For many, Britain is the promised land. In the Pegasas bookshop just north of the Neris river in Vilnius, four shelves are devoted to English-language tuition. No other language—not even German or Russian—gets more than one.

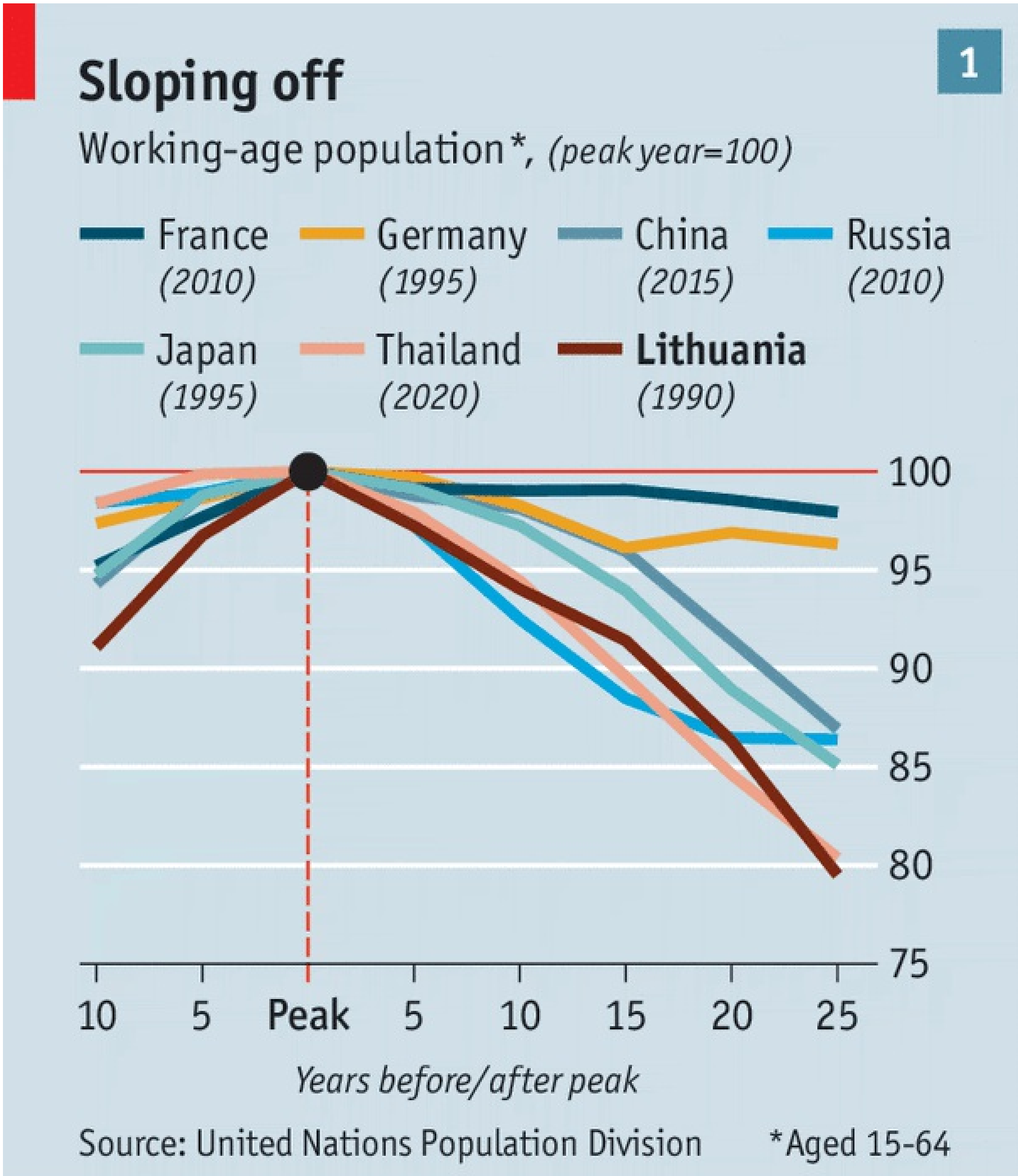
Mostly because of emigration, the number of Lithuanians aged between 15 and 64 fell from 2.5m in 1990 to 2m in 2015. The country is now being pinched in another way. Because its birth rate crashed in the early 1990s, few are entering the workforce. The number of 18-year-olds has dropped by 33% since 2011. In 2030, if United Nations projections are correct, Lithuania will have just 1.6m people of working age—back to where it was in 1950.

Lithuania was an early member of a growing club. Forty countries now have shrinking working-age populations, defined as 15-to 64-year-olds, up from nine in the late 1980s. China, Russia and Spain joined recently; Thailand and Sri Lanka soon will. You can now drive from Vilnius to Lisbon (or eastward to Beijing, border guards permitting) across only countries with falling working-age populations.

It need not always be disastrous for a country to lose people in their most productive years. But it is a problem. A place with fewer workers must raise productivity even more to keep growing economically. It will struggle to sustain spending on public goods such as defence. The national debt will be borne on fewer shoulders. Fewer people will be around to come up with the sort of brilliant ideas that can enrich a nation. Businesses might be loth to invest. In fast-shrinking Japan, even domestic firms focus on foreign markets.

The old will weigh more heavily on society, too. The balance between people over 65 and those of working age, known as the old-age dependency ratio, can tip even in countries where the working-age population is growing: just look at Australia or Britain. But it is likely to deteriorate faster if the ranks of the employable are thinning. In Japan, where young people are few and lives are long, demographers expect there to be 48 people over the age of 65 for every 100 people of working age in 2020. In 1990 there were just 17.

Some countries face gentle downward slopes; others are on cliff-edges. Both China and France are gradually losing working-age people. But, whereas numbers in France are expected to fall slowly over the next few decades, China's will soon plunge—a consequence, in part, of its one-child policy. The number of Chinese 15-to 64-year-olds, which peaked at just over 1bn in 2014, is expected to fall by 19m between 2015 and 2025, by another 68m in the following decade, and by 76m in the one after that (see chart 1).



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Jörg Peschner, an economist at the European Commission, says that many countries face demographic constraints that they either cannot or will not see. He hears much debate about how to divide the economic cake—should pensions be made more or less generous?—and little about how to prevent the cake from shrinking. Yet countries are hardly powerless. Even ignoring the mysterious business of raising existing workers' productivity, three policies can greatly alleviate the effects of a shrinking working-age population.

Never done

The first is to encourage more women to do paid work. University-educated women of working age outnumber men in all but three EU countries, as well as America and (among the young) South Korea. Yet female participation in the labour market lags behind men's in all but three countries worldwide. Among rich countries, the gap is especially wide in Greece, Italy, Japan—and South Korea, where 59% of working-age women work compared with 79% of men.

Governments can help by mandating generous parental leave—with a portion fenced off for fathers—to ensure that women do not drop out after the birth of a child. And state elderly care helps keep women working in their 50s, when parents often become more needy. But a recent IMF report argues the greatest boost to recruiting and keeping women in paid jobs comes from public spending on early-years education and child care.

Employers can do more too, most obviously by providing flexible working conditions, such as the ability to work remotely or at unconventional hours, and to take career breaks. Fathers need to be able to enjoy the same flexible working options as mothers. Some women are kept out of the workforce by discrimination. This can be overt. According to the World Bank, 104 countries still ban women from some professions. Russian women, for example, cannot be ship's helmsmen (in order, apparently, to protect their reproductive health). More often discrimination is covert or the unintended consequence of unconscious biases.

Countries can also tap older workers. Ben Franklin, of ILC UK, a think-tank, argues that 65, a common retirement age, is an arbitrary point at which to cut off a working life. And in many countries even getting workers to stick around until then is proving difficult. Today Chinese workers typically retire between 50 and 60; but by 2050 about 35% of the population are expected to be over 60. Thanks to generous early-retirement policies, only 41% of

Europeans aged between 60 and 64 are in paid work. Among 65-to 74-year-olds the proportion is lower than 10%. In Croatia, Hungary and Slovakia it is below one in 20.

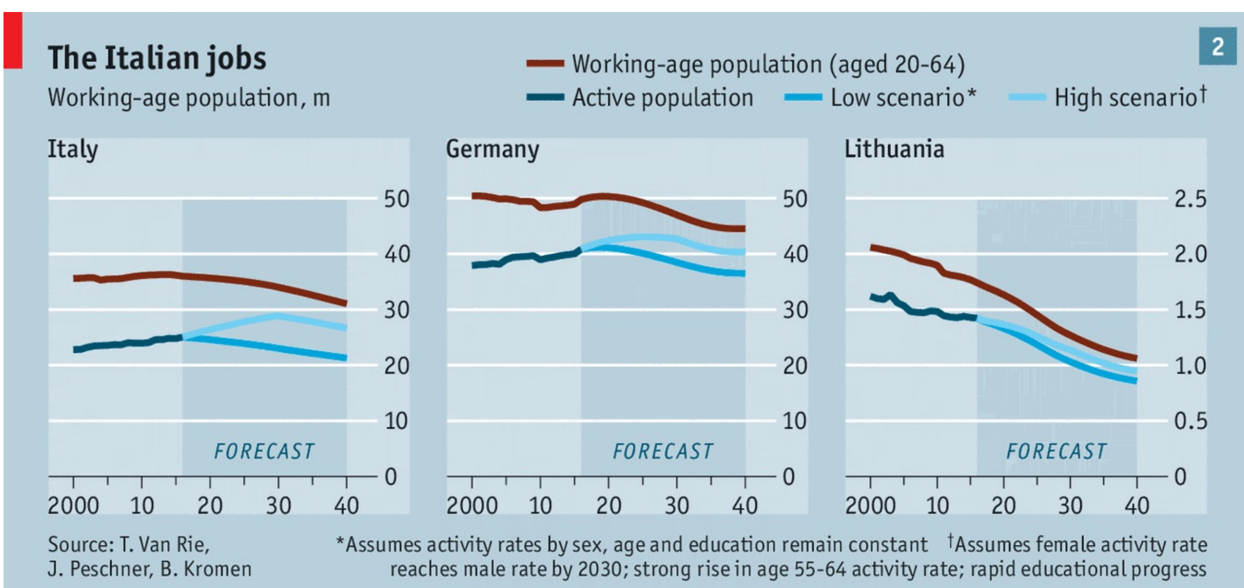
The levers for governments to pull are well known: they can remove financial incentives (tax or benefits) to retire early and increase those to keep working. Raising the state retirement age is a prerequisite almost everywhere; if the average retirement age were increased by 2-2.5 years per decade between 2010 and 2050, this would be enough to offset demographic changes faced by "old" countries such as Germany and Japan, found Andrew Mason of the University of Hawaii and Ronald Lee of the University of California, Berkeley.

Employers, too, will have to change their attitudes to older workers. Especially in Japan and Korea, where they are most needed, workers are typically pushed out when they hit 60 (life expectancy is 84 and 82 respectively). Extending working lives will require investment in continued training, flexible working arrangements, such as phased retirement, and improved working conditions, particularly for physically tough jobs. In 2007 BMW, a German carmaker, facing an imminent outflow of experienced workers, set up an experimental older-workers' assembly line. Ergonomic tweaks, such as lining floors with wood, better footwear and rotating workers between jobs, boosted productivity by 7%, equalling that of younger workers. Absenteeism fell below the factory's average. Several of these adjustments turned out to benefit all employees and are now applied throughout the company.

A final option is to lure more migrants in their prime years. Working-age populations are expected to keep growing for decades in countries such as Australia, Canada and New Zealand, which openly court qualified migrants. Others can try to entice foreign students and hope they stick around. Arturas Zukauskas, the rector of Vilnius University, thinks that he could improve greatly on the current tally of foreign students—just 700 out of 19,200. In particular, he looks to Israel, which has the highest birth rate in the rich world. Lithuania had a large Jewish population before the second world war, and many prominent Israelis have roots in the country. Partly to signal the academy's openness, Vilnius University has started awarding "memory diplomas", mostly posthumously, to some Jewish students evicted on Nazi orders.

The trouble is that the countries with the biggest demographic shortfalls are often the most opposed to immigration. For example, the inhabitants of the Czech Republic and Hungary view immigrants more negatively than any other Europeans do, according to the European Social Survey. Those countries' working-age populations are expected to shrink by 4% and 5% respectively between 2015 and 2020. Countries that lack a recent history of mass immigration may have few supporters for opening the doors wider. Even if they wanted new settlers, they might have to look for them far afield. Countries with shrinking working-age populations are often surrounded by others that face the same problem.

"China has never been a country of immigrants," explains Fei Wang of Renmin University in Beijing. It is unlikely to become one, but is trying to lure back emigrants and to attract members of the ethnic-Chinese diaspora. In February the government relaxed visa laws for "foreigners of Chinese origin". In Shanghai, and perhaps soon in other cities, foreign-passport holders are allowed to import maids from countries such as the Philippines. That is a small step in the right direction.



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Just as countries' demographic challenges vary in scale, so the remedies will help more in some countries than in others. Take Italy and Germany. Both have shrinking working-age populations that are likely to go on shrinking roughly in parallel. But Italy could do far more to help itself. Because the women’s employment rate in Italy lags so far behind the men’s rate, its active population would jump if that gap closed quickly—and if everybody worked longer and became more educated (see chart 2). Germany could do less to help itself, and Lithuania less still.

In theory, every rich country can prise open the demographic trap. Governments could begin by lowering barriers to immigrants and raising the retirement age. They could entice more women into the workforce. They could raise the birth rate by providing subsidised child care, which would create a wave of new workers in a couple of decades, just when the other reforms are petering out. But, when a country is shrinking, many things come to seem more difficult. Earlier this year, Poland built up a large backlog of immigration applications, many of them from Ukrainians. It turned out that the employment offices were badly understaffed, and could not process the paperwork in time. They had tried to take on workers, but failed.

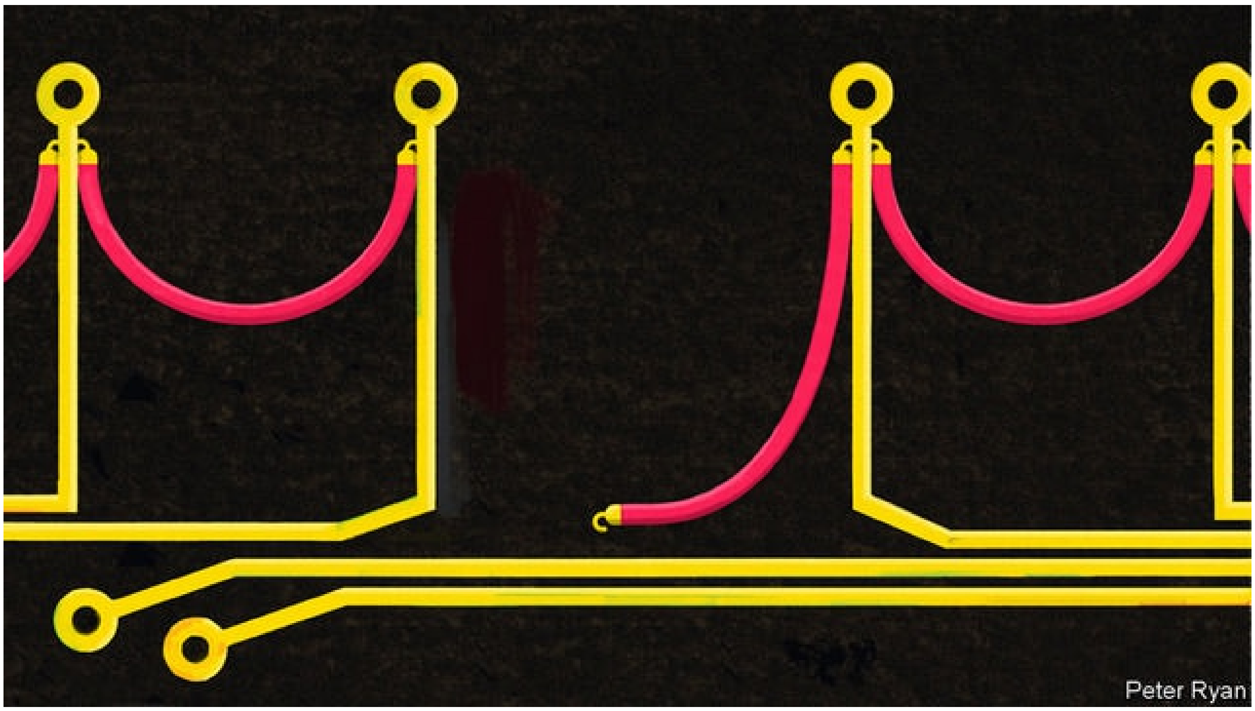
Special report

Special report

Exclusive access

Financial inclusion is making great strides

Nearly a quarter of the world's population remains unbanked. But mobile phones are helping to change that, writes Simon Long



May 3rd 2018

AS THE EBOLA virus was devastating parts of west Africa in 2014, Sierra Leone's difficulties were compounded by its emergency-response workers going on strike. They were risking their lives, but were often paid erratically and not in full. Sometimes they travelled long distances to collect the money, in cash, to find that it had been disbursed to an impostor, or that the official paying it out would take a cut. So the government switched to making the payments digitally, to the workers' mobile-phone accounts. That way they were paid in a week in full, rather than after a month with deductions. Thanks to lower costs and reduced fraud, the new system was millions of dollars cheaper. The strikes ended; lives were saved.

According to a report by the Better than Cash Alliance, a partnership based at the UN of governments, companies and organisations promoting digital payment, Sierra Leone was well placed to make this change in two respects: about 95% of the country was covered by a mobile-phone signal; and 90% of the emergency workers had mobile phones. Even so, the obstacles were formidable. Only 15% of the workers had mobile-money accounts. Opening one could be hampered by a lack of documentation, made worse by the country's severe shortage of surnames (most people share just ten of them). Biometric identification, such as fingerprints, raised fears of infection from the Ebola virus (a problem that was solved by facial-recognition technology). But they got there in the end.

The episode offers a graphic example of how technology can deal with "financial exclusion" by greatly reducing the number of those without access to financial services. Almost inadvertently, the spread of mobile telephony and mobile-internet services has brought hundreds of millions of people into the formal financial system. Take bKash, of Bangladesh, one of the world's biggest mobile-money services. Started in 2011, it now reaches 30m registered customers. Kamal Quadir, a founder, says people used to keep their money under the mattress; now they can store it on their phones. The service "has become the collective mattress for all the common people of Bangladesh. Now the money is in digital form and they are in the banking system regulated by the central bank."

Since its inception in the Philippines in 2000 and its take-off in Sub-Saharan Africa more than a decade ago, "mobile money"—the transfer of cash by phone—has become a global phenomenon, welcomed and encouraged by governments and international organisations. In 2010 the G20 group of countries came up with a set of "Principles for Innovative Financial Inclusion". In 2012 the World Bank, with funding from the Bill and Melinda Gates Foundation, produced the first "Findex", or financial-inclusion index, an ambitious attempt to measure the scale of the problem and track efforts to tackle it.

This special report will look at some of the fruits of those efforts. It appears at a relatively optimistic time, when the ranks of the financially excluded are thinning fast and there are strong hopes that the process will accelerate further. One reason is the growth in mobile-phone and internet penetration, making finance accessible even to those living a long way from physical bank branches or ATMs. According to the Findex, 78% of the world's unbanked adults receiving wages in cash have a mobile phone. Moreover, the "unbanked" are seen as an increasingly attractive commercial market. Firms as diverse as Ant Financial, an affiliate of Alibaba, China's e-commerce behemoth, and PayPal, a Silicon Valley payments firm, make much of their role in expanding financial inclusion. Daniel Schulman, PayPal's chief executive, says his company's mission is "to democratise financial services".

The report will consider whether non-profit organisations and businesses are right to be so upbeat about the prospects for more financial inclusion. On the commercial side, tensions have arisen between the different sorts of businesses engaged in this market: commercial banks jealous of their traditional quasi-monopoly on formal finance and yet wary of further risky adventures in "subprime" markets; mobile-network operators that now provide the infrastructure for payment, the most basic of financially inclusive services; the "fintechs", aggressive financial-technology startups fizzing with bright ideas, idealism and sometimes greed; and, increasingly, the "platforms", big internet firms that have a lock on how people spend their time online. The report will ask whether the winners from all this competition will be consumers, and "especially the relatively excluded", as Olivia White of McKinsey, a consultancy, believes.

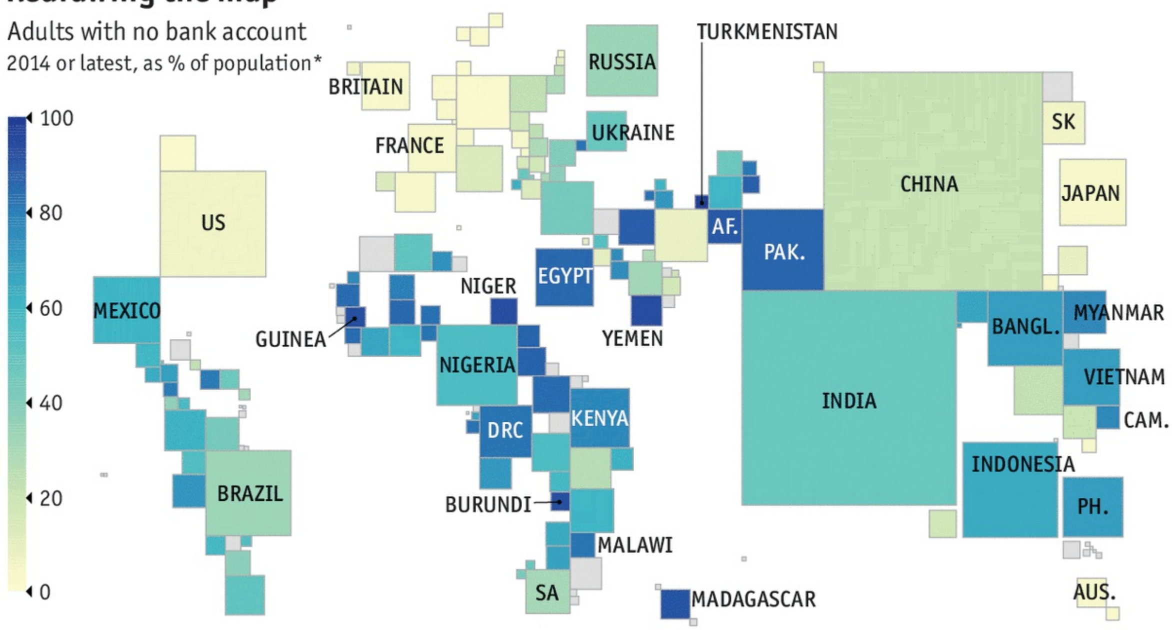
Making poverty profitable

Although it will look at rich countries, it will focus mainly on the developing world, where the problem is most acute. One example of a country where financial exclusion is extreme but prospects for greatly reducing it seem bright is Pakistan. Only 24% of the adult population there have bank accounts, a further 7% use other formal financial services and 24% are served informally. But the country has a huge population (about 210m), much of it young; a high level of mobile-phone penetration (146m accounts) and mobile-signal coverage; a decent regulatory framework; and a vibrant ecosystem of non-profits and foreign and domestic businesses committed to the market. Kosta Peric of the Gates Foundation believes that Pakistan is on its way to becoming "the first fully connected and inclusive economy".

The latest "Findex", its third iteration, based on 150,000 interviews and covering data for 2017, was published last month. The headline findings are striking: although the problem remains vast, progress has been spectacular. At 1.7bn worldwide, the number of the "unbanked" in 2017 was down from 2bn in 2014 and 2.5bn in 2011 (see map). The proportion of adults with a bank or mobile-money account was up to 69% last year, from 62% in 2014 and 51% in 2011. In the three years since the previous Findex, 515m people had acquired an account.

Redrawing the map

Adults with no bank account
2014 or latest, as % of population*



Source: World Bank

*Countries scaled to population

Economist.com

Notional access to an account is not the same as "inclusion". The Findex report finds that a quarter of all accounts worldwide are inactive, with no deposits or withdrawals in the past 12 months. India's numbers are especially misleading. Following the launch of a bold financial-inclusion plan in 2014, which promised that every Indian would have access to a basic bank account, some 240m accounts were opened over the next two years. But it soon became clear that up to a quarter of them were "zero-balance accounts", a euphemism for "unused". So banks made sure most had at least some money in them, perhaps by depositing tiny sums, often out of the bank staff's own pockets. "Zero-balance" made way for "one-rupee" (1.5 cents) accounts, but financial inclusion improved only on paper.

Even if the accounts are in use, some in the field argue that in itself this does little to enhance inclusion. It does not allow the holder to borrow, save or buy insurance. If financial exclusion is defined more broadly, it also covers many unbanked or underbanked people in the rich world, where the issue is attracting attention from policymakers.

In both rich and poor countries, financial technology, or fintech, is already seen as the dominant force behind the big advances of recent years recorded in the Findex. Leaving aside the relentless advance of the mobile phone, the optimism is inspired by progress in two areas. One is the development of cheap biometric systems allowing even the illiterate with no papers to establish a unique digital identity that a financial institution can use. In India, for example, 99% of the adult population now have a 12-digit universal identity number, known as Aadhaar. Such systems are not foolproof. A surprising number of people lack a distinct fingerprint, and iris recognition needs high-quality cameras. Biometric-based algorithms always involve a trade-off between precision and ease of use. But when other means of identification are added, security can be far tighter than it ever was in a paper-based regime.

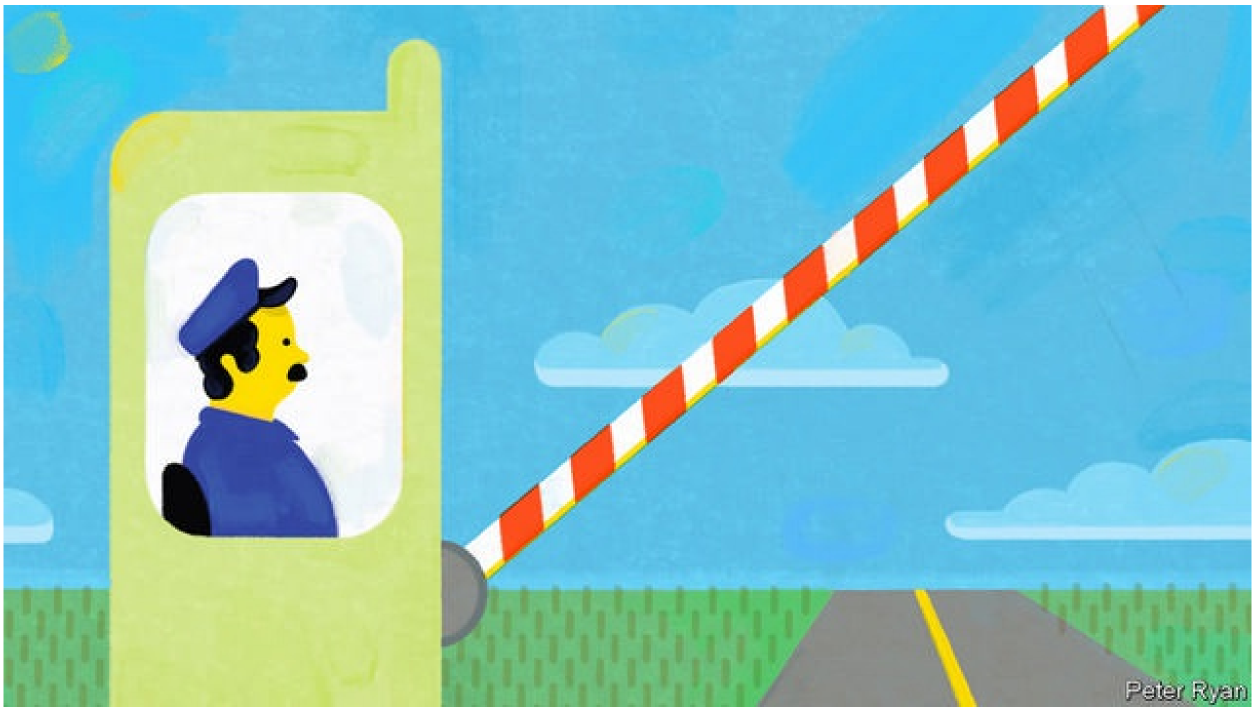
Second, cloud computing allows ever greater numbers of financial transactions to be automated and unimaginable quantities of data to be analysed by artificial intelligence (AI). Ant Financial boasts a 3-1-0 model: three seconds to reach a credit decision; one second to transfer the money; no human intervention. Automation also reduces the cost of providing finance and makes it profitable to deal in smaller amounts of money. Instead of being a bad banking risk, the poor have become the business opportunity at the bottom of the pyramid. And new sorts of data, along with more sophisticated ways of using them, may compensate for the lack of a credit history and give the unbanked access to finance for the first time.

Special report

Paying respects

How mobile money is spreading

The payment industry is undergoing a revolution



May 3rd 2018

IT IS A measure of how fast and unpredictably technology and finance have developed that the two most influential new payment systems of the 21st century so far both came about more or less by accident. M-PESA, Kenya's mobile-payment system, evolved out of a pilot scheme in 2005 by Safaricom, the country's biggest mobile operator, financed by DFID, the British government's aid agency. Its researchers had noticed that Kenyans were transferring mobile-phone airtime between each other as if it were money. They thought this might offer a way to handle microcredit repayments, reducing costs.

Alipay, a smartphone-based payment system now ubiquitous in China and spreading fast abroad, has its origins in a service devised for Taobao, an online platform run by Alibaba where small businesses sell direct to Chinese consumers. Customers were reluctant to pay for goods before they had received them. So buyers would send their orders by fax to Alipay to hold their money in escrow and release it when delivery was confirmed. In 2008 this system was transformed into mobile “wallets” in which the money is held.

Safaricom turned M-PESA into a general money-transfer system which became the most popular way of moving money around in Kenya. Account-holders (who now number nearly 30m) pay money in by handing cash to one of Safaricom’s 148,000-plus agents, typically corner shops that were already selling scratch cards to top up mobile phones. The cash can then be withdrawn at another agent or transferred to another M-PESA account-holder. That allows people working in the cities to send money back to their home villages faster, more cheaply and more securely. Other services have been added over the years. M-PESA has expanded abroad and spawned dozens of imitators.

On Singles’ Day last year, a day of frenetic online commerce, Alipay processed $25bn in transactions, 90% of them via mobile phones

Almost all of them are tiny compared with Alipay, which has 520m active users, almost as many as all the mobile-money accounts held in the rest of the world put together. It hopes to increase its customer base to 2bn worldwide by 2025. Ant, founded only in 2014, is expected to list on a stock exchange next year. It is reported to be seeking an earlier round of funding which would value the company at $150bn (for comparison, Goldman Sachs is valued at about $100bn).

The volumes its systems handle are staggering. On Singles’ Day (November 11th) last year, a day of frenetic online commerce, Alipay processed $25bn in transactions, 90% of them via mobile phones. The only mobile-payment service that comes close to Alipay’s scale is WeChat Pay, offered by its Chinese rival Tencent, a social-media giant. It has reduced Alipay’s share of the Chinese mobile-payment market from above 80% to just over half. Most Chinese use both systems.

M-PESA and Alipay follow very different models. M-PESA was designed for a simple feature phone, working from a text menu of options (though it is now also available as an app). Alipay is available only as a smartphone app, linked to a bank account, reflecting the rapid uptake of internet-enabled phones in China. Payments are made by Quick Response (QR) codes, the square black-and-white dot matrices that have become ubiquitous in China. Even some beggars accept them.

Both systems have made big inroads into financial exclusion. A study in Kenya quoted in the Findex by two economists, Tavneet Suri of MIT and William Jack of Georgetown University, found that access to M-PESA increased consumption levels and lifted 194,000 Kenyan households (2% of the total) out of poverty. In China the absolute number of adults without an account, at 225m, is still larger than anywhere else in the world. But 82% of the unbanked have mobile phones, compared with about two-thirds globally. Already 40% of adults in China make mobile payments, and 85% of those who make purchases on the internet pay for them online (globally, more than half of online buyers pay cash on delivery). In a recent paper the Consultative Group to Assist the Poor, a partnership of development groups based at the World Bank in Washington, DC, pointed out that 44% of China's people live in rural areas, where connectivity can be a barrier. In the countryside 71% of residents still do not use the internet, compared with 33% in urban areas.

Both the "Chinese" and the "Kenyan" models have crossed borders. Most developing countries have a mobile-payment service, but Sub-Saharan Africa is the only region where the share of adults with a mobile account exceeds 10%. Tencent has an epayment licence in Malaysia where it plans to launch WeChat Pay—its first foray outside China and Hong Kong. Alipay has taken a higher-profile approach, enlisting merchants in Europe and America to accept it as a means of payment for the benefit of Chinese residents and tourists. And in Asia itself, Ant Financial has been investing in local mobile-payment services in India, Indonesia, Malaysia, the Philippines, Singapore, South Korea and, most recently, Pakistan.

The Chinese are coming

This last investment, of $184.5m, is to buy 45% of Telenor Microfinance Bank (TMB), which manages Pakistan's biggest mobile-money service, Easypaisa. Owned by Telenor, a Norwegian multinational mobile-network operator, TMB launched Easypaisa in 2009. Competitors in Pakistan view

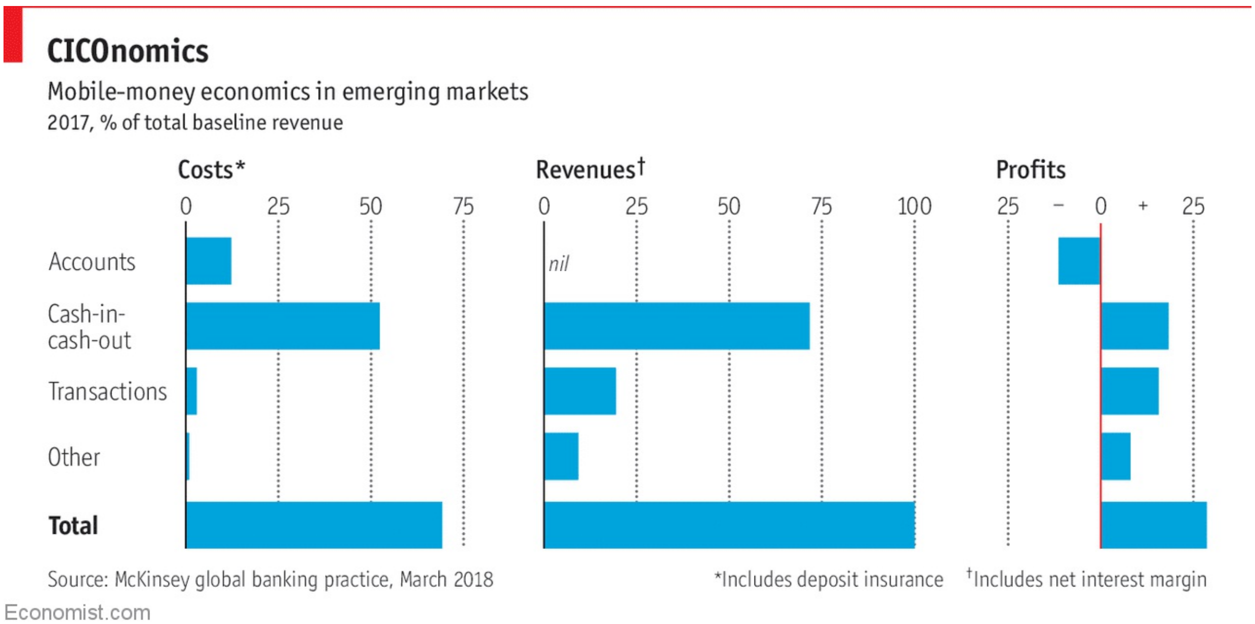
Ant’s arrival with some foreboding. “They are here not to save the poor Pakistani but to promote e-commerce,” says one local microfinance lender.

It is hardly surprising that many in this industry, rooted in charitable development work, feel ambivalent about vast commercial enterprises entering the payment business. The suspicions are not confined to Pakistan, and are likely to become more acute as American and Chinese tech giants slug it out for market share in poor countries (see box). As a still largely nascent market of enormous potential, Pakistan also illustrates many of the other tensions affecting the payment business.

One is between the desire of both governments and businesses to digitise payments swiftly and the capacity of the population to go along with that. Moving away from cash payments reduces costs, cuts leakages through corruption, discourages the informal economy and increases the tax base. The poor may be equally quick to realise that mobile money is more secure from robbers, can save them hours of travelling and queuing and may open up a range of financial services. But they may struggle to afford even a simple feature phone, and the illiterate and innumerate especially may find using it daunting at first.

In Pakistan that covers a big chunk of the population. The overall adult-literacy rate of 58% hides lower shares in the countryside (49%) and among women (45%). The drive for financial inclusion may not narrow the gender gap. Pakistan’s Benazir Income Support Programme (BISP), which offers cash transfers to the neediest women, seemed a good way to do that, but making it work has not been straightforward. Agents delivering the cash would take a cut. Almost all Pakistanis have a digital identity stored in a national database that helps them open a bank or mobile-money account. But giving BISP recipients debit cards linked to this so they could get the money from an ATM also sometimes meant that middlemen took the cards, withdrew the money and skimmed a commission. Mobile money works better, but it still usually involves a visit to an agent. The number of mobile accounts held by women in Pakistan rose by an impressive 4m in the 12 months to September last year, to 7.3m, but those held by men increased by an even more remarkable 12m, to 25.6m.

Similar obstacles slow down the move from “cash-in-cash-out” (CICO) systems to those in which mobile money is accepted for day-to-day purchases. (Easypaisa is largely an "over-the-counter" system in which both sender and recipient use cash and the digital money moves from one agent to another.) The aim is to increase the number of individual mobile accounts, and then of mobile payments. But so long as other shops accept cash, an individual shopkeeper has little incentive to accept electronic payments. And a new study by McKinsey finds that CICO is still crucial to current business models for mobile money, accounting for about 60% of profits (see chart).



Cash is here to stay. "It works quite well," notes McKinsey's Ms White drily. Even in Norway, where digital payments have a bigger share than anywhere else, 17% of all payments are still in cash. But digital payments will become easier and more common. "Tap-to-pay" methods using near-field communication technology that have taken off in Europe, and the EFTPOS (electronic funds transfer at point of sale) machines ubiquitous in rich countries, may be supplanted in many developing ones by an app on a small retailer's smartphone. In Pakistan, as in much of the world, this is likely to be one that can read a QR code. M-PESA in Kenya, for example, is rolling out "scan-to-pay" as well as "tap-to-pay" services among its merchants.

Although cumbersome, electronic payments are possible on a feature phone, and some such phones have cameras that can read QR codes. But a smartphone makes them much easier, raising another tension: between feature-phone-based services and internet-enabled phones. In Pakistan the local subsidiary of FINCA, a global non-profit microfinance network, has a joint venture with FINJA, a local fintech, marketing a mobile wallet for smartphones called SimSim. That seems perverse in a country where smartphones account for only about a quarter of mobile connections. As elsewhere, however, that proportion is rising rapidly thanks to cheap Chinese handsets. Qasif Shahid of FINJA argues that in the modern world those without a smartphone lack a digital identity and are not really "included". Designing systems for them that rely on feature phones is "a ploy for people to continue to belong to the have-nots".

A final tension is between competition and the concentration implied by network effects. Rich countries have burgeoning choices. Sit in a taxi in Singapore and the window is obscured by stickers advertising different ways to pay for the ride—credit cards, debit cards, stored-value cards and any number of smartphone apps. Shop counters groan under the weight of all the EFTPOS machines. But in frontier markets the brave pioneers of mobile money tend to become near-monopolies. M-PESA has 80% of the market in Kenya. In Bangladesh the central bank has licensed 27 services, and Kamal Quadir claims a market share of only 60% for bKash. But his network of 176,000 agents is hard to match. As he says, "you need network effects and scale to be effective." In Pakistan, Easypaisa and JazzCash, its biggest rival, have a market share of about 85% between them.

One way of both fostering greater take-up of digital finance in the short term and mitigating the long-term risks of monopolies is to embrace "interoperability", allowing payments across different systems. To this end the Gates Foundation has collaborated with a number of fintechs, including Ripple, a highly valued distributed-ledger developer, to create free open-source software. The result, a system called Mojaloop (moja means "one" in Swahili), makes it easier to deploy interoperable payment platforms. The idea is to ensure that the very poor will have access whatever happens to the rest of the market.

For now, intense competition in most countries means that disadvantaged consumers should indeed benefit from the rise in mobile money. But competition is fierce in part because network effects imply that the winner takes all. And as transferring money gets ever closer to the goal of free, frictionless, real-time payments, what will matter is not so much the process itself as the additional services the provider is offering.

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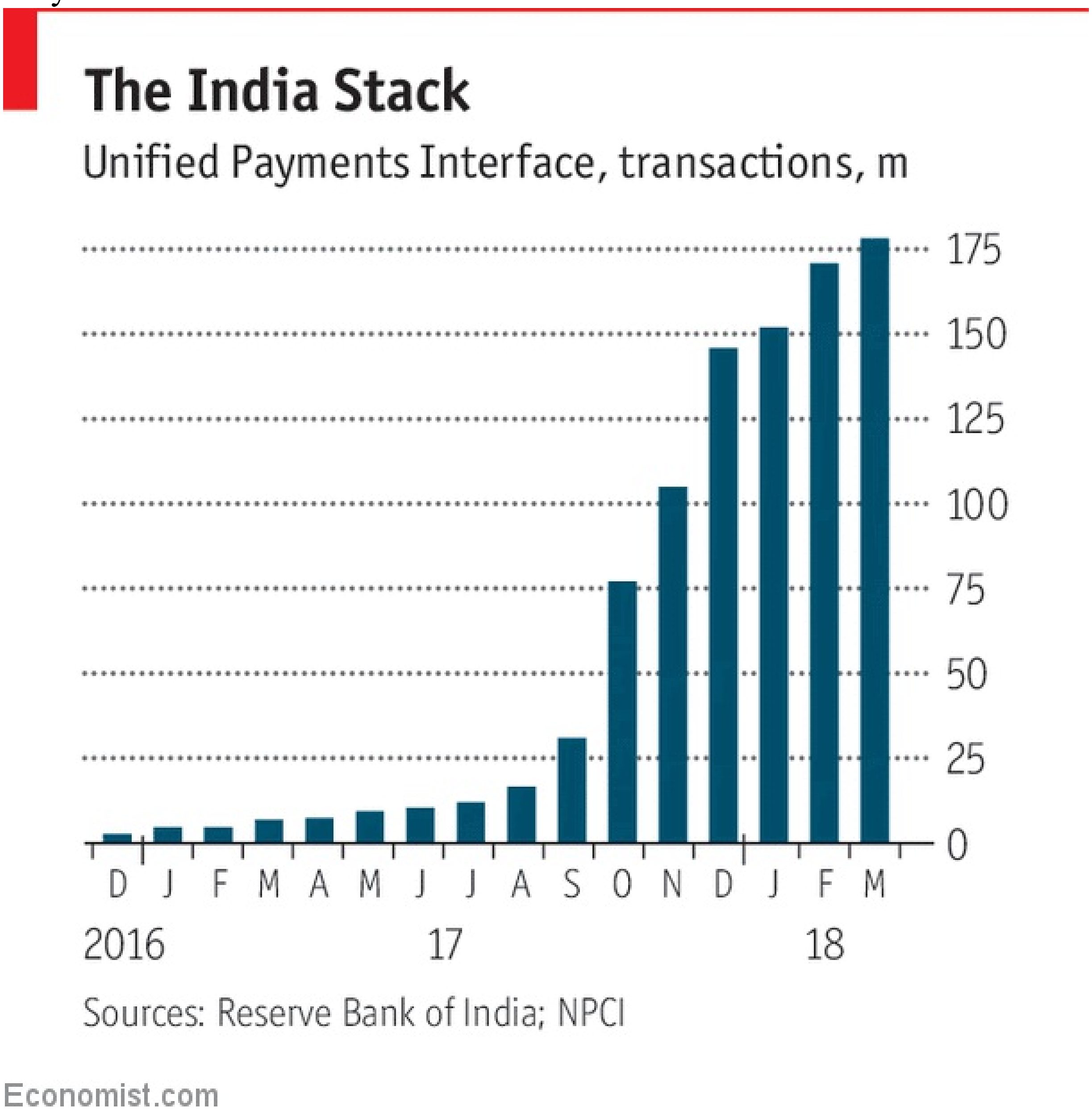
Special report

Stack’em high

India’s digital platforms

India is becoming an important battlefield for financial inclusion

May 3rd 2018



DRUMBEATERS FOR FINANCIAL inclusion are excited about India. With

190m adults without bank or mobile-money accounts, of whom an estimated 100m have mobile phones, it is second only to China in its potential. It has also become, in the words of Greta Bull, the chief executive of the Consultative Group to Assist the Poor, where "Silicon Valley battles China".

Successive Indian governments have actively promoted both the opening of bank accounts and the expansion of digital money. To nurture Aadhaar, the national-identity digital database, the previous Indian government in 2009 recruited Nandan Nilekani, a former boss of Infosys, a big Indian software and outsourcing firm. Now back at Infosys, he says that the current Indian government is even more enthusiastic about the project. Both administrations recognised, he says, that it is "the only way to achieve financial inclusion at scale". In some ways, he adds, "we have leapfrogged the rich world."

Indians now have about 800m bank accounts linked to Aadhaar. Account-holders do not even need a phone to get at their money. Some merchants have thumbprint readers. Aadhaar forms part of what is called, in techie jargon, the "India Stack", a set of interlinked digital platforms that allow smooth transfers to and from bank accounts via a "Universal Payments Interface" (UPI). Bank accounts can be linked to a UPI address, allowing immediate payment to be made from one account to another.

Launched in 2016, it has had a decent start. By this March it was handling around 178m transactions, worth about $3.6bn, reaching a larger number in 18 months than credit cards have managed in India in 18 years. Dilip Asbe, chief executive of the National Payments Corporation of India, the bank-owned non-profit organisation responsible for the UPI, says that it will be small merchants who ultimately determine success. As the system beds in, he believes that more and more of them will start accepting QR-code-based payments.

Global giants are now competing to develop applications for this interface. Google launched an app called Tez (Hindi for "fast") last September. By this March it already had 14m active users a month and was accepted as a form of payment by over 500,000 merchants. Designed to resemble a messaging system, it also offers "proximity payments"—two nearby phones can be paired through an ultrasound signal ("audioQR") and money sent between them without the phone number or any other personal details being shared (a relief, in particular, to many women). WhatsApp, a messaging service owned by Facebook, has also been experimenting with a UPI-based payments system.

But the biggest rival is a domestic online retailer and mobile-payment firm, Paytm (for "pay through mobile"), which in February handled 40% of India's UPI payments. Claiming over 300m accounts, it provides the country's most popular mobile wallet. Alibaba and Ant Financial are minority shareholders. Around 150 Ant engineers have worked in India on Paytm's systems at one time or another. Tencent, meanwhile, has invested in PhonePe, a mobile-payments competitor offered by Flipkart, another Indian online retailer.

Mobile payments got a big boost in November 2016 when India's prime minister, Narendra Modi, abruptly announced the withdrawal of high-value banknotes, which made up 86% of the rupees in circulation. The number of Paytm accounts increased from 115m at the time of the announcement to 160m in just 60 days. In retrospect, this can be seen as one of the stages in a payment revolution in India. The final destination seems an unlikely one for such a poor country, but according to Mr Asbe, "the ultimate aim is to replace cash."

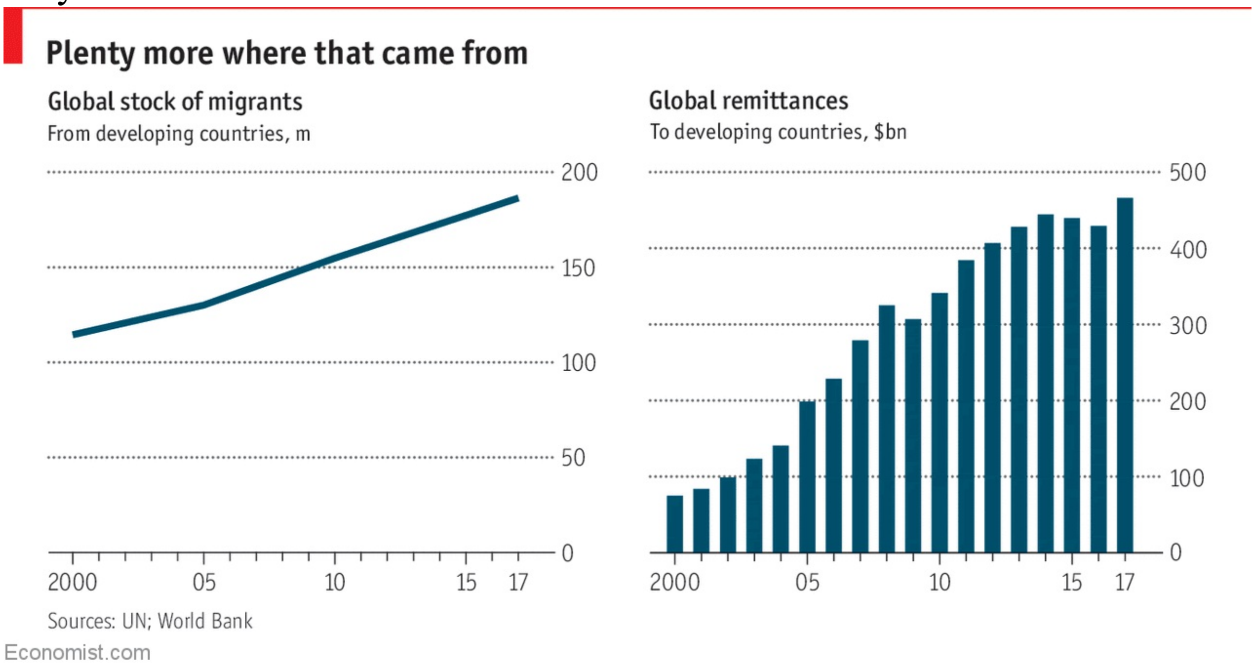
Special report

Not to the swift

The battle for the remittances market

Cheaper cross-border transfers are coming

May 3rd 2018



BLOCKCHAIN HOLDS GREAT potential for improving payment systems, but for the moment that potential remains largely unrealised. In March Swift, a Brussels-based service owned by 11,000 banks that handles more than half of all cross-border interbank payments, said further progress was needed before distributed-ledger technology "will be ready to support production-grade applications in large-scale, mission-critical global infrastructures". But it is coming, and cross-border payments are in its sights. Also in March, at Money 20/20, a payment-industry gathering in Singapore, Ravi Menon, managing director of Singapore's central bank, argued that one of the strongest possible uses for blockchain technology is to "facilitate cross-border settlements". Many think that Swift's current payment system will move to the blockchain in the long run. In 2016 ICICI, an Indian bank, and Emirates NBD of the United Arab Emirates successfully tried out a network built by Infosys to handle remittances from the Gulf to India. Ant Financial has published 49 blockchain patents, more than any other company anywhere. Stefan Thomas of Ripple says that 100 banks worldwide are committed to deploying his firm's "interledger protocol" technology. Western Union, the giant incumbent of the global remittances industry, is also experimenting with it.

This business, a lifeline for tens of millions of the world's poor, has long seemed ripe for digital disruption. As migration continued to climb, global remittance flows to developing countries in 2017 reached about $466bn (see chart), around three times as much as flows of development aid. In Pakistan, for example, remittances last year were worth about $20bn, not much less than all the country's merchandise exports. In December the central bank launched an initiative to promote the use of e-wallets for cheaper remittances. For now, they are expensive. The fee for sending $200 is about 7.2%, or as much as 9.1% if the money is going to Sub-Saharan Africa (and that ignores the exchange rate). The UN's Sustainable Development Goals include a target of cutting such fees to 3%. A World Bank report blames high costs on exclusive arrangements between money-transfer firms and national post offices, and on "derisking" by banks scared of infringing anti-money-laundering and know-your-customer regulations.

Money-transfer operators point out that they also incur heavy costs. They have to "pre-fund" transfers, leaving money sitting in destination countries to enable prompt settlement. Ripple cites an estimate of $27trn for the size of this global float. And operators need a physical presence at both ends. Western Union has more than 550,000 outlets, covering every country in the world bar Iran and North Korea.

Taking a shot at Goliath

But this business, too, is going digital. The fintechs have taken aim at Western Union's market, not least to exploit cost savings from the growth of mobile money. One, London-based TransferWise, boasts that its charges are just one-eighth of the banks' because it offers a "true" exchange rate. Another firm, MoneyGram of America, accepted an offer of $1.2bn from Ant Financial, but in January the sale was blocked on national-security grounds by America's watchdog, the Committee on Foreign Investment in the US.

Another firm, WorldRemit, also offers lower fees than Western Union, partly because its model is "100% digital in", which means it will not accept any cash. More than one-third of its global transfers are to mobile-money services.

Meanwhile Western Union is rebranding itself as a digital company, says Stanley Yung, its chief customer officer. Its revenue from digital money transfers increased by 23% in 2017, to over $400m. As its competitors sourly point out, finance is a notoriously sticky business. Just as few people move their bank accounts, so customers are reluctant to forsake a money-transfer system that has worked for them, even if it charges steep fees.

Special report

Pocket banking

Mobile financial services are cornering the market

Mobile money means more nimble financial services

May 3rd 2018

KAUSAR PARVEEN, of Chakwal district in the north of Pakistan's Punjab province, is a star beneficiary of the work of Karandaaz, a Pakistani financial-inclusion charity. The owner of just one buffalo, she borrowed 75,000 rupees (about $650) to buy another one and started selling milk. The business has done so well she now has four buffaloes and an assistant, and has taken out another loan to install a biogas plant, saving on firewood and sparing her family the woodsmoke.

This was how microcredit, as promoted by Muhammad Yunus, a Nobel-prizewinning entrepreneur from Bangladesh who launched his Grameen bank in 1983, was supposed to work: credit would allow the poor to establish microbusinesses and improve their lives. The idea has spread across the developing world. Sadly, in many places it has not worked out that way. A big expansion of microcredit in India's Andhra Pradesh province caused a crisis in 2010 when the lenders were blamed for an increase in suicides by farmers. A World Bank paper last November, written by Robert Cull of the bank and Jonathan Morduch of New York University, considered evidence showing that microcredit has had "only modest average impacts on customers". It has often been used to cover the normal ups and downs of household spending, which is helpful but not transformative.

Part of the problem is that microfinance is very hard to provide on a large scale. Reaching, assessing and helping borrowers like Ms Parveen is time-consuming and labour-intensive, which makes it hard to keep interest rates at a reasonable level. Typical annualised percentage interest rates are in the region of 20-40%, cheaper than the traditional local moneylender or pawnbroker but hardly a snip. Digital money holds out the hope of improving things in two ways: by making it cheaper and faster to grant, disburse and repay loans and to provide other financial services, notably savings and insurance; and by harvesting data that should widen access to financial services for those with little or no history in the formal financial sector.

In Kenya, for example, Safaricom in 2012 launched M-Shwari, a paperless bank account offered by the Commercial Bank of Africa (CBA) via M-PESA. CBA takes the risk but can use the know-your-customer checks already done digitally by M-PESA to open the account, and the M-PESA payment history to gauge creditworthiness. Like M-PESA itself, it has grown like Topsy (CBA's customer base increased from 50,000 in 2010 to 22m today) and has been much imitated across Africa and beyond. In Pakistan, FINCA, the global microfinance network, wants to use SimSim, its new mobile-money account, to offer "nano loans" (the equivalent of $5 or $10, say), thereby establishing a data trail for assessing bigger loans later.

M-Shwari and a few of its peers also offer services that pay interest on mobile-money accounts in credit. Indeed, the number of financial services available to poor people with a mobile-money account is exploding. Michael Schlein of Accion, a Massachusetts-based financial-inclusion non-profit, speaks of "a golden age of fintech". Take life insurance. In Ghana, MTN, a mobile-network operator, offers a life-insurance product called Mi-Life linked to its mobile-money accounts. For about $0.23 a month users get cover of around $100. This is catching on across the developing world. In March Telefónica, a Spanish multinational network operator, announced a tie-up with Bima, a provider of mobile micro-insurance, to offer life insurance across Latin America, starting in Nicaragua. Crop and livestock insurance is also becoming available on mobile phones. A number of firms, such as Econet in Zimbabwe and Acre Africa in east Africa, offer farmers "index insurance" for their crops that will pay out automatically to a mobile-phone account, without the need to put in a claim, if, say, a rainfall index drops below a certain level.

Digital money should make it cheaper and faster to grant and repay loans, and widen access to financial services for those without a formal credit history

Ingenious pay-as-you-go schemes offer credit for purchases. The most famous is M-Kopa's solar-panel technology, which has brought electricity to hundreds of thousands of homes in Kenya, Tanzania and Uganda. Buyers put down a small deposit and then make a daily payment from their mobile-money account until, after a year, they own the panel. If they miss a payment the panel is automatically locked, so if they urgently need money for something else, they have the choice of forgoing a day's electricity to give them extra cash in hand. In February M-Kopa announced a partnership with MasterCard to help it expand through Africa, using the card firm's QR technology. Again, good east African ideas travel: Easypaisa in Pakistan, for example, now has a similar offering. SimSim would like to use the model to finance smartphone purchases, but the technology to lock the devices remotely is not yet robust enough to rebuff attempts to outwit it.

The data generated by such accounts provide the nearest thing many of the holders have to a credit score. They are an invaluable aid to lenders trying to decide if a borrower can afford a loan. But a phone—and especially a smartphone—also provides all sorts of other information that some lenders may find useful for marketing or credit-assessment services. Positional data, for example, can show if someone has a steady job and a permanent address. Social-media activity can be highly informative. And shopping data can let on, say, if the user is pregnant.

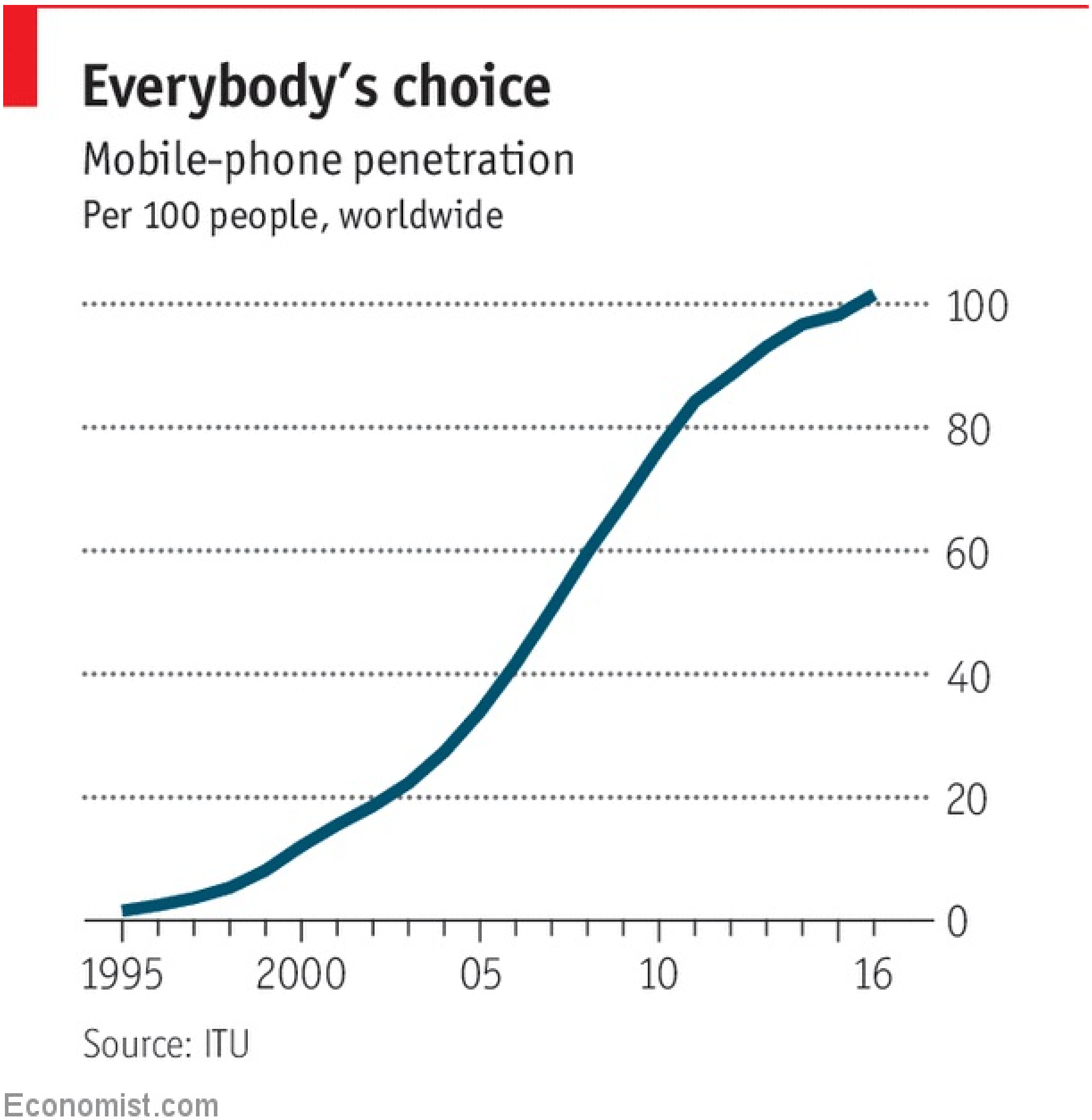
Some firms specifically try to generate credit judgments in the absence of a conventional financial history. Lenddo EFL, a merger of two fintech startups, claims to have facilitated more than 7m assessments, allowing 50 financial institutions of all sizes to lend more than $2bn to people with limited borrowing histories. Lenddo relies on advanced AI-driven analytics. EFL provides “psychometric testing”—online quizzes that have a surprisingly good record in predicting a prospective borrower’s propensity to repay. Questions might be about how you are feeling; your view of the time value of money (“Would you take $10,000 now, or $20,000 in six months’ time? How about $17,000 now?”); how you spend your money; what you would do with a windfall; and how you view your community. If the questions seem easy to game, that is part of the point: the way that defaulters game it goes into the data. The algorithm will always be one step ahead. Lara Zibarras, a senior psychology lecturer at City, University of London, is working on another set of psychometric tests to be introduced by Oakam, a British subprime lender. They ask people to choose between photos to reveal personality traits. Early tests suggest they are as accurate in predicting missed first payments as an experienced human loan-underwriter.

The most extensive use of “alternative” data (which, unlike “alternative” facts, do have a basis in reality) is made in China. In 2015 the government awarded eight firms licences to develop consumer-credit ratings. Alipay’s is the most advanced. A good score from the firm’s Zhima (Sesame) credit agency may allow its holder to hire a car, use a bike-sharing service or book a hotel room without paying a deposit, and let him see a doctor without having to queue to pay. At one time, it is reported, it even allowed people to jump security queues at Beijing airport. Lonelyhearts flaunt their credit ratings in online-dating profiles. For those with a lower score, however, a Zhima rating may be risky. According to Xinhua, China’s state news agency, the database includes a list of more than 6m people who have defaulted on court fines, which has helped the courts catch up with more than 1.2m defaulters who found that their credit score had plummeted.

Open Sesame

Ant says that Zhima improves financial inclusion. As of 2015, the People’s Bank of China (the central bank) maintained credit histories for around 380m citizens. That is less than one-third of the adult population, compared with nine-tenths of Americans who have credit records. Zhima's system, claims an Ant spokeswoman, is transparent. The five metrics on which it is based are indeed public: personal information, ability to pay, credit history, stability of social networks and "behaviour". The meaning of this last one is not entirely clear. In 2015 Li Yingyun, a Zhima director, told *Caixin*, a magazine, that someone playing video games for ten hours a day might be rated a bad risk; a frequent buyer of nappies would be thought more responsible.

As concern about the misuse of online data mounts in China, too, Ant now tends to play down such behavioural data. Douglas Feagin, its head of international operations (and a former Goldman Sachs banker), says its algorithms rely heavily on the debt-service and payment history: "Past repayment history is the best predictor of future credit performance." In Lahore, Mr Shahid of FINJA is also sceptical of claims made for non-traditional data: "Everything is overrated except the payment history."



For Ant, the credit score forms part of an "ecosystem" of online services that support each other. It also offers loans, and since 2013 has had a fund where Alipay users can earn interest on their surplus cash. The fund, known as Yu'e Bao (or "leftover treasure"), offers much higher returns than bank deposits. By the end of last year it had become the world's biggest investment fund, with 1.58trn yuan ($243bn) in assets under management and 325m accounts, equivalent to nearly a quarter of China's population. It has an estimated market share of 25%. Tencent has its own online fund, Licaitong, linked to WeChat, with 300bn yuan under management by the end of January this year.

Lufax, a subsidiary of Ping An, an insurance giant, started as a marketplace for peer-to-peer lending but has turned itself into a financial “supermarket”, offering loans, securities, mutual funds, insurance and more.

These Chinese giants have shown that serving people who until recently were regarded as unbankable can be profitable. Greater financial inclusion, in effect, is a business opportunity. Institutions in richer countries are trying to heed that lesson.

Special report

The bottom rung

Financial inclusion in the rich world

Tech and data offer hope of more financial inclusion in developed countries, too

May 3rd 2018

HACKNEY IN NORTH-EAST London prides itself on being one of the capital's most ethnically diverse boroughs. The council identifies only 36% of the population as "white British". Dalston Junction, a now-trendy part of the borough, buzzes with a down-at-heel sort of cosmopolitanism: a Caribbean bakery; the Halal Dixy Chicken shop; the Afro World wig-and-extensions parlour; dozens of outlets for Lycamobile ("call the world for less") and for money-transfer firms.

It is also diverse in wealth. Nearby gentrification is sprouting in a few trendy coffee bars and a sleek creperie. But Hackney is also, on a measure of "multiple deprivation", the 11th most deprived of more than 400 local-authority areas in Britain. Dalston has more than the usual number of charity-run second-hand shops and at least four pawnbrokers.

Competing with this last group is a branch of Oakam, a British lender set up in 2006. It advertises itself as an “alternative to doorstep lenders”, the traditional financiers for those beneath the bar set by mainstream banks. Originally aimed at recent immigrants, it extended its reach to the rest of those “lacking access to basic financial services”—a group it puts at 12m across Britain. A report published in March 2017 by a House of Lords committee estimated that 1.7m adult British residents have no bank account; 40% of the working-age population have less than £100 ($140) in cash savings; and 31% show signs of financial distress.

Britain is not the only rich country where big chunks of the population live largely outside the mainstream financial system. In America the Centre for the New Middle Class, the think-tank arm of Elevate, a Texas-based online lender specialising in the “nonprime” market (not immediately creditworthy), estimates that 109m Americans are nonprime and a further 53m are “credit invisibles”, without enough of a financial history to be assigned a credit score. A survey by the Federal Reserve last year found that 44% of Americans would struggle to meet an unexpected expense of $400 without selling something or borrowing.

Banks make good money out of the way many people with bank accounts and a decent credit standing raise funds at short notice: using a credit card or dipping into the red on a current (checking) account with a bank. That is one reason why they do not bother much with lending to those without good credit scores. Another is that, since the financial crisis—the origins of which, after all, lay in the subprime market—banks have been anxious to clean up the quality of their loan assets.

The underbanked do not lack financial options, but are generally charged exorbitant prices for them, especially when measured by the annualised percentage interest rate (APR). In Britain such lenders include pawnbrokers, offering an APR of between 25% and 101% for a secured loan; doorstep lenders such as Provident, the biggest, which will charge an APR of 1,558% for a 13-week loan; “payday lenders” such as Wonga, which offer similar rates for a loan to be repaid after 1-35 days in one lump sum; and “rent-to-own” lenders, such as BrightHouse, which offer finance for purchases to be repaid in instalments. In America the industry also includes "check-cashers" that pay immediate cash (at a discount) for cheques that would take days to clear in a bank, and "title-lenders" that lend against the borrower's car. In both countries these fringes of legal finance are the last defences against a scary, unregulated world of illegal loan-sharking.

Prey for them

In both countries, too, this end of the credit market has caused regulatory concern. Some of the lending is clearly predatory. According to America's Consumer Financial Protection Bureau, a controversial watchdog set up after the financial crisis, in 2016 more than four-fifths of those who borrowed against their cars had to renew their loans; a large proportion of these end up losing their vehicles. And some payday loans seem designed not to be repaid but to go into default, laying the foundations of a long-term debt relationship. In Britain the regulator, the Financial Conduct Authority, in 2015 imposed interest caps on payday lenders, some of which were charging APRs in excess of 5,000%.

But as Lisa Servon, an American academic, finds in her book "The Unbanking of America", lenders to the less well-off are not all purely exploitative, nor are they feared and resented by all their users. Rather, they are meeting a need unfulfilled by banks and welfare systems. However, the high cost of their products makes them vulnerable to new entrants to the market. Fired by a mixture of technological zeal, idealism and the profit motive, such firms are competing for the unbanked dollar.

As in the developing world, technology can help in three main ways: by making identity checks easier; by lowering costs; and by enabling new forms of credit assessment. Auxmoney, a German online-credit marketplace, allows loan applications to be submitted entirely digitally and remotely, including an identity check and digital signature by video link. By automating processes and dealing with customers mainly online (usually via a mobile phone), such operators keep down staff numbers and costs. Oakam's boss, Frederic Nze, says that its cost-income ratio is 50%, and trending downwards to below 40%, compared with 57% for a typical doorstep lender.

Oakam's rates, which by statute have to be prominently displayed on its website, are high (“1,421% APR representative” in March). But a group of borrowers at their Dalston branch seem unbothered by this. What seems to matter to them is that they are treated decently. One, a rehabilitated drug user and single mother, was so angered by her experience at another lender that she went out and spent her £100 loan on crack. Another says that no bank will touch her because she once splurged on her credit card when she was 18. All are glad to have access to credit at all.

What Oakam shares with other nonprime lenders, and those in poor countries, is a willingness to look beyond the scores handed out by credit bureaus. Those data are backward-looking, ignore much non-credit history, such as regular payments to utilities, and have nothing to say about those with little or no borrowing history (“a thin file”). This often excludes potentially valuable clients: immigrants anxious to build a good reputation in their new homeland; students with bright career prospects; hardworking, trustworthy individuals needing cash to tide them over a difficult patch. These should not be hard to lend to. Ken Rees, the boss of Elevate, says he is constantly meeting people from fintechs advertising their data-processing prowess, yet on examination they mostly just extend the realms of the banked to bring in those who, even on a cursory check, would have been included anyway.

But lenders now have wads of other data, too. Oportun, for example, is an American firm with 270 physical outlets, with its roots in the Latino immigrant community. It offers instalment loans at a typical interest rate of around 32%. One morning in March at its branch in Redwood City, California, three tellers—all Spanish-speaking locals who had first come into contact with Oportun because they or their families had been borrowers—have just one client between them. His documents—some utility bills and a bank statement—are scanned and transmitted to head office. Within minutes, the automated loan approval comes through. Oportun reports its lending to credit bureaus, helping its clients build up their histories. Success, says Raul Vazquez, the chief executive, can be seen as getting them into the formal system. So the business model is to get rid of the best customers, which seems almost perverse.

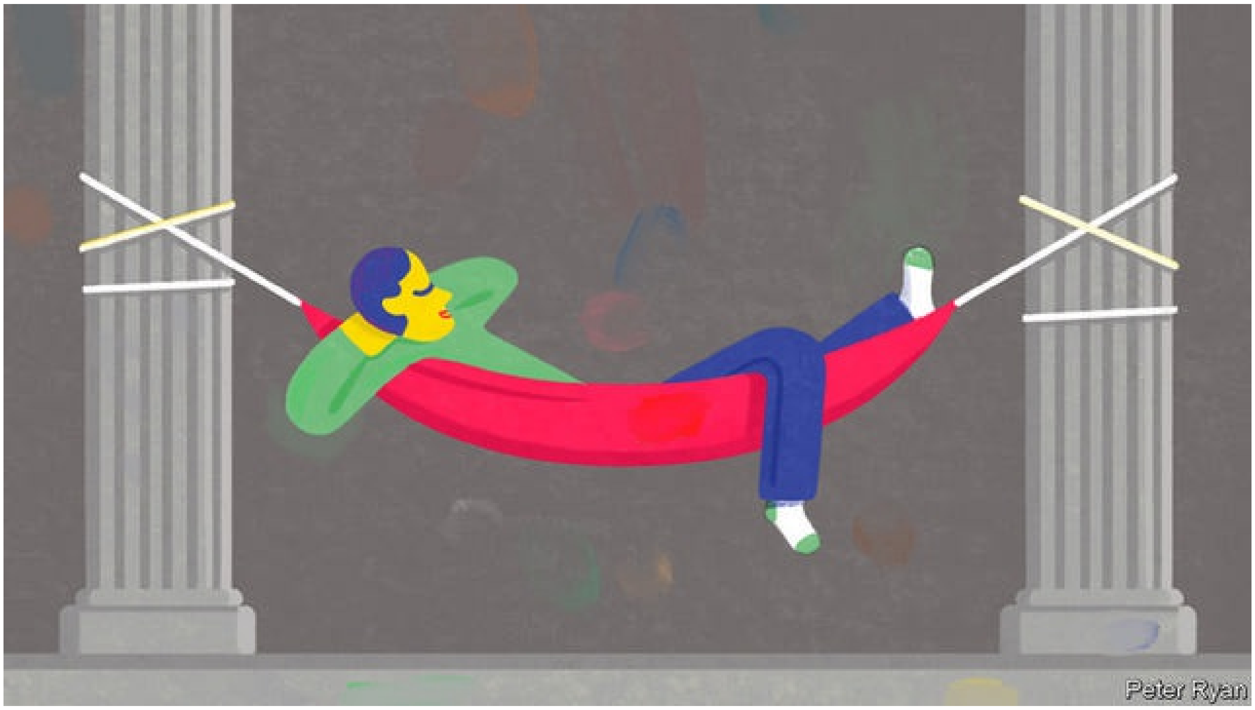
In rich countries such as Britain and America, where most people have current accounts, their bank statements offer lenders plenty of data that algorithms can feast on. The ability to analyse them better than banks and other rivals may provide a competitive edge. But digital technology also provides data through the apps that users download on their phones. Lenders say they can learn a lot from how, and how often, their customers use their app. Oakam, for example, offers an in-app game in which customers climb a “ladder” of client categories to earn a higher status and discounts. For people at the bottom of the credit pile, it is an apt metaphor.

Special report

The best of times

Who gains and who loses from more financial inclusion

Despite some risks, consumers are in clover



May 3rd 2018

NO ONE GETS up in the morning thinking they want to do some banking, notes Piyush Gupta, boss of DBS, South-East Asia’s biggest bank. Speaking in March at the Money 20/20 conference in Singapore, Mr Gupta meant that banking is just a means to an end—buying a house, paying school fees and so on. And in a digital world, banks risk becoming invisible—“dumb pipes” designed and managed by others. They seem unlikely to be big winners in the new financial world.

Their main competitors, however, are not the fintechs. During the dotcom boom of the late 1990s, ambitious internet startups saw themselves as revolutionaries. The big financial institutions, so set in their ways, would surely be swept away by a wave of internet-based disintermediation. Sure enough, the incumbents nearly went under—but because of the global financial crisis, not competition from nimbler rivals. Fintechs today are mostly reformists rather than revolutionaries. Thanks to open application programme interfaces (APIs), they can offer their services on banks' platforms. So if they are going to be winners, it is only by having curtailed their ambitions.

Mobile-network operators (MNOs) provide the infrastructure where more and more of the financial system is based. Back in the mid-1990s, John Reed, then the chief executive of Citibank, sought a merger with AT&T;, realising, as he later put it, that "a network supplier and a content provider would be a good combination." But most MNOs are content to make money as dumb pipes. And that revenue—essentially, fees per transaction for transferring funds—will come under threat as competitors offer free transfers, hoping to make profits from ancillary services.

The biggest winners all round are likely to be consumers, though with a number of caveats

So what banks, fintechs and MNOs fear most are the digital "platforms"—the colossi bestriding the internet and controlling the apps and sites where most people spend most of their time online. In a world where data rule, Google might be expected to be king, but it insists it has "no aspiration to be a bank". Facebook in some countries offers payments on its Messenger service and via its subsidiary, WhatsApp. It dabbled in using data to generate credit ratings, but users found that creepy, so it stopped. Amazon already has a substantial business lending to small firms using its platform. A report in March that Amazon was in talks with JPMorgan Chase to offer its customers bank accounts sent a frisson through the banking world. Amazon has data to drool over.

Chinese firms start with a huge advantage: the country's sheer size. They also benefit from a protected domestic market. UnionPay, for example, became the world's biggest bank-card company, based almost entirely on the Chinese market, from which Visa and MasterCard have been largely excluded. Alibaba and Tencent, as well as UnionPay, are expanding overseas. As yet their ambitions are directed mainly at the Asian near-abroad, as well as at Chinese tourists and the diaspora. But they have big ideas, deep pockets and a business model that seems to work.

The biggest winners all round are likely to be consumers, though with a number of caveats. Four stand out: market concentration, security, privacy and inequality.

Concentration is a worry for the future. The fear is that network effects will drive smaller payment providers out of the market as platforms offering free transfer services undermine their business models and the winners start demanding monopoly rents. For the next few years, however, consumers will benefit from prices driven down by competition.

Digital security is already a big concern. Even the Swift system found itself vulnerable to cyber crime when over $100m was stolen from Bangladesh's central bank in 2016. India's Aadhaar has repeatedly been charged with being susceptible to data leakage through bribery, which it has mostly denied. M-Shwari in Kenya recently suffered an interruption of service because of "technical issues". But by and large, digital payment is safer than cash for the low-income consumers who are the main users of mobile money, according to Ruth Goodwin-Groen, managing director of the Better Than Cash Alliance.

Brave new world

Privacy may be an even bigger issue. As it becomes more obvious that people are trading their personal data for better access to financial services, they will worry about losing control. The problem is most acute in China, where the government's efforts to build a "social-credit" rating system, rewarding people for being good citizens, seem the stuff of dystopian fantasy. They also feel uncomfortably close to credit scores derived from "alternative" data, with which China's central bank and firms such as Ant have been experimenting. In January Ant had to apologise for having made opting in to a Zhima credit score the default setting for users who opened a report on their

Alipay activity over the past year.

The greatest problem for financial inclusion, though, may be the persistent disparities revealed by the new Findex. It shows that, for all the advances, the gap between the number of male and female account-holders has not narrowed over the six-year period covered by its three editions, remaining at nine percentage points. Likewise, a big gap remains between richer and poorer households. Among the richest 60%, 74% of adults have an account; among the poorest 40% the share is only 61%.

The Findex survey asked a question designed to find out why those 1.7bn people remain unbanked. The explanations included cost and distance, the fact that a family member had an account, lack of documentation, distrust in the financial system and religious concerns. But by far the biggest reason, cited by two-thirds of respondents, was having too little money. To solve that problem, technology is essential. But it is not enough.

Business

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The art of the deal

T-Mobile and Sprint chivvy regulators to bless their merger

A union would mark a retreat for Japan’s SoftBank and a coup for T-Mobile’s maverick boss

May 3rd 2018 | NEW YORK

JOHN LEGERE, the lion-maned boss of T-Mobile, made his wireless firm the fastest-growing carrier in America by cutting prices and giving customers better deals than AT&T; and Verizon, which he relentlessly mocked on Twitter as retrograde behemoths. His personal brand as an industry maverick may have helped too. On April 29th he put that image to the test, agreeing to a combination with Sprint, the next largest carrier after T-Mobile, and creating a behemoth under his leadership.

The deal, all in shares, values the combined entity at $146bn including debt. If approved by regulators, it would squeeze the number of providers in the wireless market in America from four to three. That is a big “if”—twice earlier this decade, antitrust authorities have either stepped in to prevent such an outcome or indicated that they would do so, for fear of higher prices for consumers.

Mr Legere presumably knows the challenge, so he appealed to the political priorities of President Donald Trump. First came a promise that the union with Sprint would add thousands of jobs in America (despite also promising shareholders $6bn of annual savings, mostly cost cuts). Second, he pledged that the two firms would spend $40bn within three years to build a national 5G mobile broadband network much more quickly than either Verizon or AT&T;, by taking advantage of a combination of their spectrum assets. Mr Trump's administration has made it clear that it covets early development of a 5G network, to stop China winning the battle over the technology. In addition, "Trump-led tax reform" was "particularly helpful" to the deal's economics, cooed Mr Legere. Investors, worried that Mr Trump's Department of Justice will not be so easily charmed, sold shares in both companies.

The deal represents a big retreat for Masayoshi Son, boss of SoftBank, which owns 85% of Sprint. Mr Son engineered a $20bn takeover of Sprint in 2013, with the aim of merging it with T-Mobile, but badly misjudged the regulatory mood. Twice he tried and failed to merge Sprint with T-Mobile and put Sprint in charge. Instead Sprint gave up its third-place position in the wireless market while consistently losing money, raising the spectre of bankruptcy.

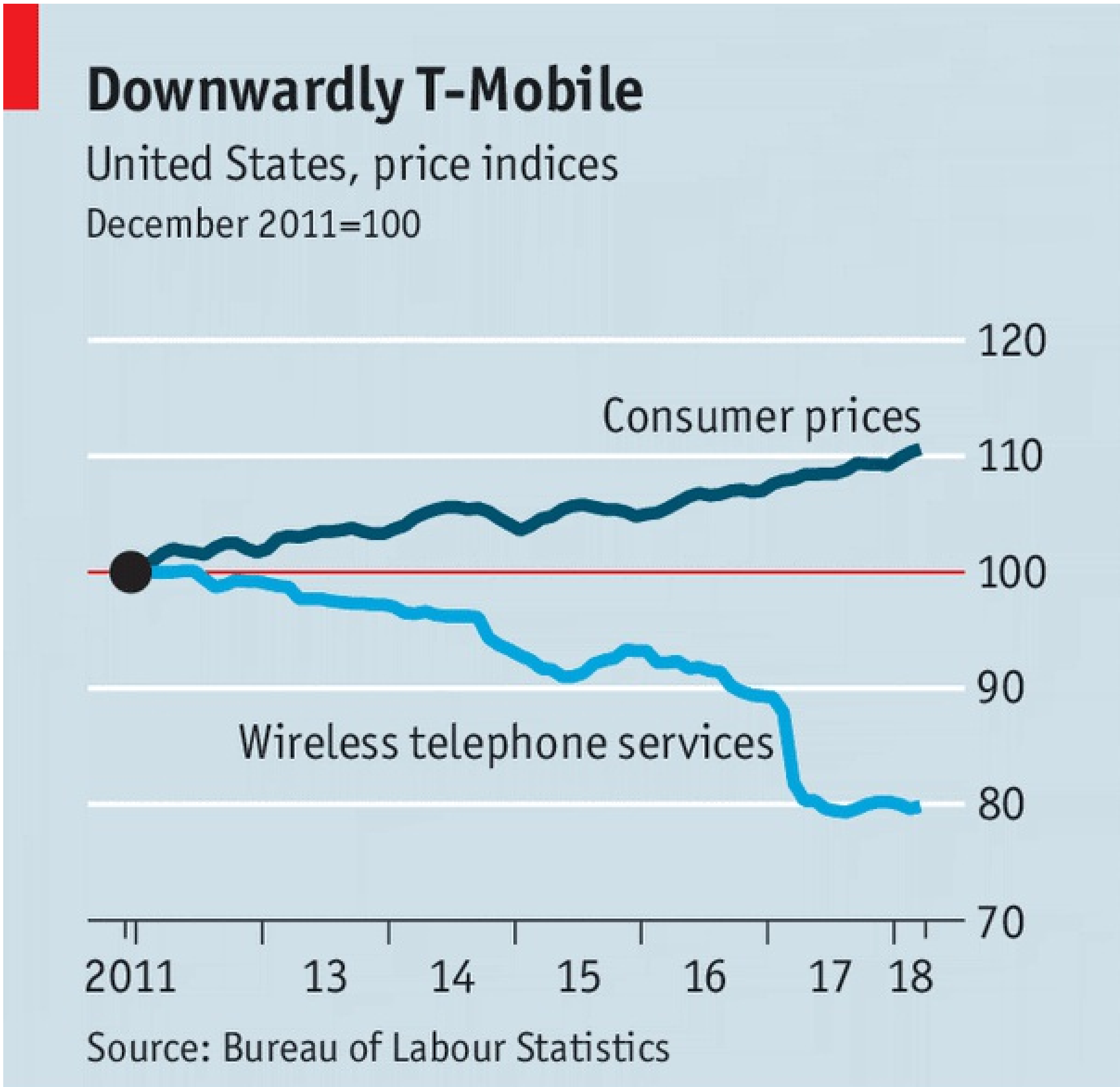
Calling the deal a merger seems a face-saving gesture for Mr Son. The new company will be called T-Mobile, Mr Legere will run it and Deutsche Telekom, its parent firm, will own a plurality of shares. But SoftBank won better terms than analysts expected, getting 27% of the new company and four board seats, including one for Mr Son. He will be able to switch attention from Sprint to his new $100bn Vision Fund, a giant technology fund.

The two companies argue, with some support from analysts, that telecommunications companies increasingly need massive scale to succeed. AT&T; and Verizon have more combined market share now than they did five years ago, at about 70%. (T-Mobile, with 16%, has gained market share mostly from Sprint, which has 12%.) AT&T; is trying to buy Time Warner, pending a regulatory challenge (see article), in part to better lock in customers. Both AT&T; and Verizon are investing in 5G. Mr Legere and

Marcelo Claure, the boss of Sprint (pictured above), say that only by joining up can T-Mobile and Sprint compete against the larger firms.

Their claims about 5G do contain some truth. Combined, the two companies own enough spectrum to cover much of the country with a far zippier network than either has now, though not at the fastest speeds promised with 5G. “Sprint is bringing some serious spectrum assets that T-Mobile doesn’t have and really needs badly for 5G,” says Stéphane Téral of IHS Markit, a provider of market and financial data.

The new T-Mobile would be better and stronger, analysts say, but its prices would probably not be lower. Projections from T-Mobile and Sprint of sharply higher profit margins for the merged firm suggest another priority.



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In 2011 regulators blocked an acquisition of T-Mobile by AT&T;, and in 2014 they indicated to T-Mobile and Sprint that they believed the market still needed four carriers. Customers have benefited: monthly wireless bills for urban consumers have fallen by 20% since 2011 (see chart). Mr Legere's success at T-Mobile, in fact, could be the merger's undoing. T-Mobile appeared on the verge of collapse in late 2011 when regulators blocked the AT&T; acquisition. Since 2013 it has thrived, adding 40m customers by getting rid of long-term contracts, reducing prices and offering unlimited data usage. Craig Moffett of MoffettNathanson writes that the justice department "undoubtedly feels vindicated by its 2011 decision". He gives the merger a 50-50 chance of approval.

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Vintage legal drama

The case against the AT&T-Time; Warner deal has gone badly

Silicon Valley's role in upending pay television undermined the government's argument

May 5th 2018 | NEW YORK

NEAR the end of the antitrust trial over AT&T;'s $109bn acquisition of Time Warner, Richard Leon, the presiding judge, asked Randall Stephenson, chief executive of AT&T;, what the pay-television market would look like in seven years' time. Mr Stephenson mused in his folksy Oklahoma drawl that seven years ago his predictions for today would have missed "so hard" when it came to the decline of pay-TV and the rise of competition from Silicon Valley.

The exchange sounds self-deprecating but it highlighted what AT&T; argued was a crucial weakness in the government's case. The Department of Justice, which is seeking to block the deal, has chiefly looked back to the past, not forward to a video and advertising market increasingly shaped by Netflix, Google and Facebook. Many analysts agree, and are cautiously optimistic about AT&T;'s chances of a favourable settlement or ruling in time for the deal's closing deadline of June 21st.

Further media consolidation would then unfold as big competitors pursue similar vertical mergers of content and distribution businesses. Comcast might immediately launch a hostile bid for much of 21st Century Fox, for example, potentially upending Disney's planned acquisition of much of Rupert Murdoch's entertainment business. It would take only months for the marketplace to transform again.

The central question of the trial, which adjourned on April 30th with closing arguments, is whether AT&T;, which owns DirecTV, a satellite provider, would extract higher prices from other pay-TV distributors and thus from their customers, by threatening to withhold Time Warner's TV networks from them. The government argued that AT&T; could do so, at a cost to consumers of more than $400m a year, because networks such as TNT and CNN represent "must-have" content.

Daniel Petrocelli, AT&T;'s lead lawyer, and defence witnesses, punched several holes in this argument. They argued it would be "absurd" for AT&T; to withhold content from anybody because it would cost them dearly to do so. They said the government's expert witness, Carl Shapiro, had used an economic model based on unreasonable assumptions, overestimating how many consumers would switch pay-TV providers if Turner networks were temporarily blacked out. And they said that Mr Shapiro and the government had not sufficiently reckoned with the pay-TV industry's rapidly declining hold over customers. Several million customers each year are dropping expensive pay-TV packages, including from DirectTV, as consumers flee for cheaper options like Netflix. In other words, ever-fewer people must have Time Warner's so-called "must-have" TV networks.

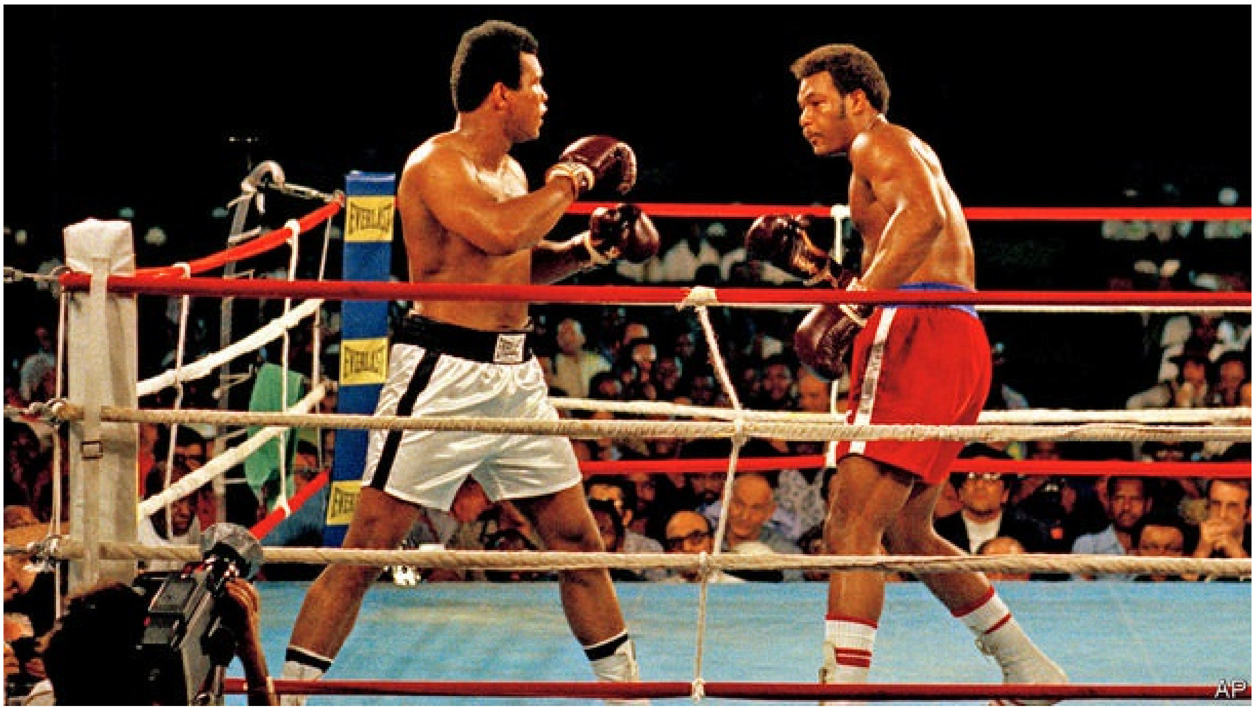
In his testimony Mr Stephenson played up such struggles. He said he wants to use the billions AT&T; is still earning from the declining satellite business to invest in cheaper video options for mobile-phone customers, something he is already doing without Time Warner. He argues that the battleground has moved to mobile in the fight with Netflix, Google and Facebook for subscriptions and advertising.

That reasoning suggests what may be the real long-term goal for AT&T;, which is to use entertainment content to improve its position (it is currently in second place) in wireless, and to take away broadband customers as wireless data speeds become more competitive with fixed-line broadband. If the Time Warner merger goes through, Verizon, the largest wireless provider, may likewise feel compelled to acquire an entertainment firm (concentration in the wireless sector is partly what led this newspaper to recommend blocking the deal when it was announced, in 2016). It is hard to predict how the market will look in seven years. But this is unlikely to be the last time that antitrust regulators and industry lawyers clash in court.

Rumble in the jungle

Glencore, a hard-slugging mining giant, meets its match in Congo

A fight between two billionaires involves a coveted mineral, cobalt



May 3rd 2018

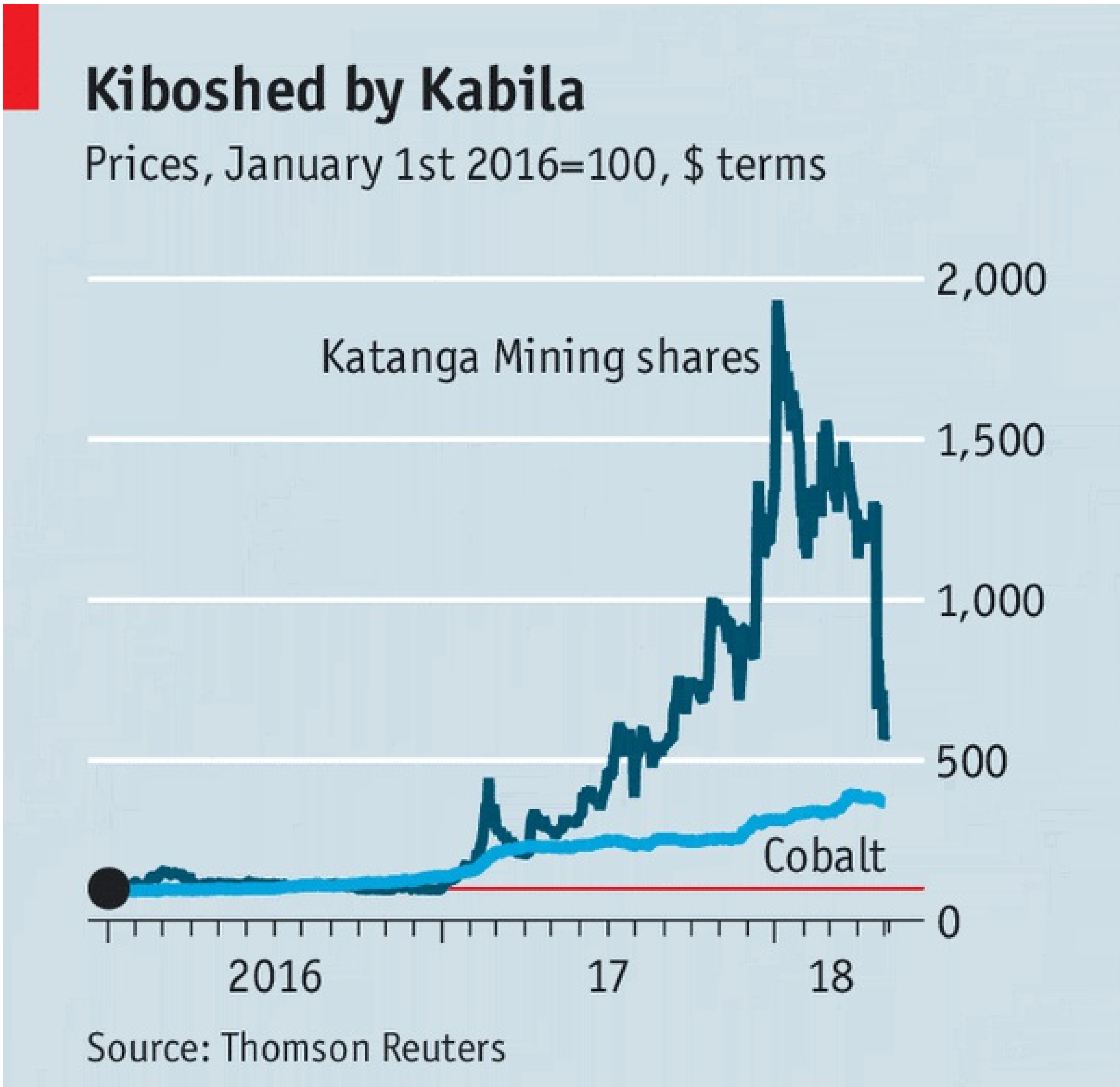
IN THE mining world the bout has the drama of a heavyweight title fight. In one corner is Ivan Glasenberg, billionaire boss of Glencore, the world's biggest commodities-trading firm. In the other is Dan Gertler, an Israeli billionaire accused by America of corruption related to his dealings with Joseph Kabila's government in the Democratic Republic of Congo (DRC).

The prize is a battery mineral, cobalt, which Glencore produces in the DRC and whose value has almost tripled since the electric-vehicle revolution accelerated at the start of 2017. It will be a tough fight. In the DRC Glencore is currently facing the potential loss of one of its biggest mines and sharply higher mining levies, as well as a costly lawsuit. "It's a shakedown of Glencore," says an analyst in London.

The clash between Messrs Glasenberg and Gertler, two former business partners, dates back to December, when the American government slapped sanctions on Mr Gertler, accusing him of amassing hundreds of millions of dollars through “opaque and corrupt” mining deals in the DRC, which he denies. Glencore’s two mining companies in the country, Kamoto Copper Company (KCC) and Mutanda Mining, had been paying royalties to firms owned by Mr Gertler in recent years, as required by Gécamines, the country’s state mining company. In order to avoid violating the sanctions, Glencore says it has stopped those payments.

On April 27th a company affiliated to Mr Gertler filed a suit in the DRC to freeze some assets of KCC and Mutanda, and to seek damages of almost $3bn for future unpaid royalties. The sum is staggering. Glencore says it “entirely rejects” the calculation. According to audited accounts, KCC’s last payments to a Gertler-related company were $54.7m in 2015. On May 1st Glencore won a temporary injunction in a London court against Mr Gertler taking further legal action against KCC. But the court did not rule on the legality of the Congo proceedings, and Glencore’s assets there remain frozen —at least until another hearing on May 11th.

Mr Gertler’s move puts serious strain on Glencore’s operations in Congo, where it is the biggest producer of both copper and cobalt. It is under attack there on other fronts, too. Last month Gécamines started legal proceedings in the DRC to dissolve KCC, in which it is a joint-venture partner with Glencore’s Toronto-listed subsidiary, Katanga Mining, arguing that KCC’s $9bn debt is draining the firm for Glencore’s benefit. Katanga’s shares, which soared last year on the strength of rising cobalt prices (see chart), have plunged on fears that Gécamines may nationalise the mine and sell it to a Chinese rival.



Economist.com

Glencore says it hopes to recapitalise KCC to save it from the possibility of nationalisation. NGOs pressing for greater transparency in Congo, such as Belgium-based Resource Matters, say that would be long overdue. They say the debts (mostly borrowed from Glencore-related companies) have helped KCC cut its tax bill in a poverty-stricken country in dire need of roads, schools and hospitals.

Yet even if that matter is settled, Glencore faces another round of pain—a new mining code that could sharply raise royalty rates on mineral production.

Glencore and other global mining firms in the DRC have so far failed to persuade the authorities in Kinshasa to relax some of the terms of the code, though negotiations are said to be continuing.

Mr Glasenberg may be partially reaping what he sowed, analysts say. His firm long did business with Mr Gertler, despite reports about the latter's relationship with Mr Kabila. Other Western mining firms say they steer clear of the DRC because of reputational and legal risks. Glencore's travails may be the result of Mr Kabila—who has overstayed his second, and supposedly final, term in office—squeezing mining firms for cash to stay in power.

Glencore may survive the slugfest. Some analysts say it may be encouraged to make a big tax prepayment to Gécamines to preserve its assets (it would probably have to verify where that money goes). Others say it may attempt to convince America's Treasury to relax sanctions against Mr Gertler (companies may have similarly intervened in the case of Rusal, a Russian aluminium producer that has been sanctioned by America—see Schumpeter). But that is unlikely. Meanwhile, the gloves are off.

Searching for the big time

A startup in Paris is scaling up unusually fast

Algolia’s clever website search system has won thousands of American businesses as customers

May 3rd 2018 | PARIS

IT WAS not the sort of do-it-yourself activity that Castorama, a French home-improvement chain, usually promoted. The search engine on the firm’s website started offering customers puerile responses to their inquiries. Its auto-complete text function suggested such intriguing products as a “bollock hammer” or “cock sander”. It also returned offensive anti-Semitic phrases. The firm blamed manipulation by unnamed actors and had to briefly scrap its search function.

That incident, two years ago, was a reminder that much online search occurs within websites. Internet giants such as Google excel at bringing users to sites but once there customers often rely on websites’ own search functions to find products or services. Some firms build their own engines; others use open-source software, such as Elasticsearch, to supply them. The results can sometimes be painfully slow and undiscerning.

As e-commerce grows, so does demand for search systems that are fast, accurate and resilient to typos or tampering. A firm that saw an opportunity in this is Algolia, a French startup founded in 2012. It has a search application that hunts the client's website and swiftly offers consumers relevant results.

Algolia is growing unusually fast for a European startup. It has some 200 engineers and other staff, up from 60 in 2016, most of them based in penthouse floors at its new headquarters behind Paris-Saint-Lazare station (its legal headquarters and a marketing office are still in San Francisco). The firm says it has over 4,500 clients, more than double the tally of two years ago, mostly in America. Its platform is processing 41bn search requests a month, as of March, again more than double the equivalent figure two years ago.

One client, Twitch, a live-streaming video platform owned by Amazon, sees nearly 1bn visits to its site each month, leading to lots of searches. Other customers include Stripe, a cloud-based payments firm; Medium, a publisher; Crunchbase, a database for techies; and various Fortune 500 and CAC 40 firms.

Its figures sound impressive, but there is no ad spending attached to its searches since users are already on company websites. Algolia's model is to charge clients for its bespoke service, rather than selling ads and scooping up data about users. Its revenues reached $1m in 2014, two years after founding, rose to $10m in 2016 and doubled to $20m last year.

Julien Lemoine, Algolia's co-founder, sees opportunity among midsized European firms, which are belatedly aware that they must expand their digital offerings. He has plans for operations in Germany and Japan, after opening in Australia this year. Engineers are focused on "natural-language processing" to improve search in tricky tongues like Arabic and Japanese.

A perennial complaint about young tech firms in France is that—despite their gifted engineers and smart ideas—few know how to scale up fast enough to interest big investors. Cedric Sellin, a Paris-based business angel, reckons that locals are too scared of venturing abroad early. "Too many startups try to nail it here, before they think of going elsewhere," he says. Algolia, in contrast, uses English in all its offices and sought clients in America from the start. The founders' experience at Y Combinator, a revered school for startups in California, helped them become unusually comfortable, for a French outfit, about taking risks.

Raising serious amounts of capital early also helped. France may have plenty of seed funds for the smallest startups, but ambitious firms usually have to relocate across the Atlantic in search of big investments. But Algolia drew in $74m from investors led by Accel, a venture-capital firm in London, that were attracted by the firm's global ambitions. Turning *l'Hexagone* into a "startup nation" means looking beyond France's borders.

Chain reaction

Trade wars threaten to disrupt American firms’ global supply chains

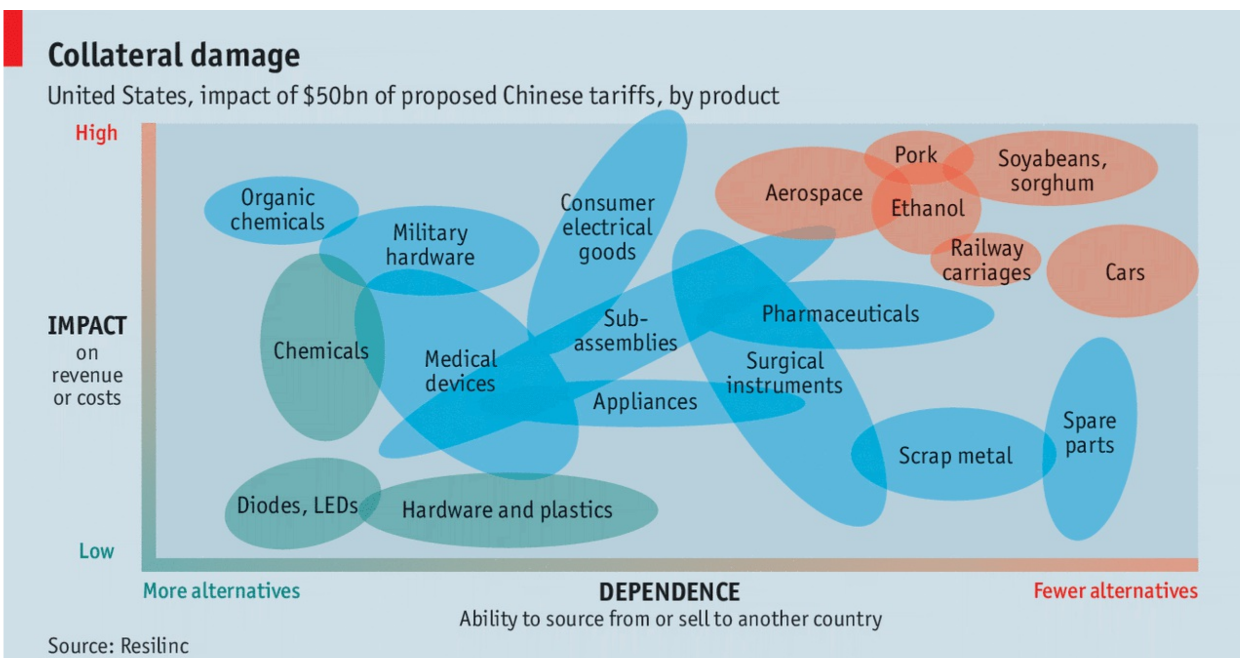
Yet most companies are in the dark about the possible impacts

May 3rd 2018 | COLUMBUS, OHIO

“DON’T panic yet,” advises the sandwich king of Ohio. Robert Grote is chief executive of JE Grote Company, a family-run firm in Columbus that is a global manufacturer of pizza-preparation machines, bacon-slicers and automated sandwich-makers. Since about half of its $60m or so of annual sales comes from outside America and his firm buys speciality steel from Europe, he is closely following President Donald Trump’s recent efforts to upend the global trading order. Though European executives he knows are alarmed, he says his American peers believe Mr Trump’s threats are probably negotiating tactics and are willing to “let it play out”.

Mr Grote’s relaxed stance might seem reasonable. The Trump administration first caused shock waves on March 8th by unveiling a 25% tariff on imported steel and a 10% tariff on imported aluminium, but quickly granted temporary exemptions to countries responsible for most of America’s imports of those metals. These exemptions were due to expire on May 1st, but at the last minute America offered the European Union, Mexico and Canada extensions for another month. The Trump administration says it will use the additional time to conclude a renegotiation of the North American Free-Trade Agreement (NAFTA), and to push the EU into agreeing to "voluntary" quotas on exports. As for the threat of a trade war with China, Mr Trump's dispatch this week of his top trade officials to Beijing fuelled hopes of a negotiated settlement.

Yet there are plenty of reasons to worry, too. Some are obvious. America's trading partners could lash out. This week the European Commission declared, after news of the extensions, that "we will not negotiate under threat." China has already imposed tariffs on dozens of American imports, ranging from wine to pork, in response to the tariffs on steel and aluminium, and proposed $50bn in tariffs targeting soyabeans, chemicals, cars and other products. If these were to come in, the impact on American firms would vary (see chart). The industries that will suffer most are ones, like aerospace and agriculture, that both sell a lot in China and that do not have many alternative markets.



Economist.com

Even if tensions de-escalate, some damage will already have been done.

Devry Boughner Vorwerk of Cargill, an American grain-trading titan, points out that merely threatening to impose tariffs on China has harmed America's reputation as a reliable supplier: "It's not a good idea to insult your best customers."

Businesses that consume steel and aluminium will pay higher prices for their inputs. A report released on May 1st by America's Institute of Supply Management, an independent research outfit, confirms that price increases and shortages are already squeezing local firms. Among other examples, it cites a fabricator of metal products that has been forced to eliminate some products because of the difficulty and cost of acquiring raw materials. American steel and aluminium producers are certainly gearing up for greater demand. Jesse Gary of Century Aluminium says his firm is planning to invest over $100m to expand and modernise its production facilities in Kentucky.

LinkedOut

So much is relatively clear. Much harder to calculate is the exposure of American firms to supply-chain risk as a result of disruptions to international trade. Resilinc, a supply-chain analytics and management firm, has gathered data on the global purchasing and inventory transactions of nearly 30,000 manufacturers and suppliers worldwide. Bindiya Vakil, its boss, says that "most companies are unable to quantify the risk of a serious trade war," in part because the relevant information is "siloed" in firms and not properly analysed. A senior executive at an American *Fortune* 100 firm admits that the firm has spent a month intensely studying the likely impacts of Mr Trump's policies and still does not know how its suppliers and sub-suppliers will be affected.

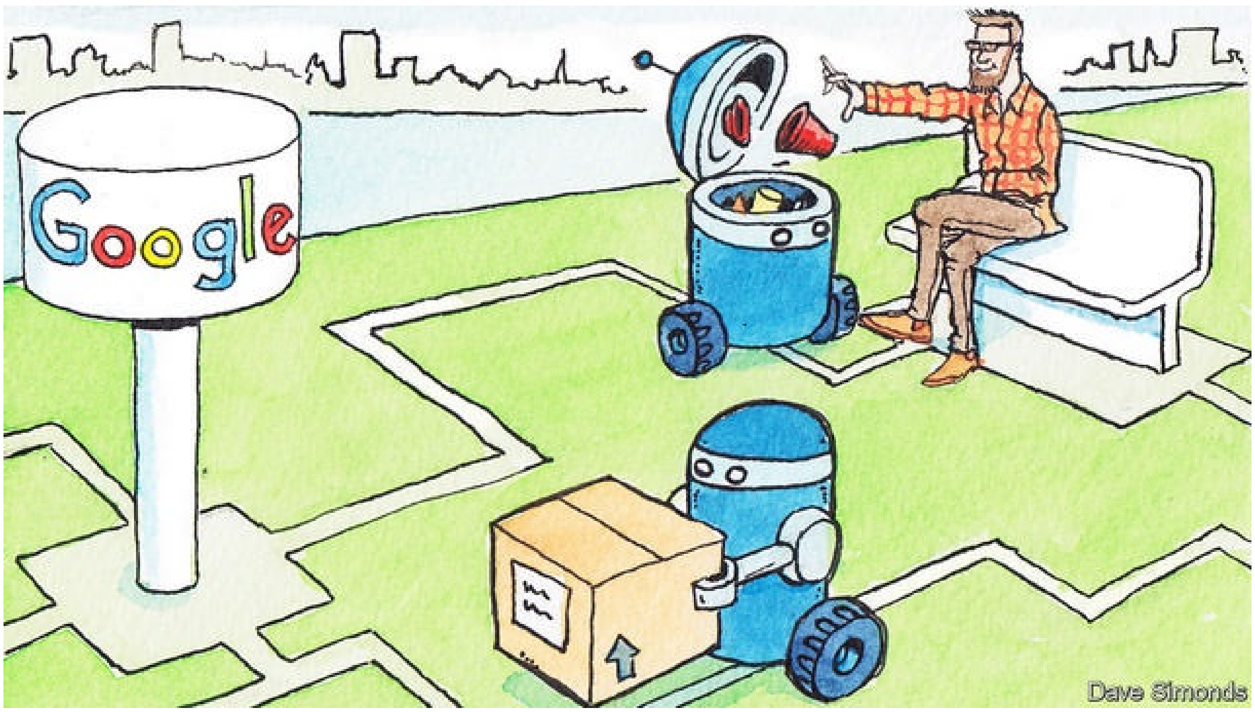
But there is little doubt that supply chains and the geography of production will shift. Some firms have already been rejigging output to cope with the possible demise of NAFTA. Fiat Chrysler Automobile (whose chairman sits on the board of *The Economist*'s parent company) said in January that in 2020 it will move assembly of its Ram pickup trucks from Mexico back to Michigan. That would sidestep the imposition of tariffs of 25% if America were to exit NAFTA. Its plant in Mexico, which has free-trade agreements with a host of countries, will be used to make vehicles for export to other markets around the world. An executive at a giant American industrial firm says that if tariffs increase the cost of manufacturing substantially at its American plants, it will shift some production to its plants in Europe or Asia.

In many cases, then, American factories will not benefit. Eric Hillenbrand of Alix Partners, a corporate-restructuring firm, confirms reports that firms of various nationalities which used to import raw metals and process them in America (for example, bending or forging steel or aluminium into complex shapes) are preparing to shift that value-added work out of the country owing to the metals tariffs. Working out what the Trump administration intends on trade is hard enough. Working out what effects it will have is even tougher.

Streets ahead

The world’s first neighbourhood built “from the internet up”

Toronto’s run-down Quayside area will have snow-melting pavements, package-delivery robots and self-driving shuttles



May 3rd 2018 | TORONTO

QUAYSIDE, an area of flood-prone land stretching for 12 acres (4.8 hectares) on Toronto’s eastern waterfront, is home to a vast, pothole-filled parking lot, low-slung buildings and huge soyabean silos—a crumbling vestige of the area’s bygone days as an industrial port. Many consider it an eyesore but for Sidewalk Labs, an “urban innovation” subsidiary of Google’s parent company, Alphabet, it is an ideal location for the world’s “first neighbourhood built from the internet up”.

Sidewalk Labs is working in partnership with Waterfront Toronto, an agency representing the federal, provincial and municipal governments that is responsible for developing the area, on a $50m project to overhaul Quayside. It aims to make it a “platform” for testing how emerging technologies might ameliorate urban problems such as pollution, traffic jams and a lack of affordable housing. Its innovations could be rolled out across an 800-acre expanse of the waterfront—an area as large as Venice.

First, however, Sidewalk Labs is planning pilot projects across Toronto this summer to test some of the technologies it hopes to employ at Quayside; this is partly to reassure residents. If its detailed plan is approved later this year (by Waterfront Toronto and also by various city authorities), it could start work at Quayside in 2020.

That proposal contains ideas ranging from the familiar to the revolutionary. There will be robots delivering packages and hauling away rubbish via underground tunnels; a thermal energy grid that does not rely on fossil fuels; modular buildings that can shift from residential to retail use; adaptive traffic lights; and snow-melting sidewalks. Private cars are banned; a fleet of self-driving shuttles and robotaxis would roam freely. Google's Canadian headquarters would relocate there.

Undergirding Quayside would be a "digital layer" with sensors tracking, monitoring and capturing everything from how park benches are used to levels of noise to water use by lavatories. Sidewalk Labs says that collecting, aggregating and analysing such volumes of data will make Quayside efficient, liveable and sustainable. Data would also be fed into a public platform through which residents could, for example, allow maintenance staff into their homes while they are at work.

Similar "smart city" projects, such as Masdar in the United Arab Emirates or South Korea's Songdo, have spawned lots of hype but are not seen as big successes. Many experience delays because of shifting political and financial winds, or because those overseeing their construction fail to engage locals in the design of communities, says Deland Chan, an expert on smart cities at Stanford University. Dan Doctoroff, the head of Sidewalk Labs, who was deputy to Michael Bloomberg when the latter was mayor of New York City, says that most projects flop because they fail to cross what he terms "the urbanist-technologist divide".

That divide, between tech types and city-planning specialists, will also need to be bridged before Sidewalk Labs can stick a shovel in the soggy ground at Quayside. Critics of the project worry that in a quest to become a global tech hub, Toronto's politicians may give it too much freedom. Sidewalk Labs's proposal notes that the project needs "substantial forbearances from existing [city] laws and regulations".

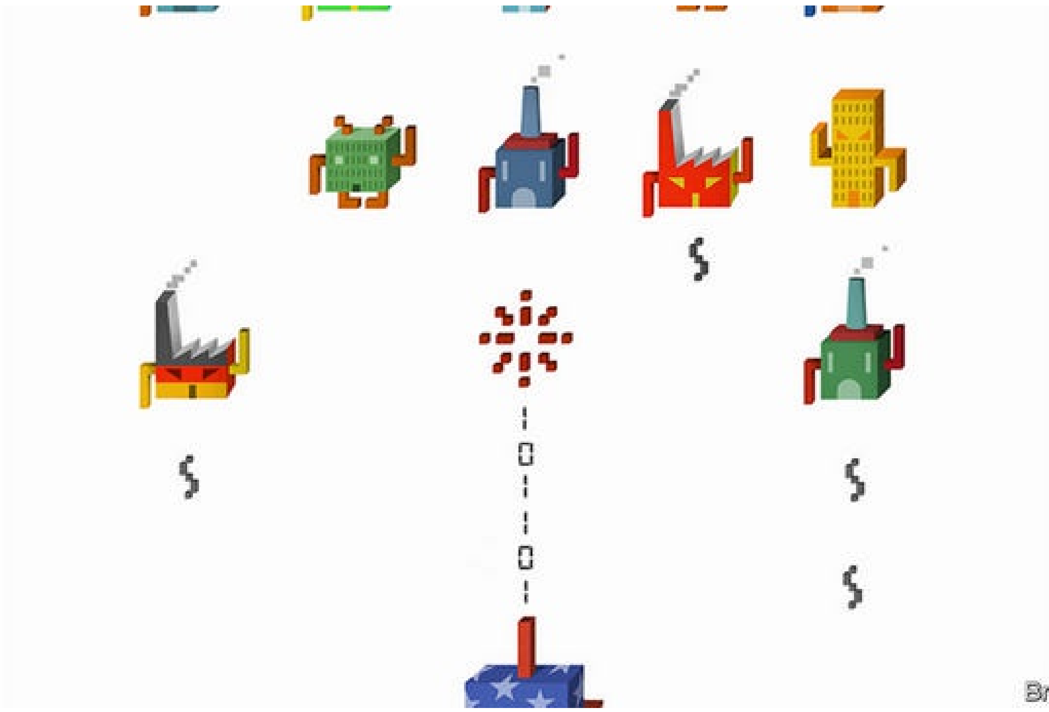
It is not yet known what business model Sidewalk Labs plans for Quayside. Rohit Aggarwala, its head of urban systems, said at a public meeting in March that it is "frankly a little unclear" what it will be. Mr Doctoroff says the firm might make money by licensing the products and services it develops in Toronto and selling them to other cities. It is uncertain whether Torontonians who contributed data to hone the services would share the revenue.

Privacy concerns will doubtless arise—over what data the sensors at Quayside will hoover up, who will own them, where they will be housed and so on. For now, Sidewalk Labs has said it will not use or sell personal information for advertising purposes and that the data will be subject to "open standards", allowing other firms and agencies to make use of it. Sidewalk Labs and Waterfront Toronto have brought in a former federal privacy commissioner and a former privacy commissioner of Ontario as advisers.

But privacy experts call such assurances insufficient, because Canada's legal frameworks for data privacy and security lag behind the latest innovations from tech firms. "You can always choose whether or not to download an app on your phone," says Kelsey Finch at the Future of Privacy Forum, a think-tank. "You can't easily opt out of the community that you live in."

Zap! American officials can destroy foreign firms like gremlins on a screen

But there are also big downsides to the actions against Rusal and ZTE



Brett Ryder

May 5th 2018

WARFARE has been transformed by drones. Using pilotless aircraft armed with precision weapons America can kill its enemies—in, say, the Hindu Kush or Syria—with a click of a mouse. There is a similar shift in economic diplomacy, where Uncle Sam has perfected new weapons that exploit its power over the world's financial plumbing and over the brainiest parts of the tech industry. In April these weapons were used in anger on big, important firms for the first time. The targets were Rusal, a Russian metals firm, and ZTE, a Chinese electronics company. The results have been devastating—and alarming.

In 1919 Woodrow Wilson called international sanctions a "silent, deadly remedy" and over the next 70 years America deployed them about 70 times, reckons Gary Hufbauer of the Peterson Institute. America achieved its geopolitical objectives only a third of the time, he says. But there was little doubt that it could meet its narrower goal of inflicting pain by halting trade with other countries and by freezing foreigners' assets in America.

But by the 1990s globalisation had weakened America's clout. Foreign firms had more countries to trade with. Multinationals saw fines from the authorities as a tolerable cost of doing business. The nadir was the Iraq oil-for-food programme in the 1990s, administered by the UN. Over 2,000 firms were suspected of making illegal payments to Saddam Hussein's regime.

Everything changed after September 11th 2001. American officials realised they could use data and financial flows as a weapon, according to Juan Zarate, a former official, in his memoir "Treasury's War". The Patriot Act in 2001 allowed the Treasury to label foreign banks as threats to financial integrity and to ban them from the system for clearing dollar payments. In 2001-03 America won the right to peer into SWIFT, a formerly confidential global bank messaging system. Suddenly America could track its enemies. And it could make them radioactive to most counterparties, because any bank that touched them, even indirectly and with multiple degrees of separation, could be banned from clearing in dollars—which, if you run a cross-border bank, is fatal.

Between 2002 and 2008 the Treasury experimented with small fry. It brought to heel Victor Bout, an arms dealer; BDA, a bank in Macau that traded with North Korea; and Nauru, a Pacific island with a sideline in exotic finance. Since 2008 Western banks have been fined for breaking rules in the past, but not banned from dollar clearing. More recently Iran and Syria have faced new sanctions but they have few links with the global economy.

Last month, the stakes were raised. At the end of 2017 Rusal was one of the world's largest aluminium producers, with an enterprise value of $18bn, controlled by Oleg Deripaska, an oligarch close to Vladimir Putin. Kapow! In April it was sanctioned as part of a package of measures against Russia. Rusal's links to America are slight. It makes 14% of its sales there, does not typically use American banks and is listed in Hong Kong and Moscow (a related company, EN+, is listed in London).

The consequences have still been devastating. Many investors must sell their securities. Rusal may be unable to refinance its dollar debts. Global trading houses that buy its product have curtailed activities, as has Maersk, a shipping line. The London Metal Exchange has limited trading with Rusal. Credit-ratings agencies have withdrawn ratings. European clearing houses will not settle its securities. Its shares have dropped by 56% and its 2023 bonds trade at 45 cents on the dollar. Mr Deripaska is scrambling to sell down his indirect interest in Rusal to try and save it.

What about ZTE? At the end of last year it was the world's fourth-biggest telecoms-equipment firm, with an enterprise value of $17bn, boasting a Chinese state firm as its anchor shareholder. It only makes around 15% of its sales in America. Bang! On April 16th the Commerce Department banned American firms from supplying it with components for seven years. ZTE had admitted trading with Iran and North Korea and then, in 2016 and 2017, it lied about the remedies it had put in place. ZTE's shares have been suspended. The fallout will be severe. UBS, a bank, reckons that 80% of ZTE's products rely on components from America, mainly cutting-edge semiconductors. Western banks and firms will be worried about coming into contact with it.

Companies that break the law or act in concert with autocratic governments do not deserve sympathy. But there are three, unsettling conclusions to draw from America's first use of smart weapons against big foreign firms. First, any large company can be reached. No fewer than 2,000 big companies outside America issue dollar bonds, for example. Total dollar debt owed by firms outside America is over $5trn. Cross-border supply chains mean most firms rely on American tech components in some way.

Second, these powers could be misused, either for overtly political ends or because they are badly calibrated. The aluminium market is in turmoil—so much so that the Treasury, surprised by its own potency, may do a U-turn over Rusal. After ZTE, investors worry that Huawei, a Chinese rival, could be next. Its international sales are two-thirds as big as General Electric's. Or take Chinese banks, which have built up huge dollar debts and deposits as they globalised. Last year the Treasury considered sanctioning CCB and Agricultural Bank, according to Bloomberg. In total they have $344bn of dollar liabilities; sanctions could start a run.

Killing me softly

The third conclusion is that other countries will develop ways to escape America's reach. ZTE and Rusal offer a step-by-step guide to what you need to survive without American permission: semiconductors, a global currency and clearing system, credit-ratings agencies, commodity exchanges, a pool of domestic investors and shipping firms. These are all things that China is working on. America's use of its new weapons simultaneously demonstrates its power and will hasten its relative decline.

Finance and economics

Dollars and sense

Make Bank of America great again

A sprawling financial empire has found a winning strategy

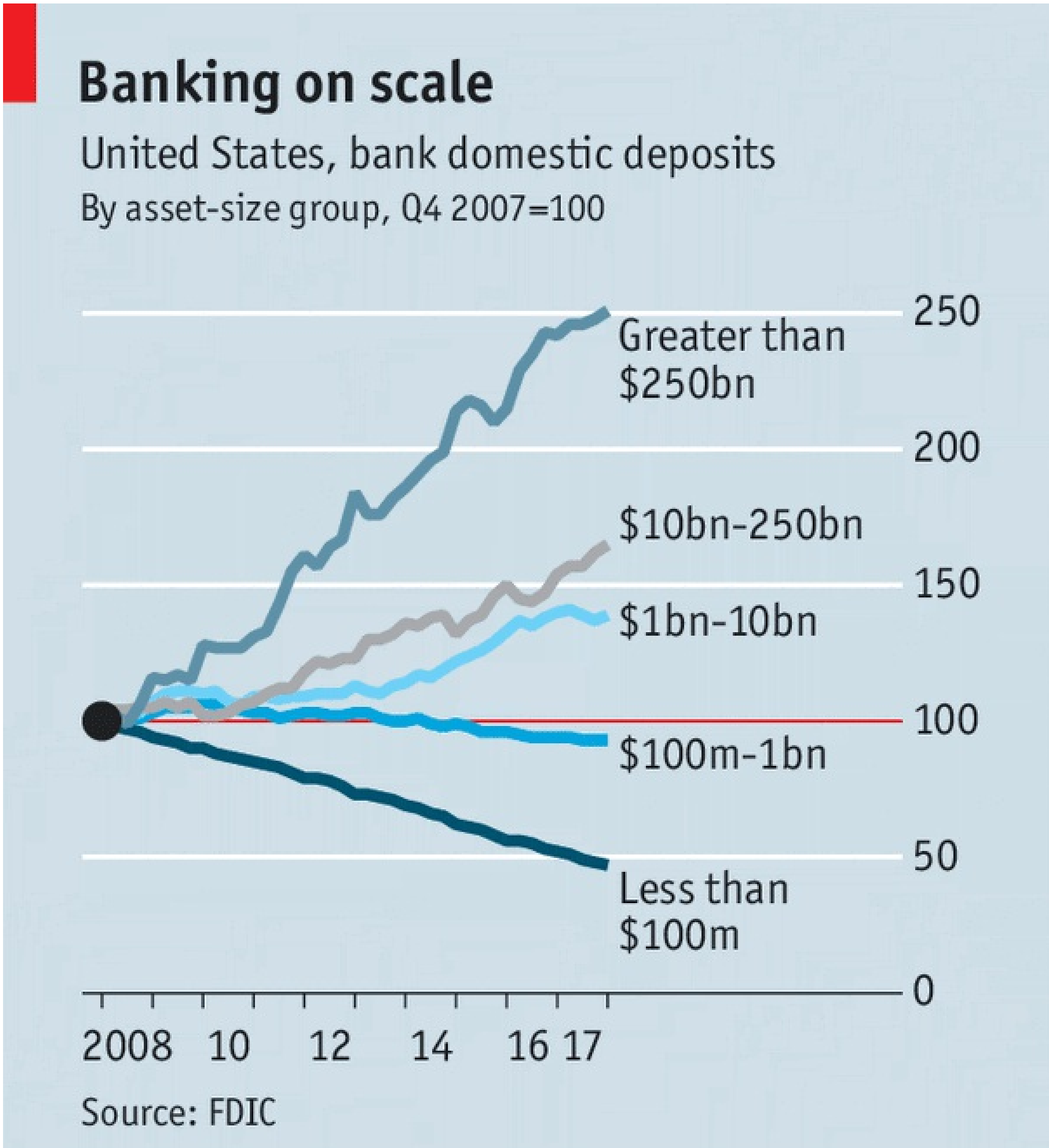
May 3rd 2018 | NEW YORK

IN THE skyscraper that is Bank of America's New York headquarters, the chief executive, Brian Moynihan, looks relaxed. The bank has just announced record first-quarter earnings. Its return on equity is comfortably in double digits. Its share price has been on a roll. The revival of America's second-largest bank, he avers, was inevitable. Any dark moments? None, except perhaps when America's sovereign debt was downgraded in 2011 and all the country's banks suffered. Early hints at the current prosperity? On his first day in the job, in 2010, he says. Vast losses from bad debt and litigation merely obscured billions of dollars in operating profits. "We just had to get rid of what was dragging us down."

In fact, this renaissance was anything but predictable. Over little more than half a century Mr Moynihan's two predecessors, Hugh McColl and Ken Lewis, had transformed the tiny North Carolina National Bank into an institution that could claim a business relationship with half of all American households. Any disruption along the way was dwarfed by the consequences of the final two acquisitions, Countrywide Financial, a subprime lender, and Merrill Lynch, an investment bank with underwriting, brokerage and trading arms. Both imploded during the financial crisis. Asked what made Mr Moynihan the right person to take over in the midst of the chaos, the acerbic Mr Lewis was reputed to have quipped: “He wanted the job.”

Over the next five years Bank of America lost $134bn on loans that were repaid late or not at all and related expenses, and spent a further $64bn on litigation. Headcount had peaked at 302,000 in 2009 after the Merrill purchase; it fell by 100,000 in a brutal series of redundancies. The number of branches was slashed from 6,100 in late 2008 to 4,500. For years, the pain seemed fruitless. As recently as February 2016, its shares traded at half their accounting value. Regulations that in effect outlawed acquisitions constrained its opportunities for growth. Investors had little faith in the worth of its assets, or indeed in its strategy.

The stockmarket has since become a believer. The bank’s shares now trade at 130% of accounting value. The threat of regulatory sanctions continues to hang over all financial institutions, but Bank of America has been replaced by Wells Fargo as a favoured target. And it has benefited from government policies in other ways. The recent cut in corporate taxes lowered its effective tax rate from 27% to 18%, accounting for a third of its increased profits. The wide variety of capital standards to which big banks must adhere gives a relative advantage to those that have lots of businesses, and can thus arrange their affairs most efficiently. The crisis-era bail-outs sent the message that the government regarded the largest banks as too big to fail. Deposits have since flooded in (see chart), even though interest rates have been nugatory, keeping funding costs down. And the rules intended to avert future bank failures have helped big banks see off competition from smaller ones, since they can spread compliance costs over a larger base.



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Mr Moynihan is now hacking away at anything not directly related to servicing Bank of America clients. He has got rid of stakes in Santander, BlackRock, China Construction Bank and Banco Itaú; credit-card businesses in Britain, Canada, Ireland and Spain; and a slew of private-equity investments. He has kept hubs in London and Hong Kong for trading and investment banking, which act as a conduit between foreign clients and

America, and American clients and the world. But wealth management, once offered in 35 countries, is now offered in just one—America.

Internal restructuring has been unrelenting. The bank claims to have moved away from lucrative but risky activities such as subprime lending for cars, cards and homes. When Mr Moynihan took over the top job, 23 kinds of current accounts were offered. That has been cut to three. The number of people visiting Bank of America branches has declined from a peak of 1m weekly a couple of years ago to 850,000, even as the volume of transactions has increased. A quarter of all deposits are now done using a cheque-photographing feature on smartphones.

Finally, however, Mr Moynihan can return to thoughts of expansion. The bank has announced that it will start to open new branches once more. There will be fewer teller windows and more side-offices where staff can sell investments and loans. It is also trying to create a bridge between its retail branches and its wealth-management and investment-banking activities. It wants to drum up business from midsized companies that would prefer to issue securities through the investment bank, rather than take a loan, and from individuals who would like investment options alongside their bank accounts. It has built a new electronic platform, Merrill Edge. That should help it compete with Fidelity and Charles Schwab, and provide new clients for Merrill's brokers, now rebranded financial advisers.

None of this is all that dramatic. But that is intentional. After the trauma of the financial crisis, any abrupt or daring change of direction by a big American bank would probably be blocked by regulators. For now and some time to come, the twin aims will be to keep improving operational efficiency and avoid disaster. Mr Moynihan has done well enough at both that, when the time comes to replace him, there should be plenty of willing candidates.

Shrink to fit

European universal banks can succeed. But can Deutsche Bank?

Germany’s troubled leading lender is abandoning any aspiration to be a global investment bank

May 3rd 2018

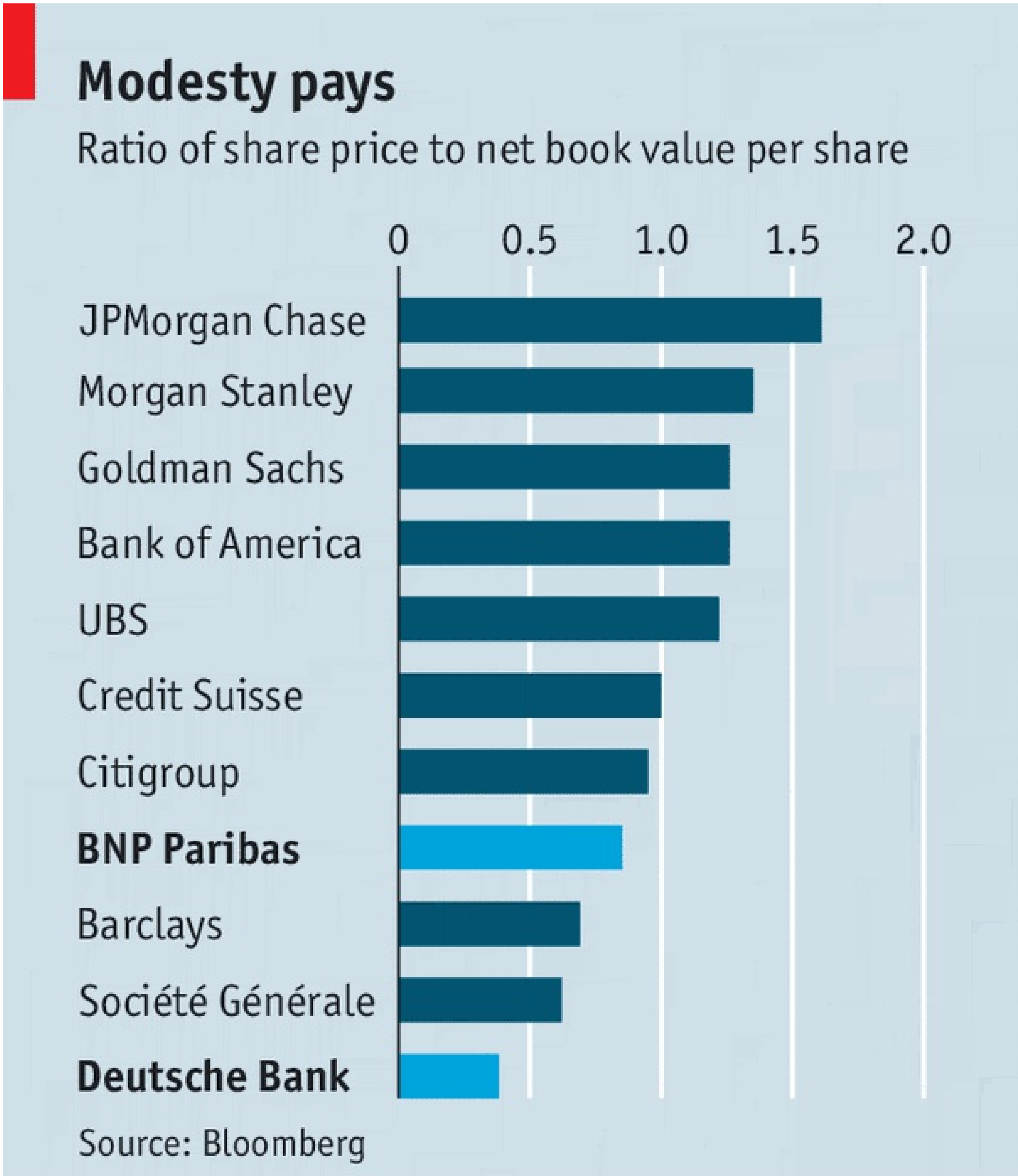
AFTER just 18 days as Deutsche Bank’s chief executive, Christian Sewing had two tasks to perform on April 26th. The easy one, inherited from his ousted predecessor, John Cryan, was to report predictably glum first-quarter results. Net profit dropped by 79%, year on year, to only €120m ($147m). Harder was indicating where he might lead Germany’s troubled leading lender. The rough answer is: back towards Europe, and away from any aspiration to be a global investment bank.

Mr Sewing intends to concentrate more on raising finance and managing payments and currencies for big European companies, and less on America and Asia. He plans to cut the small swaps-repurchasing business in America and to focus the buying and selling of shares for hedge funds and other investors on the most profitable clients. By 2021 corporate and investment banking’s share of total revenues will be trimmed to 50%, from 54% last year. As a result, Mr Sewing said, earnings should become more stable.

So far, says Andrew Coombs of Citigroup, Mr Sewing has supplied “more questions than answers”. He thundered about cost-cutting. Yet he still aims only to keep operating costs below €23bn this year—a target raised by €1bn in February. Longer-term guidance for costs, revenue, assets and leverage is still to come. Mr Coombs worries that restructuring may cost far more than Deutsche is allowing for. So the leverage ratio (a gauge of capital strength), which at 3.7% is well below the figures for its peers, may fall in the short run. Withdrawal from those trading businesses should lift it, but because contracts can last a long time, this may take a while.

As well as its corporate and investment bank, Deutsche has Germany’s biggest retail bank (plus banks in Italy and Spain) and an asset manager, DWS. It thus seems to be settling for being a universal bank with its centre of gravity in Europe. This is far from the course of the 1990s and 2000s, when Deutsche and other European adventurers took on Wall Street.

Such a model can be made to pay. France’s BNP Paribas also combines retail banking, in Belgium, Italy and Luxembourg as well as at home, with a division serving corporations and institutional investors that has a strong European flavour. Granted, the French bank, which is due to report first-quarter results on May 4th, returned an unspectacular 8.9% on equity last year (it hopes for 10%-plus by 2020). Its stockmarket worth is 15% below the book value of its assets. But for Deutsche, that’s dreamland (see chart).



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There are important differences. France has a few big banks; Germany lots of small ones. Though bigger by assets than Deutsche, BNP Paribas is a smaller investment bank. Coalition, a research firm, ranks it sixth in Europe and Deutsche second, with Americans taking the other top slots.

Come what may, Europeans' glory days are gone. Tighter capital rules since the financial crisis, notes Alastair Ryan of Bank of America Merrill Lynch, have hit them harder than American banks. The Americans' vast balance-sheets and huge domestic market give them scale that Europeans, with smaller markets and minuscule rates and margins, cannot match.

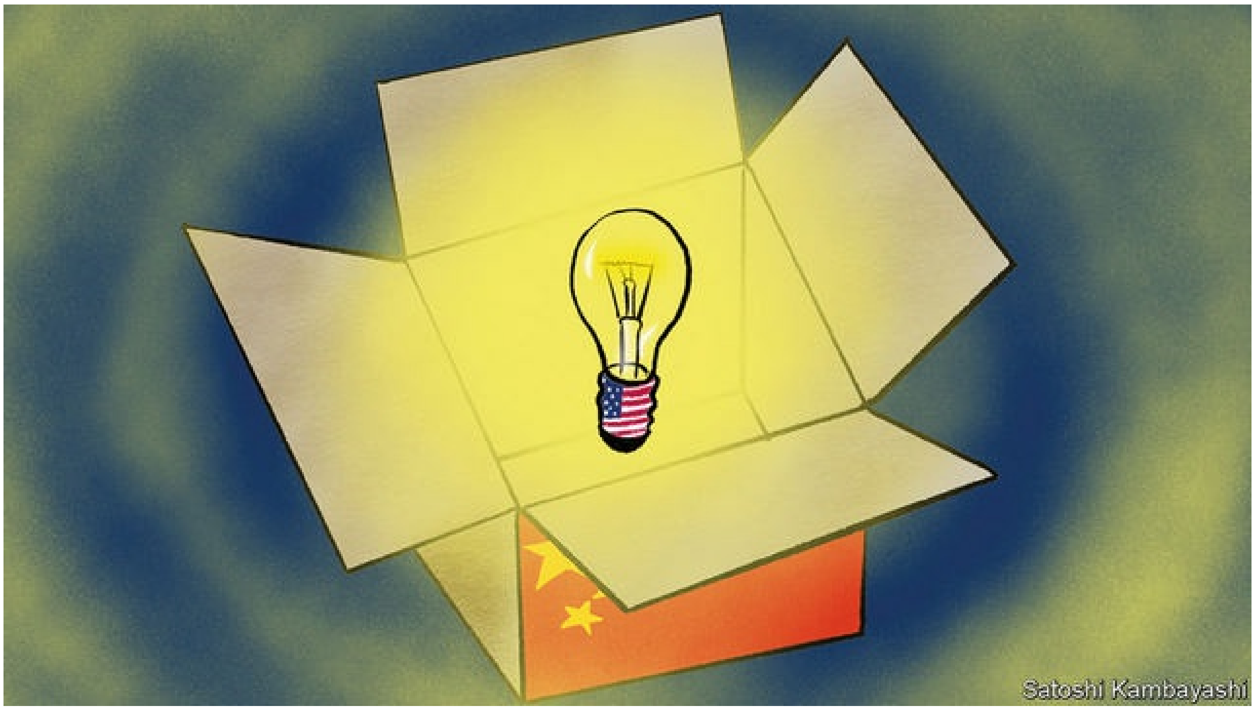
The Americans were also quicker than Europeans to shape up after the crisis. Europeans have had to choose new models. Switzerland's UBS tacked from investment banking towards wealth management; Credit Suisse may have pivoted to Asia just in time; Barclays styles itself as a transatlantic bank; BNP Paribas was never a true swashbuckler anyway.

Even by European standards, Deutsche was slow. As late as 2015 it believed that as others retrenched it would be the "last man standing" and make a killing when business picked up. Did it wake up too late? Over to you, Mr Sewing.

China chill

Fears that China has hurt innovation in the West are overblown

America's patents and research spending have soared alongside its trade deficit with China



May 3rd 2018 | SHANGHAI

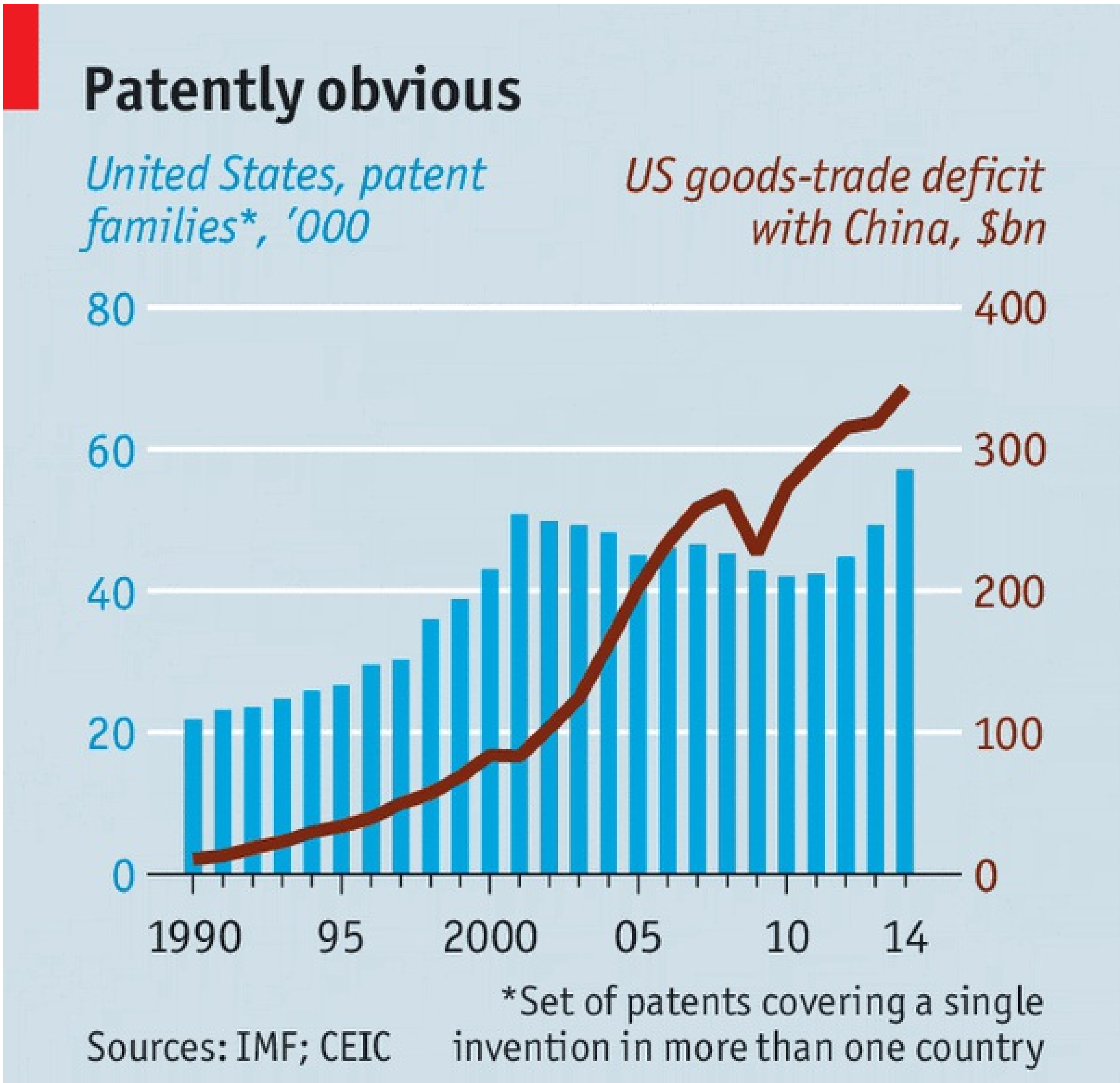
POPULAR concern about free trade with China has focused on the loss of manufacturing jobs in America and Europe. Policymakers have an additional worry: that China's rise is hurting innovation in the West. This fear is among the small set of issues that unites American Democrats and Republicans. In 2016 Barack Obama's commerce secretary said that China's state-driven economy would weaken the world's innovation ecosystem. Donald Trump's advisers allege that China makes it harder for foreign firms to invest in innovation by squeezing their returns. Mr Trump's trade team was expected to raise this complaint, among others, with Chinese officials during talks in Beijing on May 3rd and 4th, as *The Economist* went to press. There is one problem. Data suggest that competition with China has coincided with more innovation in America, not less.

The relationship between competition and innovation is complex, even before considering trade with China. Economists agree that the right competitive landscape fosters innovation. But they disagree about what exactly that landscape looks like. More competition might prod companies to try harder to develop new products in the hope of gaining market share. Alternatively, if competition is cut-throat, profits might evaporate to the point that companies have little incentive to take risks.

The fear is that China generates the wrong kind of competition and stunts the good kind. Businesspeople elsewhere worry that when the Chinese government decides to fund this or that industry, investment soars and margins collapse. Overcapacity in steel was caused in part by Chinese investment in steel processing; semiconductor firms think their industry might be next. At the same time, argues Robert Lighthizer, the US Trade Representative, foreign companies that beat their Chinese competitors are not adequately rewarded because China presses them to transfer their intellectual property.

The two main academic papers on this question looked at the years around China's accession to the World Trade Organisation in 2001. Far from settling the matter, they were contradictory. Economists studying European companies found that competition from Chinese imports both caused firms to improve their technology and led to a shift in jobs to the most advanced firms. They concluded that 15% of the upgrading of technology in Europe between 2000 and 2007 could be attributed to the increase in imports from China. But economists examining the impact on America argued that, on the contrary, Chinese competition had led companies to spend less on research as profits fell. They calculated that imports from China explained 40% of a slowdown in American patenting between 1999 and 2007, compared with the preceding decade.

The IMF has now weighed in with more recent figures. Its conclusion is rather more cheerful, at least for those who think a trade war with China is a rotten idea. In a report published in April the fund showed that, following an extended period of decline, high-quality patents granted to American companies had risen sharply between 2010 and 2014. It also pointed to a big increase in American spending on research and development during the same years—even as America's trade deficit with China rocketed (see chart). The growth in patents was more sluggish in Europe and Japan. But both patents and research spending soared in South Korea, the country most directly exposed to manufacturing competition from China.



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A separate IMF working paper late last year unpicked some of what is happening in America. Competition from Chinese imports has caused research spending to be reallocated within certain industries, away from also-rans and towards the most productive and profitable firms. At the same time, many researchers left manufacturing industries and moved into service sectors such as data-processing and finance. Both results are consistent with an American economy that is playing to its strengths. The IMF's analysts concluded that Chinese imports were not a threat to innovation in America, after all, and that policymakers could take a deep breath. No loud inhaling sounds have yet been reported from the White House.

Smart investment

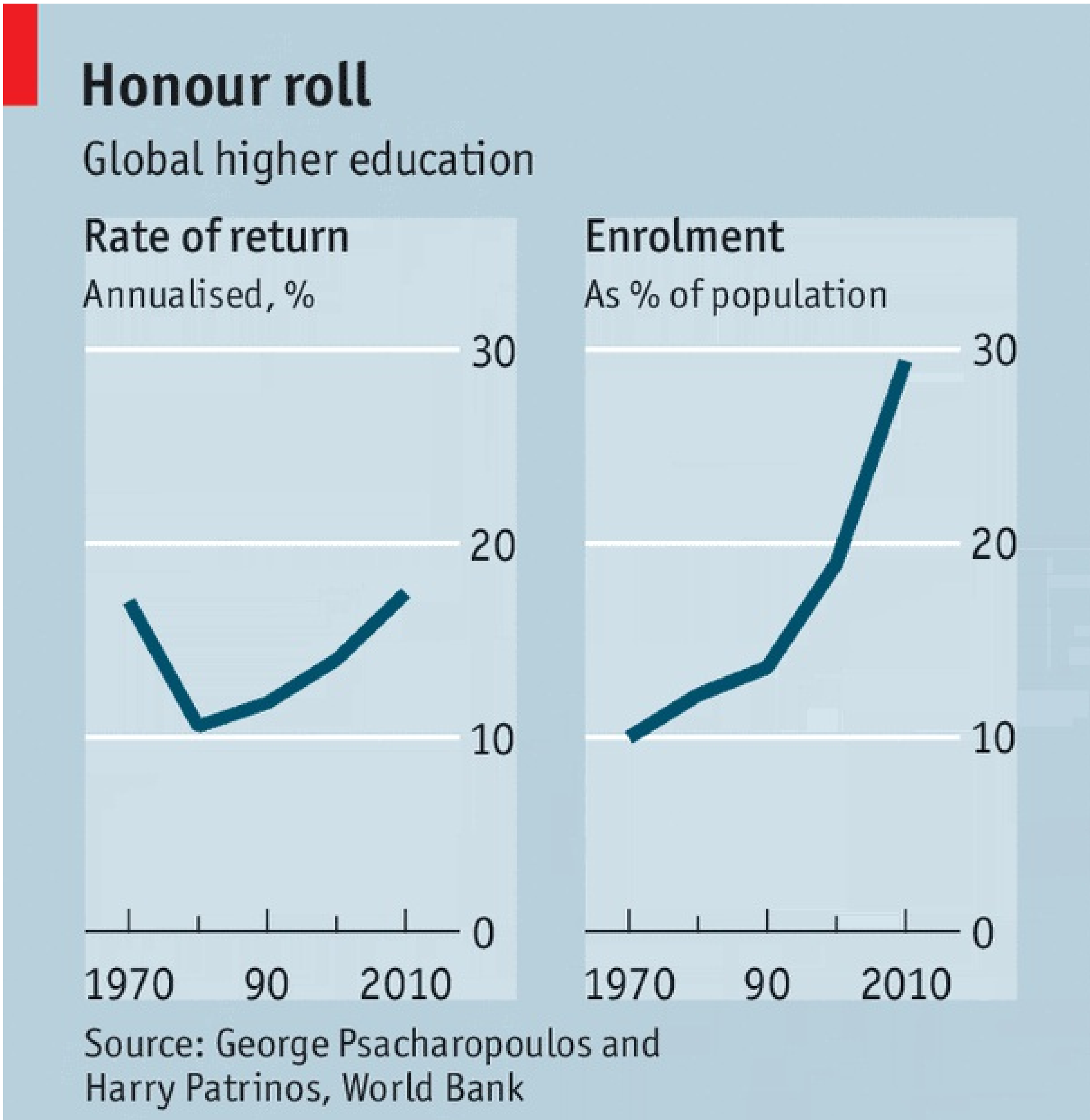
Even though more people are doing it, studying is still worthwhile

Returns to education over the past half-century have beaten the American stockmarket

May 3rd 2018

WHICH has provided a better return in recent decades: America's stockmarket or education? The latter, according to a research review by George Psacharopoulos and Harry Patrinos for the World Bank. The two economists looked at 1,120 studies, across 139 countries, and came up with an annual average "rate of return"—actually a pay premium, the increase in hourly earnings from an extra year of schooling—of 8.8%. The analogy is inexact, but for comparison America's stockmarket returned an annual 5.6% over the past 50 years.

Their figure excludes social gains, such as lower mortality rates associated with greater education. The premium is higher for girls and for primary education. It is also higher in poor countries, presumably because the smaller the share of educated people, the higher the pay they can command. The same reasoning suggests that the return should have dwindled as educational attainment rose. Instead, it has stayed strong, especially for higher education (see chart).



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Some researchers have posited that technological advances have displaced some skilled workers, who have then in turn displaced less-skilled ones, leaving their relative positions in the pecking order—and thus the return to their extra education—little changed. Mr Psacharopoulos and Mr Patrinos are more sanguine. They think the world is witnessing a “race between education and technology”. A rising number of degree-holders has tended to push returns down, but rising demand for higher-level skills, driven by the speed of technological change, has worked in the opposite direction. Technology seems to have been winning.

Rising returns increase the incentive to invest in education. Governments and individuals seem to be responding. Public spending on education as a share of GDP is growing; private education, both at school and tertiary level, is booming. The beneficiaries are people who have access to education, either because they live in rich, well-governed countries or because they can afford to pay privately for it. Rising returns, says Mr Patrinos, signal to individuals to invest more. But they also mean that anyone who does not will fall further behind. “Either way, the conclusion is the same: invest now.”

Where it's due

A bondholder finds a sneaky way to trigger insurance against default

How Blackstone got its credit derivatives on Hovnanian to pay out

May 3rd 2018

IN 2013 Codere, a Spanish gaming firm, owed money it could not repay. Its bonds were trading at just over half face value. Blackstone, a private-equity firm, offered it a cheap $100m loan. But there was a catch. Blackstone had bought credit derivatives on Codere's debt that would pay out about €14m ($19m) if Codere missed a bond payment. So Codere delayed a payment by a couple of days to prompt a "technical default". Blackstone got its payout; Codere got its loan and stayed afloat.

On the satirical "Daily Show", Jon Stewart, the then host, likened the scheme to the insurance fraud in "Goodfellas", in which mobsters insure a restaurant before blowing it up. But that missed an important point. Blackstone did not blow Codere up—quite the opposite. As it said at the time, it "provided capital when no one else would, which allowed the company to live and fight another day". The investors who sold Blackstone credit-derivative contracts had in effect bet that Codere would not go bankrupt. Without the loan, it probably would have. Those investors would still have paid for their error.

Those machinations pale in comparison with Blackstone’s latest financial wizardry. In 2017 Blackstone bought $333m-worth of credit derivatives on Hovnanian, an American construction firm. It offered Hovnanian cheap financing on condition that it trigger those derivatives to pay out. But Hovnanian is in better shape than Codere. Though its bonds are junk-rated, it is hardly flirting with bankruptcy.

That posed two problems. The first is that missing a payment would harm Hovnanian’s image. But Blackstone found an ingenious workaround. A condition of the financing was that a subsidiary of Hovnanian bought $26m of its bonds. On May 1st Hovnanian paid other bondholders but defaulted on those held by the subsidiary.

The second problem is trickier. The derivatives, called credit-default swaps (CDSs), pay the difference between the notional value of a bond and the lowest price at which any of the company’s bonds is trading when the CDS is triggered. This is usually a good proxy for the haircut investors would have to take after a firm’s bankruptcy. If it can pay back only half its debt, its bonds should be trading at around half face value, and the CDS will cover the rest. That makes sense when a company actually defaults, and all bond claims fall due.

Hovnanian required a different approach. Bonds are usually issued “at par”, meaning investors get back the face value at the end of the term. In the meantime, they receive interest (the coupon). The coupon depends partly on how confident investors are that the loan will eventually be repaid in full.

If all Hovnanian’s bonds had been trading close to par, then a technical default would have resulted in a tiny payout. And indeed, most were. But Blackstone’s cheap financing took the form of buying a 22-year bond Hovnanian had recently issued with a 5% coupon—a combination of interest and term that even the bluest of blue-chips could not issue at par. Trading at less than half face value, it is the reference against which Blackstone’s CDS will be valued.

Those who must pay out are, unsurprisingly, irked. One regulator thinks they have a point. America's Commodity Futures Trading Commission suggests technical default may count as market manipulation. But company CDSs fall under the Securities and Exchange Commission, which has said nothing. Courts, so far, have upheld the actions of Hovnanian and Blackstone. One of the CDS sellers, Solus Asset Management, a hedge fund, was denied an injunction to stop the technical default. Blackstone says it remains "highly confident" that its arrangement with Hovnanian is "fully compliant with the long-standing rules of this market".

CDSs were intended as a hedge against losses from defaults, not a bet on a firm deciding to trigger them. But Blackstone's machinations seem to have broken the spirit, rather than the letter, of the rules. Even Bennett Goodman, the boss of its credit-investment arm, has expressed his support for a rewrite. "If people want to change the rules…because they think it makes for a more effective market structure, we are all for it," he said in March. That would indeed be good, fellas.

The Salisbury effect

Transparency is being forced on Britain's overseas territories

Tax havens will have to publish more information about company ownership

May 3rd 2018

AS BRITAIN'S prime minister between 2010 and 2016, David Cameron championed financial transparency, targeting anonymous shell companies as the getaway cars of tax-evaders and money-launderers. On his watch Britain became the first G20 country to commit to a publicly accessible register of company owners. Mr Cameron tried to make British territories with big offshore financial centres do likewise. The arm-twisting stopped when he stepped down in 2016. But campaigners, led in Parliament by Labour's Margaret Hodge, vowed to keep going. This week their persistence paid off.

Ms Hodge and Andrew Mitchell, a Conservative MP, had tabled an amendment to an anti-money-laundering bill, which was designed to force "overseas territories" in the Caribbean and Atlantic, among them the British Virgin Islands (BVI), Bermuda and the Cayman Islands, to set up public registers, if they had not already done so, by the end of 2020. Faced with defeat in the House of Commons, the government dropped its opposition to the amendment, clearing the way for it to be shoehorned into the legislation. The House of Lords, which rejected it in January, is not expected to do so again.

The measure looked a long shot until recently. But that changed with the poisoning in Salisbury, a southern English city, of Sergei Skripal, a Russian ex-spy. The nerve-agent attack sparked intense scrutiny of Russian malfeasance, including oligarchs' use of Britain and its offshore satellites to wash their dirty money. “It's all down to the Salisbury effect,” says a lobbyist.

Global Witness, a campaign group, hailed the breakthrough as the “biggest move against corruption in years”. The affected territories—under British sovereignty but not actually part of the United Kingdom—are livid. They say it breaks a long-standing constitutional arrangement, under which they have been left to shape their own policies on finance and much else. Orlando Smith, the BVI's premier, called it a “ breach of trust” that “calls into question our very relationship with the UK”. His wife, who runs the agency that promotes the islands' financial sector, described it as “smacking of colonialism”.

In fact, such intervention is not unprecedented. Britain's government has laid down the law in its territories on capital punishment and the criminalisation of homosexuality. In 2009 it imposed direct rule on the Turks & Caicos Islands after an inquiry uncovered government corruption. In February, however, it declined to block legislation in Bermuda that revoked a law allowing same-sex marriage. A minister said that such powers “can only be used where there is a legal or constitutional basis for doing so, and even then, only in exceptional circumstances”.

Do the activities of tax havens amount to such circumstances? The territories point out that they have improved their tax-transparency and anti-money-laundering regimes to the point where they are judged as good as or better than those of several OECD countries, including America. They have central ownership registers that can be accessed quickly by British and other law-enforcement agencies.

They also argue that public registers are no panacea. Britain's is in effect an honour system. The only person prosecuted for providing false information so far has been a campaigner who sought to highlight the lack of checks on submissions by registering a firm called after Vince Cable, a former British minister, and naming him as a director. The anti-money-laundering standards set by the Financial Action Task Force, an intergovernmental body, do not require registers to be public.

Anti-corruption activists insist that the rampant use of havens by financial ne'er-do-wells warrants extraordinary action. BVI-registered shell companies, in particular, crop up frequently in tax-evasion and corruption cases. Mr Mitchell argues that public access to registers is important because resource-constrained law enforcement needs help from NGOs and investigative journalists to "join up the dots".

With the bit now firmly between their teeth, anti-corruption types will want more. Pressure could grow for similar treatment of Britain's closer-to-home crown dependencies of Jersey, Guernsey and the Isle of Man, though their relationship with Britain is different. They are not former colonies, which makes it harder for Parliament to legislate for them. Geoff Cook of Jersey Finance, which is part-funded by the island's government and promotes its financial centre, says Jersey will fight to keep its system of "compliant confidentiality", until global standards dictate otherwise. Another battle looms.

Silver service

Japan’s bloated retail banks need to downsize

Too many branches, with too many staff, are weighing on profitability

May 3rd 2018 | TOKYO

SWEEP past the cash machines at the Sumitomo Mitsui bank in Tokyo’s Sangenjaya shopping district and instead enjoy the personal service. Uniformed concierges welcome every customer with a bow. A dozen tellers are watched over by a manager who leaps up to meet elderly patrons. Transactions are concluded with carved signature seals stamped on paper contracts, and another round of bows.

Japan’s high-street banks are not just overstaffed. They are also overbranched. According to the World Bank, high-income countries have on average 17.3 commercial-bank branches per 100,000 adults. Japan has 34.1. If you include branches of the post office, a popular place for people to save, the Bank of Japan (BoJ) reckons the country is the world’s most overbanked.

Retail banks across most rich countries struggled to make money after the financial crisis. But Japan has been close to or in deflation for most of the past two decades. The result, according to a report last year by the BoJ, is "strikingly" low profitability. Return on assets for the 12 months ending in March 2017 was 0.3%, compared with 1% for those in America. "The entire banking system has to drastically shrink," says Naoyuki Yoshino of the Asian Development Bank Institute, a think-tank.

A lingering culture of jobs for life is one reason it hasn't done so yet. The nation's biggest banks are, however, finally starting to act. The IMF warned last autumn that Japan's big three, MUFG, Sumitomo Mitsui and Mizuho, are among nine global banks that suffer from persistently low profitability. Last year all three announced the closure of hundreds of branches and the elimination of 32,000 jobs between them in the coming decade. Mizuho will shed a quarter of its workforce. MUFG says it expects to replace thousands of employees by automating up to 100 of its branches. All that sends a signal to the rest of the industry, says Shinobu Nakagawa of the BoJ.

The megabanks are well-placed to find alternative sources of growth by expanding abroad, says Masamichi Adachi of J. P. Morgan Securities. Reckless lending in Japan in the 1980s and 1990s was followed by a round of mergers. Recapitalisation was complete by the mid-2000s. The result was that big Japanese banks were in a position to snap up some of the business left behind as American and British banks retrenched in Asia after the financial crisis. A spending spree began in 2012. MUFG bought stakes in banks in Vietnam, the Philippines and Thailand. Since 2012 the share of foreign loans by the big three has risen from 19% to 33%. As they retrench at home, this share will probably rise further.

The country's 105 regional banks are worse-placed, says Mr Yoshino. Some are barely profitable and more than half are losing money on lending and fees. As the population has shrunk and aged, these banks' problems have been exacerbated by young people moving to the big cities. Not only is their customer base being whittled away, but the customers they are left with are older people who are most likely to want personal service. The Fair Trade Commission, which regulates competition, has approved 15 regional bank mergers in the past decade and the pace is accelerating. But the Financial Services Agency (FSA), their regulator, is reluctant to put them under too much pressure. Many provide a lifeline to ageing communities and help prop up struggling companies.

The government thinks banks should start offering more funding to startups and smaller firms. It hopes that would stimulate economic growth more broadly, but also thinks it would help the banks themselves by creating new, profitable clients. Nudging risk-averse banks away from calcified business practices while trying to avoid a major shock to the system is a tricky line to tread. “We want them to realise that profitability is low so their business is not sustainable,” says an FSA official. “Mergers are one option but there is still plenty of room for increased productivity.”

As if all this was not hard enough, Japanese banks, like those elsewhere, must also cope with new, low-cost competition. China’s largest fintech company, Ant Financial, has recently set up an office in Tokyo. Line, a messaging service with 75m monthly users in Japan, wants to expand into financial services. SBI Sumishin, an online bank set up by SoftBank Group and Sumitomo Mitsui Trust Bank a decade ago, has quickly become Japan’s most popular mortgage lender, which Noriaki Maruyama, its president, attributes mainly to costs that are a fifth of its lumbering rivals’. It has shaved interest rates on home loans to 1.17% a year, compared with an average for major banks of 1.28%, by streamlining operations (using artificial intelligence to process loan applications, for instance).

Mr Maruyama says the front-office clutter of high-street banks can be stripped away, leaving only cash machines. Most transactions can be done on mobile phones, he says. It is not an uncommon vision for a banker. But other countries do not have such cosseted customers.

Buttonwood

Where will the next crisis occur?

Corporate debt could be the culprit

May 3rd 2018

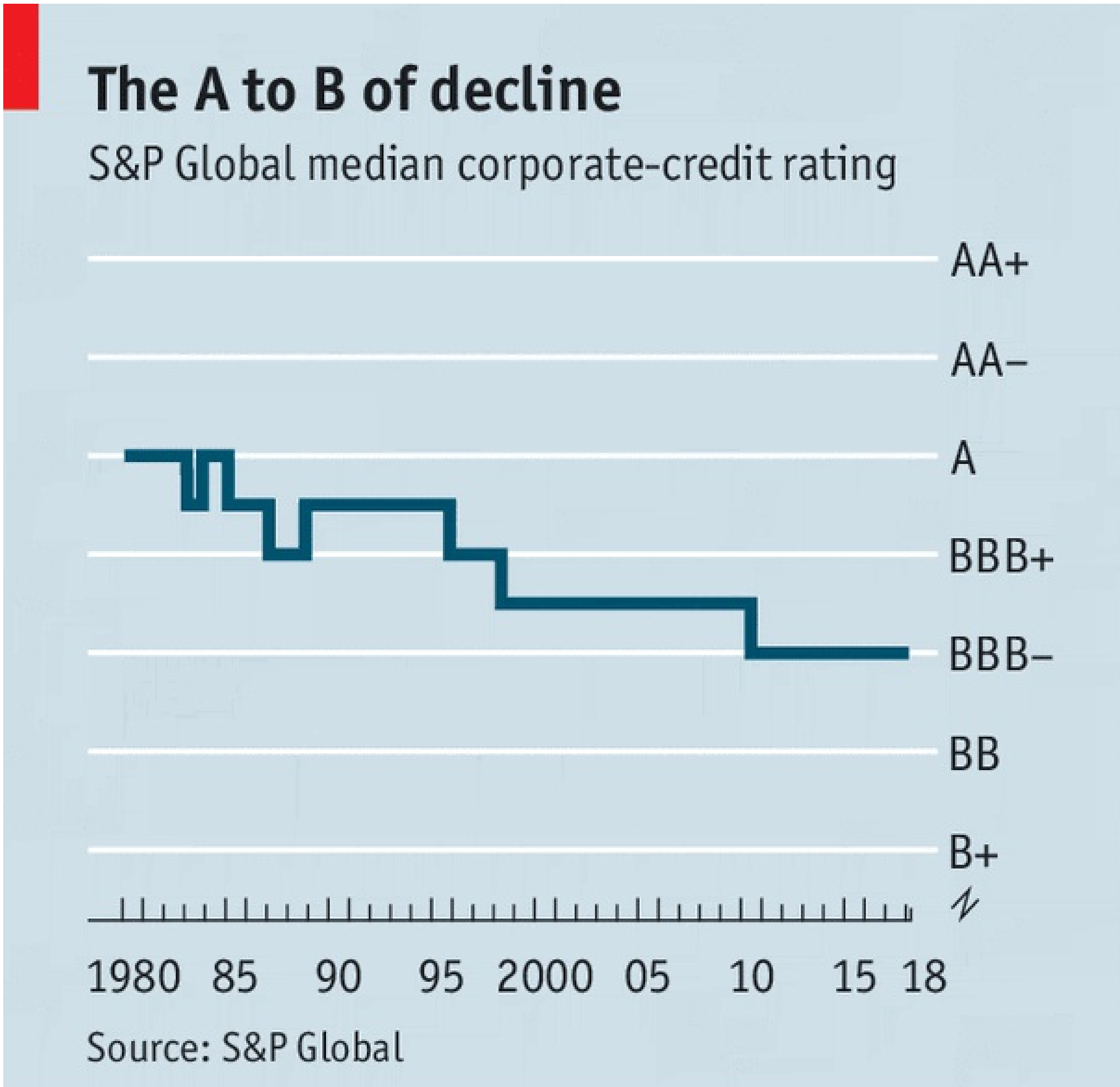
INTEREST rates are heading higher and that is likely to put financial markets under strain. Investors and regulators would both dearly love to know where the next crisis will come from. What is the most likely culprit?

Financial crises tend to involve one or more of these three ingredients: excessive borrowing, concentrated bets and a mismatch between assets and liabilities. The crisis of 2008 was so serious because it involved all three—big bets on structured products linked to the housing market, and bank-balance sheets that were both overstretched and dependent on short-term funding. The Asian crisis of the late 1990s was the result of companies borrowing too much in dollars when their revenues were in local currency. The dotcom bubble had less serious consequences than either of these because the concentrated bets were in equities; debt did not play a significant part.

It may seem surprising to assert that the genesis of the next crisis is probably lurking in corporate debt. Profits have been growing strongly. Companies in the S&P; 500 index are on target for a 25% annual gain once all the results for the first quarter are published. Some companies, like Apple, are rolling in cash.

But plenty are not. In recent decades companies have sought to make their balance-sheets more “efficient” by raising debt and taking advantage of the taxdeductibility of interest payments. Businesses with spare cash have tended to use it to buy back shares, either under pressure from activist investors or because doing so will boost the share price (and thus the value of executives’ options).

At the same time, a prolonged period of low rates has made it very tempting to take on more debt. S&P; Global, a credit-rating agency, says that as of 2017, 37% of global companies were highly indebted. That is five percentage points higher than the share in 2007, just before the financial crisis hit. By the same token, more private-equity deals are loading up on lots of debt than at any time since the crisis.



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One sign that the credit quality of the market has been deteriorating is that, globally, the median bond's rating has dropped steadily since 1980, from A to BBB- (see chart). The market is divided into investment grade (debt with a high credit rating) and speculative, or "junk", bonds below that level. The dividing line is at the border between BBB-and BB+. So the median bond is now one notch above junk.

Even within investment-grade debt, quality has gone down. According to PIMCO, a fund-management group, in America 48% of such bonds are now rated BBB, up from 25% in the 1990s. Issuers are also more heavily indebted than before. In 2000 the net leverage ratio for BBB issuers was 1.7. It is now 2.9.

Investors are not demanding higher yields to compensate for the deteriorating quality of corporate debt; quite the reverse. In a recent speech during a conference at the London Business School, Alex Brazier, the director for financial stability at the Bank of England, compared the yield on corporate bonds with the risk-free rate (the market's forecast for the path of official short-term rates). In Britain investors are demanding virtually no excess return on corporate bonds to reflect the issuer's credit risk. In America the spread is at its lowest in 20 years. Just as low rates have encouraged companies to issue more debt, investors have been tempted to buy the bonds because of the poor returns available on cash.

Mr Brazier also found that the cost of insuring against a bond issuer failing to repay, as measured by the credit-default-swap market, fell by 40% over the past two years. That makes it seem as if investors are less worried about corporate default. But a model looking at the way that banks assess the probability of default, compiled by Credit Benchmark, a data-analytics company, suggests that the risks have barely changed over that period.

So investors are getting less reward for the same amount of risk. Combine this with the declining liquidity of the bond market (because banks have withdrawn from the market-making business) and you have the recipe for the next crisis. It may not happen this year, or even next. But there are already ominous signs.

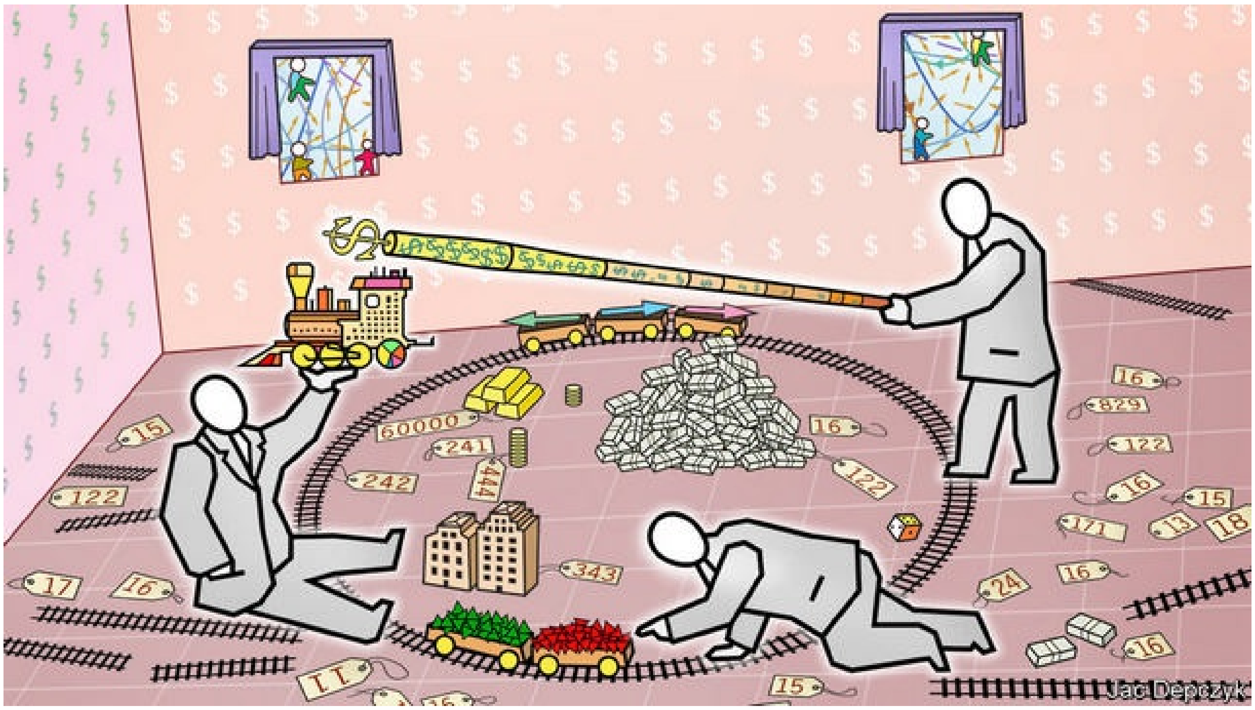
Matt King, a strategist at Citigroup, says that foreign purchases of American corporate debt have dried up in recent months, and the return on investment-grade debt so far this year has been -3.5%. He compares the markets with a game of musical chairs. As central banks withdraw monetary stimulus, they are taking seats away. Eventually someone will miss a seat and come down with a bump.

Correction (May 2nd 2018)*: This article originally stated that the median bond's rating is junk. In fact it is one notch above.*

Free exchange: The worth of nations

Economists focus too little on what people really care about

The fourth in our series on the profession’s shortcomings



May 3rd 2018

A CYNIC, says one of Oscar Wilde’s characters, is a man who knows the price of everything and the value of nothing. But, as philosophers have long known, assigning values to things or situations is fraught. Like the cynic, economists often assume that prices are all anyone needs to know. This biases many of their conclusions, and limits their relevance to some of the most serious issues facing humanity.

The problem of value has lurked in the background ever since the dismal science’s origins. Around the time Adam Smith published his “Wealth of Nations”, Jeremy Bentham laid out the basis of a utilitarian approach, in which “it is the greatest happiness of the greatest number that is the measure of right and wrong”. In the late 19th century Alfred Marshall declared the correct focus of economics to be the “attainment and…use of material requisites of well-being”. Or, as his student, Arthur Pigou, put it, “that part of social welfare that can be brought directly or indirectly into relation with the measuring rod of money".

Equating money with value is in many cases a necessary expedient. People make transactions with money, of one form or another, rather than "utility" or happiness. But even if economists often have no choice but to judge outcomes in terms of who ends up with how many dollars, they can pay more attention to the way focusing on "material well-being", as determined by the "measuring rod of money", influences and constrains their work.

The measuring rod itself often causes trouble. Not every dollar is of equal value, for instance. You might think that if two economists were forced to bid on an apple, the winner would desire the apple more and the auction would thereby have found the best, welfare-maximising use for the apple. But the evidence suggests that money has diminishing marginal value: the more you have, the less you value an extra dollar. The winner might therefore end up with the apple not because it will bring him more joy, but because his greater wealth means that his bid is less of a sacrifice. Economists are aware of this problem. It features, for example, in debates about the link between income and happiness across countries. But the profession is surprisingly casual about its potential implications: for example, that as inequality rises, the price mechanism may do a worse job of allocating resources.

Equating dollar costs with value misleads in other ways. That economic statistics such as GDP are flawed is not news. In a speech in 1968 Robert Kennedy complained that measures of output include spending on cigarette advertisements, napalm and the like, while omitting the quality of children's health and education. Despite efforts to improve such statistics, these problems remain. A dollar spent on financial services or a pricey medical test counts towards GDP whether or not it contributes to human welfare. Social costs such as pollution are omitted. Economists try to take account of such costs in other contexts, for example when assessing the harms caused by climate change. Yet even then they often focus on how environmental change will affect measurable production and neglect outcomes that cannot easily be set against the measuring rod.

Economists also generally ignore the value of non-market activity, like unpaid work. By one estimate, including unpaid work in American GDP in

2010 would have raised its value by 26% (and drawn a very different picture of the contributions of different demographic groups). As Diane Coyle of Cambridge University has argued, the decision to exclude unpaid work may reflect the value judgments of the (mostly male) officials who first ran statistical agencies. But it seems likely that economists today still treat things which cannot easily be measured as if they matter less.

Economists are at their least useful when a measuring stick should not be used at all. They have been known to calculate, for example, the financial gains from achieving gender equality. But gender equality has an intrinsic value, regardless of its impact on GDP. Similarly, species loss and forced mass migration impose psychic costs that resist dollar valuation but are nonetheless important aspects of the threat from climate change.

Such quandaries might suggest that ethical issues should be left to other social scientists. But that division of labour would be untenable. Indeed, economists often work on the basis that tangible costs and benefits outweigh subjective values. Alvin Roth, for example, suggests that moral qualms about "repugnant transactions" (such as trading in human organs) should be swept aside in order to realise the welfare gains that a market in organs would generate. Perhaps so, but to draw that conclusion while dismissing such concerns, rather than treating them as principles which might also contribute to human well-being, is inappropriate. Further, the very act of pulling out the measuring rod alters our sense of value. Though the size of the effect is disputed, psychological research suggests that nudging people to think in terms of money when they make a choice encourages a "businesslike mindset" that is less trusting and generous. Expanding the reach of markets is not just a way to satisfy preferences more efficiently. Rather, it favours market-oriented values over others.

The Pharrell Williams school

Some economists advocate the creation and use of broader measures of well-being. Several organisations, including the European Commission and the World Bank, now publish data series presenting a more comprehensive picture of social health. But the costs of the standard approach are growing. Price is a poor measure of the value of digital goods and services, which are often paid for by giving access to data. Technological progress promises to create ever more situations in which ethical considerations conflict with narrowly material ones. The question of how to increase well-being in such a world deserves greater attention.

Science and technology

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- **Language: Manners of speaking** [Fri, 04 May 05:01]
- **But is it art?: Evidence of Neanderthal creative urges** [Fri, 04 May 05:01]
- **Chemistry: How desalination got its stripes** [Fri, 04 May 05:01]
- **Working mothers: Express delivery** [Fri, 04 May 05:01]
- **Policing modern slavery: Traffic jammers** [Fri, 04 May 05:01]

Genomes and privacy

Police have used genealogy to make an arrest in a murder case

The did so by tracing the suspect via distant relatives' DNA

May 3rd 2018

ON APRIL 24th police in California announced the arrest of Joseph DeAngelo. Mr DeAngelo stands accused of eight counts of murder. On April 27th some intriguing details emerged of what had prompted the arrest. The starting-point was genetic material recovered from the crime scenes. Though this directly matched no DNA held in a police database, analysis of it led investigators all the way back to the 1800s, to Mr DeAngelo's great-great-great grandparents. The trail they followed allegedly links Mr DeAngelo to crimes committed around Sacramento in the 1970s and 1980s by an unknown man who acquired the nickname of the Golden State Killer, and who murdered at least 12 people and raped more than 50.

That a link to distant ancestors could lead to an arrest is testament to the power of modern genomics. Investigators first uploaded Mr DeAngelo's genetic profile to a website called GEDmatch. This allows anyone to use his or her own genetic profile to search for family connections. GEDmatch's database turned out to hold profiles, returned as weak matches, which looked as if they had come from distant cousins of the Golden State Killer. GEDmatch encourages uploaders to include their real name with their genomes, and the investigators were able to trace back through the matches' parents and grandparents to find their most recent common ancestor. Then, having moved backward in time, they moved forward again, looking for as many as possible of this ancestor's descendants. Using newspaper clippings, census records and genealogy websites, they discovered some 25 family trees stretching down from the common ancestor. On its own, the tree on which Mr DeAngelo appears has 1,000 members.

After that, old-fashioned sleuthing took over. From these thousands of descendants, the detectives found two who had had connections with Sacramento at the time the Golden State Killings were taking place. One was eliminated from the investigation by further DNA tests of a family member. The other, Mr DeAngelo, was arrested after police had tested the DNA on an item he had discarded.

Serial privacy

If a serial killer really has been caught using these methods, everyone will rightly applaud. But the power of forensic genomics that this case displays poses concerns for those going about their lawful business, too. It bears on the question of genetic privacy—namely, how much right people have to keep their genes to themselves—by showing that no man or woman is a genetic island. Information about one individual can reveal information about others—and not just who is related to whom.

With decreasing degrees of certainty, according to the degree of consanguinity, it can divulge a relative's susceptibilities to certain diseases, for example, or information about paternity, that the relative in question might or might not want to know, and might or might not want to become public. Who should be allowed to see such information, and who might have a right to see it, are questions that need asking.

They are beginning to be asked. In 2017 the Court of Appeal in England ruled that doctors treating people with Huntington's chorea, an inherited fatal disease of the central nervous system the definitive diagnosis of which is a particular abnormal DNA sequence, have a duty to disclose that diagnosis to the patient's children. The children of a parent who has Huntington's have a 50% chance of inheriting the illness. In this case, a father had declined to disclose his newly diagnosed disease to his pregnant daughter. She was, herself, subsequently diagnosed with Huntington's. She then sued the hospital, on the basis that it was her right to know of her risk. Had she known, she told the court, she would have terminated her pregnancy.

That is an extreme case. But intermediate ones exist. For example, certain variants of a gene called BRCA are associated with breast cancer. None, though, is 100% predictive. If someone discovers that he or she is carrying such a variant, should that bring an obligation to inform relatives, so that they, too, may be tested? Or does that risk spreading panic to no good end?

It may turn out that such worries are transient. As the cost of genetic sequencing falls, the tendency of people to discover their own genetic information, rather than learning about it second-hand, will increase. That, though, may bring about a different problem, of genetic snooping, in which people obtain the sequences of others without their consent, from things like discarded coffee cups. At that point genetic privacy really will be a thing of the past.

Language

How to change emotions with a word

Science looks at the subtleties of semiotics

May 3rd 2018

DIPLOMATS the world over know that a well-chosen turn of phrase can make or break a negotiation. But the psychological effects of different grammatical structures have not been investigated as thoroughly as they might have been. A study just published in *Psychological Science*, by Michal Reifen-Tagar and Orly Idan, two researchers at the Interdisciplinary Centre Herzliya, in Israel, has thrown some light on the matter. Dr Reifen-Tagar and Dr Idan have confirmed that a good way to use language to reduce tension is to rely, whenever possible, on nouns rather than verbs.

Dr Idan, a psycholinguist, knew from previous work that the use of an adjective instead of a noun in a sentence ("Jewish" rather than "Jew", for example) can shape both judgment and behaviour. Likewise, Dr Reifen-Tagar, a social psychologist, knew from her own earlier research that successful diplomacy often hinges on managing anger in negotiating parties.

Putting their heads together, they suspected that employing nouns ("I am in favour of the removal of settlers"), rather than verbs ("I am in favour of removing settlers"), to convey support for policy positions would have a calming effect. The one is more like a statement of an abstract belief. The other is more like a prescription of a course of action and is thus, they hypothesised, more likely to arouse emotions.

To test this idea they recruited 129 Jewish-Israeli college students and presented them with statements about policies associated with the Israeli-Palestinian conflict. Specifically, these statements concerned Israeli concessions on matters like the release of Palestinian prisoners, the borders of Israel, the return to Israel of Palestinian refugees and the division of Jerusalem.

Half of the statements were given in noun form ("I support the division of Jerusalem"). The other half were given in verb form ("I support dividing Jerusalem"). Participants responded to each on a six-point scale, where a value of one indicated "I totally disagree" and a value of six indicated "I totally agree." All of the statements were in Hebrew, in which such sentence structures are natural and acceptable. After each statement was given, participants were asked to indicate, also on a six-point scale, the extent to which they would feel anger towards the state of Israel if the concession in question were actually granted.

As the researchers had hypothesised, presenting the statements in noun form reduced feelings of anger. Participants so treated had an average anger score of 3.21, in contrast to the 3.67 averaged by those presented with verb-form statements. This is a statistically significant difference. The noun forms of the statements also increased support for the concessions, with these scores averaging 2.02, in contrast to the average of 1.72 scored by participants presented with verb-form statements.

Given these results, Dr Reifen-Tagar and Dr Idan wondered whether the reduced anger induced by the noun form would translate into reduced support for hostile action toward Palestinians. They therefore ran the experiment again, having recruited 270 new participants, with additional statements like "I am in favour of demolishing/the demolition of homes belonging to family members of those involved in terrorist activities" and "of cutting off/the cutting off of supply of electricity to Gaza during wartime”.

The results were much the same as those in the earlier experiment. Participants given the noun-structure statements again showed notably more support for concessions. But they also showed much less enthusiasm for retaliatory policies, with an average score of 2.92 compared with the 3.91 averaged by those given verb-structure statements. In matters of conflict, as in so many other areas of life, it turns out that presentation is everything.

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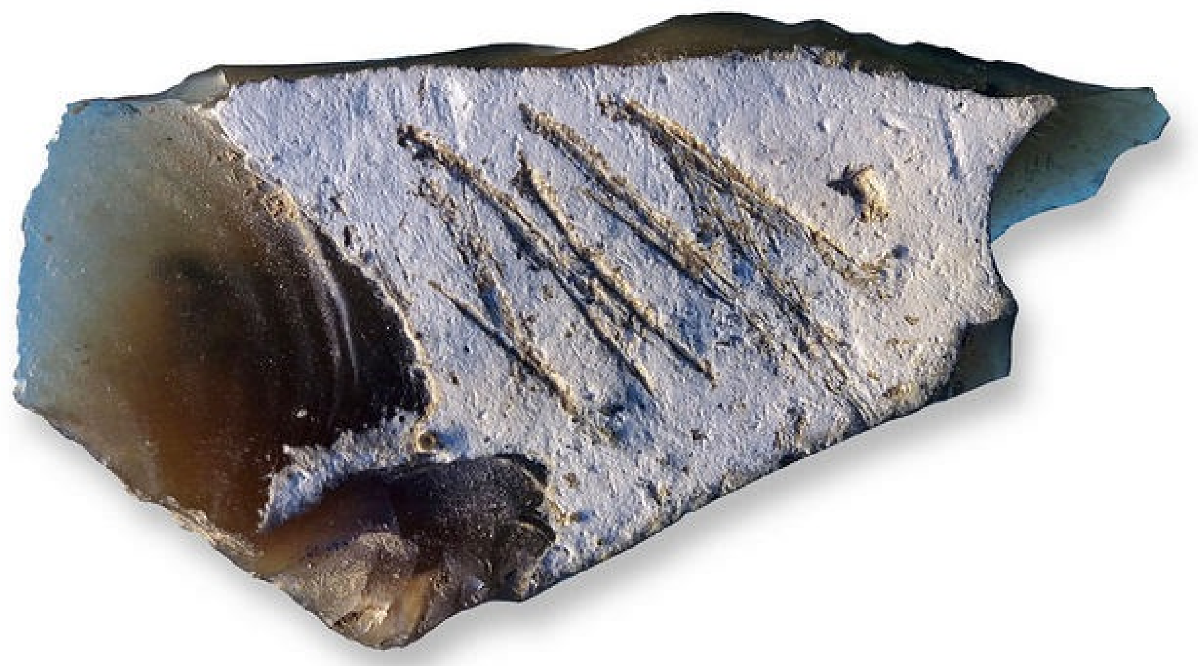
The evolution of art

Scratches on a stone may evince Neanderthal creative urges

If so, the first art was abstract art



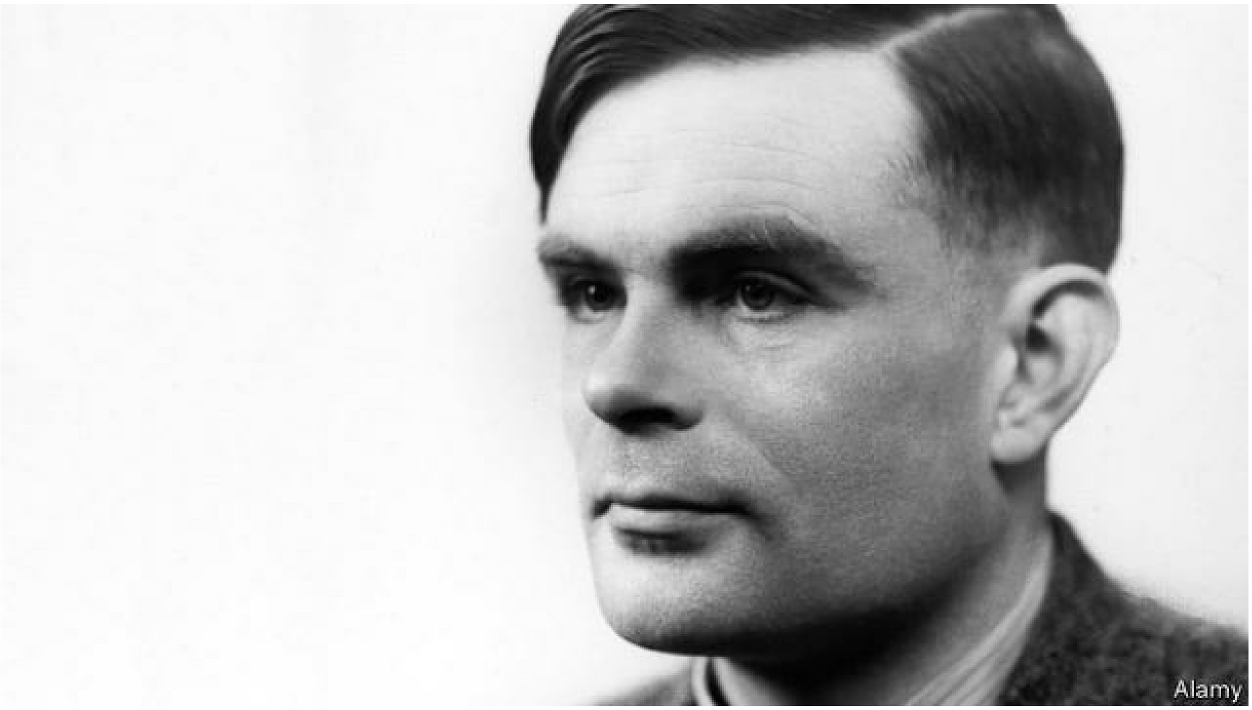
Ana Bogdan Majkic

May 3rd 2018

The scratches on this flake of flint may not look much but they were made with deliberation by a Neanderthal man or woman. That is the conclusion of Ana Majkic of the University of Bordeaux and her colleagues, in a paper just published in PLOS ONE. Dr Majkic's analysis bears on the question of whether Neanderthals had anything that might remotely be described as an artistic impulse—a phenomenon many anthropologists suspect is unique to Homo sapiens. The stone in question, about 4cm long, was found in 1925 (though no description of it was published until 2006) in a cave in the Crimea that also played host to Neanderthal bones. Patterns of scratches on stones used by Neanderthals are not unusual. They have been found at more than two dozen sites. But whether those patterns are deliberate or accidental is much debated. Dr Majkic argues for deliberation in this case because microscopic examination suggests the scratches were made by two different engraving tools, and also because, despite the flint being small, the pattern on it is framed by an unscratched area. If the scratches were accidental, some of them would probably reach the edge.

A membrane that can remove salts from water more efficiently

How desalination got its stripes



May 3rd 2018

ALAN TURING was no slouch. He laid the mathematical groundwork for modern computing. He led the successful effort to crack Germany's Enigma code during the second world war. And he also, though it is less well known, made an important contribution to chemistry with a paper winningly entitled "The chemical basis of morphogenesis". In it he described how the diffusion of two chemicals that react with each other can, in certain circumstances, produce complex patterns of blobs and striations. These patterns, now called "Turing structures", bear an uncanny resemblance to many that are found in nature: a zebra's stripes, for example, or a ladybird's spots.

The extent to which such processes are involved in the embryonic development of animals is debated. But, on a more practical note, Zhang Lin of Zhejiang University in Hangzhou, China, and his colleagues now hope to turn Turing's chemical insights to the task of improving desalination, a process that provides drinking water for around 300m people. To do so, they have made a membrane laced with microscopic Turing patterns that can remove salts from water up to four times faster than commercial alternatives. Their research is published this week in *Science*.

During desalination, seawater is often pumped first through a porous “nanofiltration” membrane made of a substance called polyamide. This removes bulky ions, such as magnesium and sulphate, as well as bacteria and other large particles. After that, it passes through a second membrane which has even tinier pores. This step, called reverse osmosis, removes ions smaller than magnesium and sulphate, particularly the sodium and chloride ions that make up common salt and that give seawater its characteristic taste.

The membranes employed for reverse osmosis are rough, and so have a large surface area through which water can pass. Nanofiltration membranes, by contrast, are smooth. That, Dr Zhang reasoned, meant that they might be improved. To introduce the necessary roughness he needed some way to modify the chemical reaction by which the membranes are made. This process, known as interfacial polymerisation, involves two chemicals. One, piperazine, is soluble in water. The other, trimesoyl chloride (TMC), can be dissolved only in an organic solvent such as decane, an oily hydrocarbon.

When piperazine and TMC meet, they react to form polyamide. But if the one is dissolved in water and the other in oil, which famously do not mix, then the reaction can happen only at the surface where the oil is floating on the water. The result is a polyamide sheet. In practice, in industrial conditions, this reaction is usually performed on a porous support that is first soaked in piperazine before one side is exposed to TMC. The polyamide sheet then forms on that side of the support. Dr Zhang’s insight was to see that this arrangement might be modified to be the type of two-chemical system that Turing described in his paper—and that if it could be, the resulting patterns would act as surface-area-increasing bumps.

For a system to form Turing patterns, two chemicals must diffuse at different rates through the medium in which the reaction is taking place. The rates cannot, however, be too different. The ideal discrepancy is about a factor of ten. To achieve this, Dr Zhang added polyvinyl alcohol to the piperazine solution, to make it more viscous and slow piperazine’s diffusion.

The upshot was the creation of polyamide sheets full of either tiny, hollow bubbles or interconnecting tubes, depending on the concentration of polyvinyl alcohol used. These are just the sorts of surface-area-increasing features that Dr Zhang had hoped for. And they did the job. The best were able to handle a fourfold increase in flow rate with no loss of performance.

Flushed with success, Dr Zhang is now turning his attention to the reverse-osmosis membranes. Though these are already rough, he thinks he can make them rougher. They, too, are made by interfacial polymerisation, so he may well be able to do so. And if both sorts of membrane can be improved, the process of desalination, which is likely to become more important as demand for water increases, will be made cheaper and more effective.

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Working mothers

A pasteurisation machine for breast milk

It will help Bangladeshi mothers who work in factories

May 3rd 2018 | DHAKA

FOR the feeding of babies, everyone agrees that “breast is best”. It is not, however, always convenient. Textile workers in Bangladesh, who are mostly women, are entitled to four months’ maternity leave. Once this is over, they often end up parking their children with relatives when they are at work. Those with refrigerators at home can use breast pumps to express milk before they go on shift, and leave it behind to chill. But fridges are expensive, and many do not own one. Unchilled milk goes off within a couple of hours so the inevitable outcome for fridgeless mothers and their babies is the use of infant formula.

A chance meeting in a coffee shop in Dhaka may, though, have helped with this problem. It was between Sabrina Rasheed (pictured above, right), a child-nutrition expert at the International Centre for Diarrhoeal Disease Research in Bangladesh, and three Canadian students. Two, Scott Genin and

Jayesh Srivastava, are engineers. The third, Micaela Langille-Collins, is a trainee doctor. The upshot of the encounter was that Dr Rasheed gave the students the job of designing a low-cost, low-tech way of keeping mothers' milk healthy in Bangladesh's tropical climate, without resorting to refrigeration.

The device the trio came up with, shown in the picture, is a cheap pasteurisation machine based on a food warmer of the sort used in canteens. Instead of food, the warmer's vessels are filled with paraffin wax, which is liquefied by the heat. Bottles containing expressed milk, held in bags made of silicon-coated nylon, are hung from a plate and bathed in the wax, which is then heated further. A thermometer in the wax registers the temperature, and once that reaches 72.5°C—the level required for pasteurisation—a timer is started. After 15 seconds this sets off an alarm to indicate that the milk has been cooked enough to kill hostile bacteria, and the bottles are removed and allowed to cool.

Thus pasteurised, microbiological tests show, the milk's shelf life at local room temperatures increases from two hours to somewhere between six and eight. This means no refrigeration is required and relatives looking after babies need collect expressed milk from the factory, where the machine is located, only once a day. The pasteurised milk also retains most of its nutritional value.

With the aid of ten donated breast pumps, Ms Langille-Collins and her colleagues tested their invention at the Interfab Shirt Manufacturing workshop, north of Dhaka. To start with, mothers employed there were suspicious, says Aliya Madrasha, head of human resources at the factory. That changed, though, when they came to understand both the convenience of the system, and the economy of no longer having to buy formula milk.

The new machine is also a hit with the factory's management. Expressing their milk at the beginning of a shift means women with babies suffer less discomfort during the day, and so are more productive. Absenteeism among mothers has also dropped, from five days a month to one. The biggest benefit, though, according to Ahasan Kabir Khan, the factory's owner, is the retention of skilled staff who might otherwise leave to nurse their children.

Mr Khan is so impressed that he now wants to put pasteurisation machines in all his factories. Other factory owners, too, are asking for the machines. Dr Rasheed and Ms Langille-Collins are therefore developing a commercial version of the machine, in collaboration with 10xBeta, a firm in New York. If their patent application is approved, they plan to lease the devices to firms all over Bangladesh and then, subsequently, to people in other poor countries all around the world.

Policing modern slavery

Software that detects human trafficking

And also other unsavoury forms of human bondage

May 3rd 2018

MODERN slavery comes in many forms. The outright sale of human beings as possessions is rare. But forced manual labour and sexual exploitation, often in a foreign country, by means of fraud, coercion or the threat of violence, are not. Such cases are often, however, hard to detect. Victims are understandably reluctant to talk. And the labour market also includes people willingly and legally performing work that is not always clearly different from that of the enslaved.

The murky world of modern slaves is, though, beginning to yield to high-tech policing methods. In South-East Asia, for instance, a particular scourge is fishing boats crewed by forced labour. Crew members are unable to escape because these vessels never dock. Instead, they offload their catches and take on supplies at sea. Dornnapha Sukkree, co-founder of a charity in Bangkok, called MAST, hopes to stop this by developing software that analyses data from transponders fitted to fishing boats. These would track vessels' movements via satellite. Boats that failed to dock from time to time would thus be obvious.

Ten fishing boats are assisting Ms Sukkree in her study. If it is successful, she hopes to persuade Thailand's fishery authorities to require all vessels above a certain size to be fitted with transponders. Many countries do this already, though with the intention of regulating fishing rather than protecting crews. Illegal fishers do sometimes switch their transponders off, of course, in order to "disappear". But that very act raises suspicions.

Much human trafficking, as the transporting of modern slaves is known, relies on trickery known as contract substitution. Recruiters lure people abroad with a lucrative contract that is later reworded, sometimes in a language the individual does not understand. Luis CdeBaca, who once ran the American State Department's anti-human-trafficking operation and is now a fellow at the Open Society Foundations, a pro-democracy organisation, hopes to prevent this bait-and-switching using a type of distributed database called a blockchain. A government might issue work visas only when signed contracts are confirmed by the blockchain to match those originally given to potential migrants.

Software can also identify pimps. Damon McCoy of New York University has developed a program that has helped police unearth five big suspected prostitution rings in California and Texas. His program hunts for signs, such as word choice, punctuation and emoji, that suggest a single hand is behind apparently unrelated online sex ads—and thus that organised crime is at work. And it can link bitcoin payments made for such ads to the ads themselves. His plan is to release the program as a free download later this year. A subsequent version will detect tiny variations in the pixel-quality of pictures, to identify those taken with the same camera.

Joining the dots

Nor is Dr McCoy's program the only software being employed to counter sex-trafficking operations in America. Since June 2017 an unnamed federal agency has used something similar, developed at Carnegie Mellon University in Pittsburgh by a researcher called Eduard Hovy. Like Dr McCoy's, this program looks for connections between the words and images used in different sex ads. But it can, Dr Hovy says, also draw in data from other sources. It might, for example, link a tweet about loud screams at night in a particular building with banter on an online “John board” discussing the sudden unavailability of a foreign woman last seen badly bruised.

Future versions of such software could seek to pull together disparate types of information in other areas of modern slavery—the frequency of visits to health clinics for the poor by strawberry pickers complaining of back pain, for example. But Dr Hovy cautions against deducing from software alone who is a victim of trafficking. He has accompanied police on operations to rescue people his program has flagged up, but who have convincingly argued that they are working voluntarily in conditions which may be tough but are still better than those back home.

In the end, like any other branch of commerce, legal or illegal, modern slavery is about making profits. And those profits have to be deposited somewhere. This gives investigators another way in. Banks in some countries face steep fines if they do not screen transactions for signs of human trafficking. For this purpose, some banks use software originally developed to detect money-laundering. Algorithms flag up dodgy-looking transactions. These are used by human analysts to generate “suspicious-activity reports”. The number of such reports sent by banks to America’s Treasury is growing, says Hector Colón, a trafficking investigator at Homeland Security Investigations, a branch of the country’s Department of Homeland Security.

The fingerprints of possible trafficking activity are many and various. Payments for repeatedly refuelling a vehicle at night might mean forced labour is being transported under the cover of darkness. Enslaved prostitutes are typically fed fast food, not “a $30 curry”, says Peter Warrack, a Canadian expert on the screening software. Weekly condom purchases add to the suspicion. Charges for exorbitant cocktails may be disguised payments for sex, especially if the bar also buys advertising on escort websites. Roughly one in 20 reports of suspicious transactions sent by banks to Canada’s finance department mention human trafficking, and half of those correctly identify the crime, Mr Warrack says.

Traffickers are aware of what is going on and do their best to outsmart the algorithms; one tell that is easily avoided is the payment into a single account of receipts from many different places. But the authorities are also looking for new things to try. According to Daniel Thelesklaf, the head of Liechtenstein's Financial Intelligence Unit, government organisations are already considering the screening of communications sent through messaging apps for hints of human trafficking. These can sometimes be intercepted if sent via a Wi-Fi network. Mr Thelesklaf reckons this has "huge potential".

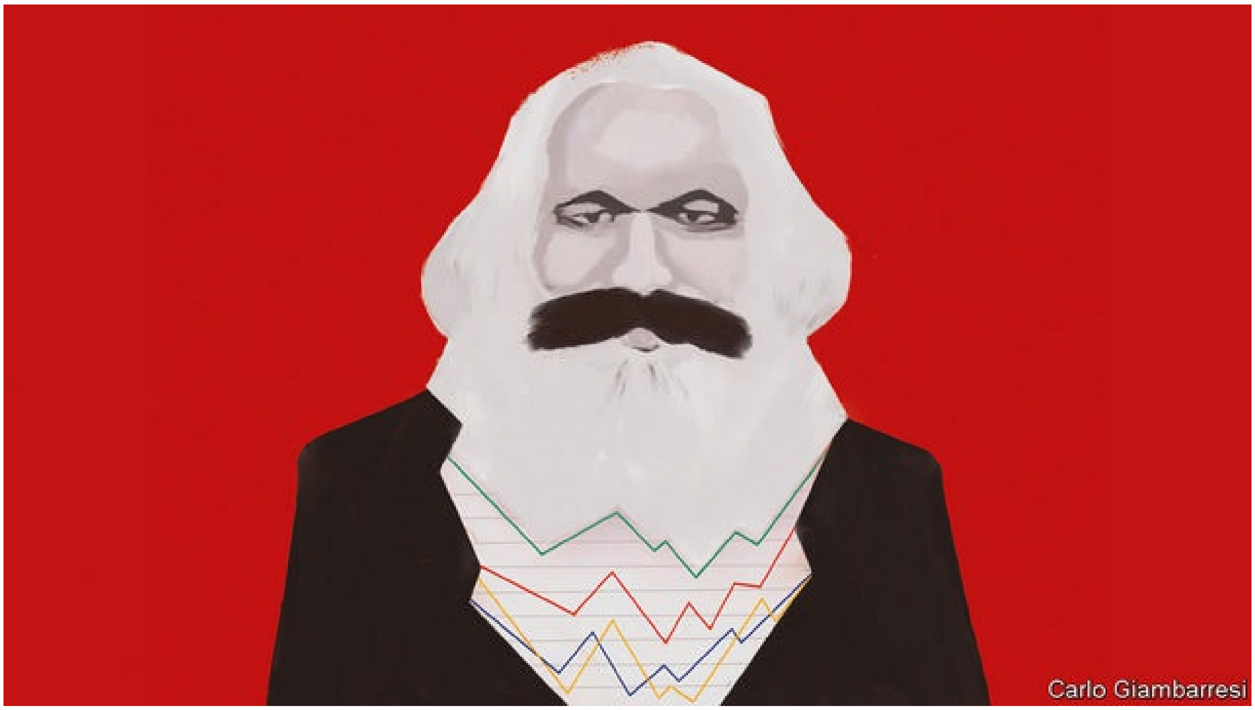
That step, though, has huge potential for controversy, too. It is one thing to scrutinise sex ads. It is quite another to start trawling on spec through messages sent mostly by innocent parties. That sounds Orwellian. Which is ironic, for the message of "1984" was that in a society where surveillance is ubiquitous, everybody who is not one of the surveyors is, in fact, a slave.

Books and arts

Second time, farce

Rulers of the world: read Karl Marx!

On his bicentenary Marx's diagnosis of capitalism's flaws is surprisingly relevant



May 3rd 2018

A GOOD subtitle for a biography of Karl Marx would be "a study in failure". Marx claimed that the point of philosophy was not just to understand the world but to improve it. Yet his philosophy changed it largely for the worst: the 40% of humanity who lived under Marxist regimes for much of the 20th century endured famines, gulags and party dictatorships. Marx thought his new dialectical science would allow him to predict the future as well as understand the present. Yet he failed to anticipate two of the biggest developments of the 20th century—the rise of fascism and the welfare state—and wrongly believed communism would take root in the most advanced economies. Today's only successful self-styled Marxist regime is an enthusiastic practitioner of capitalism (or "socialism with Chinese characteristics").

Yet for all his oversights, Marx remains a monumental figure. At the 200th anniversary of his birth, which falls on May 5th, interest in him is as lively as ever. Jean-Claude Juncker, the president of the European Commission, is visiting Trier, Marx's birthplace, where a statue of Marx donated by the Chinese government will be unveiled. The British Library, where he did the research for "Das Kapital", is putting on a series of exhibitions and talks. And publishers are producing a cascade of books on his life and thought, from "Das Kapital"-sized doorstops (Sven-Eric Liedman's "A World to Win: The Life and Works of Karl Marx"), to Communist Manifesto-slim pamphlets (a second edition of Peter Singer's "Marx: A Very Short Introduction").

None of these bicentennial books is outstanding. The best short introduction is still Isaiah Berlin's "Karl Marx", which was published in 1939. But the sheer volume of commentary is evidence of something important. Why does the world remain fixated on the ideas of a man who helped to produce so much suffering?

The point of madness

The obvious reason is the sheer power of those ideas. Marx may not have been the scientist that he thought he was. But he was a brilliant thinker: he developed a theory of society driven forward by economic forces—not just by the means of production but by the relationship between owners and workers—and destined to pass through certain developmental stages. He was also a brilliant writer. Who can forget his observation that history repeats itself, "the first time as tragedy, the second as farce"? His ideas were as much religious as scientific—you might even call them religion repackaged for a secular age. He was a latter-day prophet describing the march of God on Earth. The fall from grace is embodied in capitalism; man is redeemed as the proletariat rises up against its exploiters and creates a communist utopia.

A second reason is the power of his personality. Marx was in many ways an awful human being. He spent his life sponging off Friedrich Engels. He was such an inveterate racist, including about his own group, the Jews, that even in the 1910s, when tolerance for such prejudices was higher, the editors of his letters felt obliged to censor them. He got his maid pregnant and dispatched the child to foster parents. Mikhail Bakunin described him as "ambitious and vain, quarrelsome, intolerant and absolute…vengeful to the point of madness”.

But combine egomania with genius and you have a formidable force. He believed absolutely that he was right; that he had discovered a key to history that had eluded earlier philosophers. He insisted on promoting his beliefs whatever obstacles fate (or the authorities) put in his way. His notion of happiness was “to fight”; his concept of misery was “to submit”, a trait he shared with Friedrich Nietzsche.

The third reason is a paradox: the very failure of his ideas to change the world for the better is ensuring them a new lease of life. After Marx’s death in 1883 his followers—particularly Engels—worked hard to turn his theories into a closed system. The pursuit of purity involved vicious factional fights as “real” Marxists drove out renegades, revisionists and heretics. It eventually led to the monstrosity of Marxism-Leninism, with its pretensions to infallibility (“scientific socialism”), its delight in obfuscation (“dialectical materialism”) and its cult of personality (those giant statues of Marx and Lenin).

The collapse of this petrified orthodoxy has revealed that Marx was a much more interesting man than his interpreters have implied. His grand certainties were a response to grand doubts. His sweeping theories were the result of endless reversals. Toward the end of his life he questioned many of his central convictions. He worried that he might have been wrong about the tendency of the rate of profit to fall. He puzzled over the fact that, far from immiserating the poor, Victorian England was providing them with growing prosperity.

The chief reason for the continuing interest in Marx, however, is that his ideas are more relevant than they have been for decades. The post-war consensus that shifted power from capital to labour and produced a “great compression” in living standards is fading. Globalisation and the rise of a virtual economy are producing a version of capitalism that once more seems to be out of control. The backwards flow of power from labour to capital is finally beginning to produce a popular—and often populist—reaction. No wonder the most successful economics book of recent years, Thomas Piketty’s “Capital in the Twenty-First Century”, echoes the title of Marx’s most important work and his preoccupation with inequality.

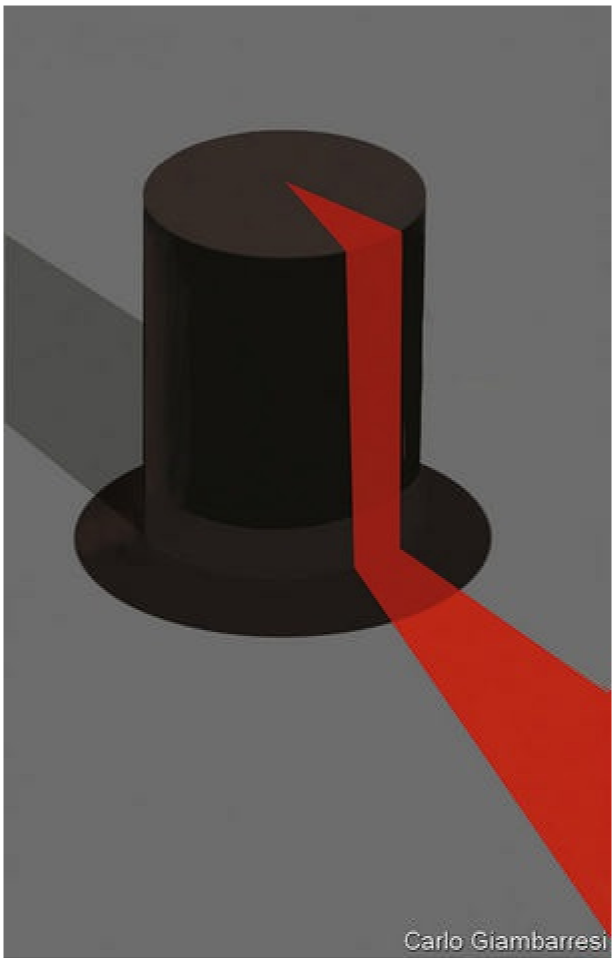
The prophet of Davos

Marx argued that capitalism is in essence a system of rent-seeking: rather than creating wealth from nothing, as they like to imagine, capitalists are in the business of expropriating the wealth of others. Marx was wrong about capitalism in the raw: great entrepreneurs do amass fortunes by dreaming up new products or new ways of organising production. But he had a point about capitalism in its bureaucratic form. A depressing number of today's bosses are corporate bureaucrats rather than wealth-creators, who use convenient formulae to make sure their salaries go ever upwards. They work hand in glove with a growing crowd of other rent-seekers, such as management consultants (who dream up new excuses for rent-seeking), professional board members (who get where they are by not rocking the boat) and retired politicians (who spend their twilight years sponging off firms they once regulated).

Capitalism, Marx maintained, is by its nature a global system: "It must nestle everywhere, settle everywhere, establish connections everywhere." That is as true today as it was in the Victorian era. The two most striking developments of the past 30 years are the progressive dismantling of barriers to the free movement of the factors of production—goods, capital and to some extent people—and the rise of the emerging world. Global firms plant their flags wherever it is most convenient. Borderless CEOs shuttle from one country to another in pursuit of efficiencies. The World Economic Forum's annual jamboree in Davos, Switzerland, might well be retitled "Marx was right".

He thought capitalism had a tendency towards monopoly, as successful capitalists drive their weaker rivals out of business in a prelude to extracting monopoly rents. Again this seems to be a reasonable description of the commercial world that is being shaped by globalisation and the internet. The world's biggest companies are not only getting bigger in absolute terms but are also turning huge numbers of smaller companies into mere appendages. New-economy behemoths are exercising a market dominance not seen since America's robber barons. Facebook and Google suck up two-thirds of America's online ad revenues. Amazon controls more than 40% of the country's booming online-shopping market. In some countries Google processes over 90% of web searches. Not only is the medium the message but the platform is also the market.

In Marx’s view capitalism yielded an army of casual labourers who existed from one job to the other. During the long post-war boom this seemed like a nonsense. Far from having nothing to lose but their chains, the workers of the world—at least the rich world—had secure jobs, houses in the suburbs and a cornucopia of possessions. Marxists such as Herbert Marcuse were forced to denounce capitalism on the grounds that it produced too much wealth for the workers rather than too little.



Yet once again Marx’s argument is gaining urgency. The gig economy is assembling a reserve force of atomised labourers who wait to be summoned, via electronic foremen, to deliver people’s food, clean their houses or act as their chauffeurs. In Britain house prices are so high that people under 45 have little hope of buying them. Most American workers say they have just a few hundred dollars in the bank. Marx’s proletariat is being reborn as the precariat.

Still, the rehabilitation ought not to go too far. Marx's errors far outnumbered his insights. His insistence that capitalism drives workers' living standards to subsistence level is absurd. The genius of capitalism is that it relentlessly reduces the price of regular consumer items: today's workers have easy access to goods once considered the luxuries of monarchs. The World Bank calculates that the number of people in "extreme poverty" has declined from 1.85bn in 1990 to 767m in 2013, a figure that puts the regrettable stagnation of living standards for Western workers in perspective. Marx's vision of a post-capitalist future is both banal and dangerous: banal because it presents a picture of people essentially loafing about (hunting in the morning, fishing in the afternoon, raising cattle in the evening and criticising after dinner); dangerous because it provides a licence for the self-anointed vanguard to impose its vision on the masses.

Marx's greatest failure, however, was that he underestimated the power of reform—the ability of people to solve the evident problems of capitalism through rational discussion and compromise. He believed history was a chariot thundering to a predetermined end and that the best that the charioteers can do is hang on. Liberal reformers, including his near contemporary William Gladstone, have repeatedly proved him wrong. They have not only saved capitalism from itself by introducing far-reaching reforms but have done so through the power of persuasion. The "superstructure" has triumphed over the "base", "parliamentary cretinism" over the "dictatorship of the proletariat".

Nothing but their chains

The great theme of history in the advanced world since Marx's death has been reform rather than revolution. Enlightened politicians extended the franchise so working-class people had a stake in the political system. They renewed the regulatory system so that great economic concentrations were broken up or regulated. They reformed economic management so economic cycles could be smoothed and panics contained. The only countries where Marx's ideas took hold were backward autocracies such as Russia and China.

Today's great question is whether those achievements can be repeated. The backlash against capitalism is mounting—if more often in the form of populist anger than of proletarian solidarity. So far liberal reformers are proving sadly inferior to their predecessors in terms of both their grasp of the crisis and their ability to generate solutions. They should use the 200th anniversary of Marx's birth to reacquaint themselves with the great man—not only to understand the serious faults that he brilliantly identified in the system, but to remind themselves of the disaster that awaits if they fail to confront them.

Cockroaches and scorpions

The world almost ended in 1983

A new history of a terrifyingly close shave with nuclear Armageddon

May 5th 2018

1983: Reagan, Andropov and a World on the Brink. By Taylor Downing.*Da Capo Press; 400 pages; $28. Little, Brown; £20.*

THE Cuban Missile Crisis of 1962 was terrifying, but at least both sides knew the world was on the brink of catastrophe. As Taylor Downing's snappily told account lays bare, what arguably made the near-miss of November 9th 1983 worse was that the West had almost no idea the Soviet leadership believed war was imminent.

East-West relations had been in dire straits for years. Ronald Reagan's soaring anti-communist rhetoric, terming the Soviet bloc an "evil empire", inspired freedom-lovers on both sides of the Iron Curtain, but panicked the Politburo gerontocracy. So too did his idealistic belief that missile-defence ("Star Wars") might keep the peace better than MAD (mutually assured destruction). A hi-tech arms race spelled doom for the Soviet Union.

As communication had shrivelled, misunderstandings mushroomed. When the Soviets shot down a Korean airliner that had veered drastically off course into their airspace, nobody in the American administration could countenance the idea that the tragedy might be (as it was) a blunder, not an atrocity. The Soviets were certain the plane was on a spying mission.

NATO's "Able Archer" exercise was also wildly misinterpreted. The Kremlin was convinced it masked war preparations. A routine change of NATO codes made the Soviets assume a nuclear first strike was imminent. In fact the KGB had an agent in the heart of NATO, Rainer Rupp. In response to an emergency request, he assured Moscow, with some bemusement, that everything in the alliance's civilian bureaucracy was ticking along as normal. But the spymasters discounted the information, while "toadying KGB officers on the ground…sent back alarmist reports." If the Soviet misreading of NATO intentions was a colossal intelligence failure, so was the inability of Western intelligence to realise just how jittery and ill-informed the Communist leadership had become.

As the Soviet Union put its nuclear forces on high alert, Lieutenant-General Leonard Perroots, the American air-force intelligence chief in Europe, reacted with puzzlement. A quid pro quo might have triggered an all-out nuclear war, which would, as Mr Downing puts it, leave only "cockroaches and scorpions" alive. Luckily, Perroots did nothing. After a sleepless night, the Kremlin leadership, huddled in a clinic outside Moscow with the ailing general secretary, Yuri Andropov, realised nothing was going to happen.

Mr Downing's book gives abundant historical background, perhaps too much for readers familiar with the period. A useful later chapter depicts how realisation of the Soviet panic unfolded in the West, first in classified assessments and eventually, long after the event, in the public domain—not least thanks to Mr Downing's television documentary, screened in 2008. He wisely avoids questions of the morality of nukes. Instead he focuses on the shortcomings that made accidental nuclear war far too plausible.

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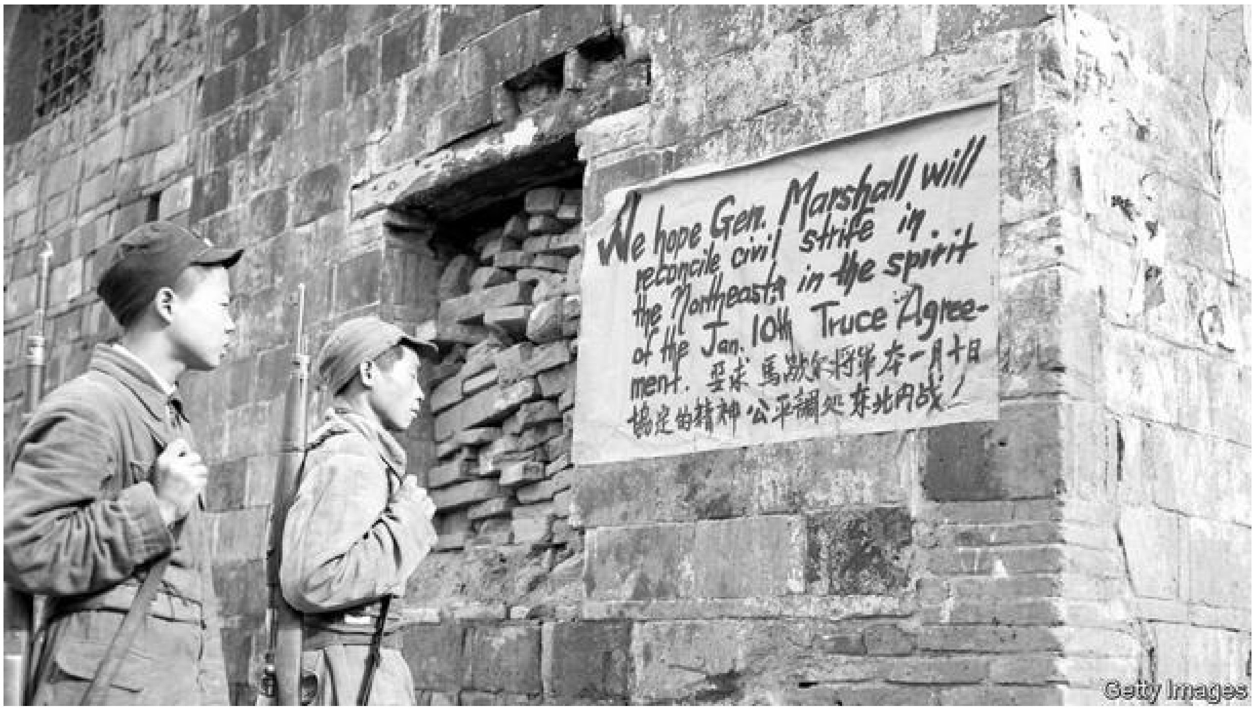
ended

Feet of clay

George Marshall won the war and rebuilt Europe, but lost China

A compelling account of his bid to save China from civil war and communism



May 3rd 2018

The China Mission: George Marshall's Unfinished War, 1945-1947. By Daniel Kurtz-Phelan.*W.W. Norton & Company; 496 pages; $28.95.*

GEORGE MARSHALL'S name is immortal, for ever attached to the visionary plan for rebuilding Europe that he oversaw as America's secretary of state in 1947-49. By then, as chief of staff of the army, he had already been, in Winston Churchill's estimation, the true "organiser of victory" in the second world war. A new book recounts what he did between winning the war and securing the peace: he spent a year in China, trying to save it.

He failed, leaving behind a bloody civil war followed by communist dictatorship. "The China Mission", an account of the debacle by Daniel Kurtz-Phelan, a former diplomat, is both a compelling portrait of a remarkable soldier and statesman, and an instructive lesson in the limits of American power, even at its zenith.

As Allied victory curdled into cold war, this was a pivotal if little-known episode. The question of “Who lost China?” fed McCarthyite conspiracy theories, which smeared even towering war heroes like Marshall. Yet, as Mr Kurtz-Phelan makes clear, his embassy started in late 1945 in a mood of great optimism, founded largely on veneration of the man himself. It is 200 pages into the story before any of its characters voice anything other than awe for its hero. Harry Truman called him the “greatest military man” ever.

Even his main Chinese interlocutors respected him. They were Chiang Kai-shek, China’s prickly and reserved leader (that page-200 critic) and Zhou Enlai, the urbane but two-faced Communist representative. The Communists and Chiang’s Nationalists had formed a fractious front against the Japanese occupation. At first, Marshall’s efforts to maintain that unity and prepare for elections and multiparty democracy went well. He even secured Zhou’s agreement to aborted plans for an “elementary school” for Communist soldiers, to train them for a merger with American-supplied Nationalist forces. As much as losing the country to the Communists, America may have wasted the chance offered by this incipient detente for a different relationship with “Red China”.

The book hints at reasons for the grim outcome. One is that, for once, Marshall was not up to the job. He made blunders. In May 1946 he lent Chiang his own aircraft to fly from Nanjing to north-eastern China for four days, to stop Nationalist troops fighting the Communists. Chiang stayed 11 days, leading the offensive himself. Communist propaganda saw proof of America’s duplicity and imperialism.

But Marshall’s mission, probably impossible anyway, also exhibited three habitual flaws of American foreign policy. First, he was not immune to “the great American faith in the curative power of his country’s form of government and persuasive power of his country’s example”. In China, this meant an inability to grasp its sheer complexity and the aims of the two big parties. Second—and as later wars in Korea, Vietnam, Afghanistan and Iraq have attested—America has been slow to accept “the near-impossibility of resolving somebody else’s civil war”.

The third lesson concerns the difficulty of achieving consensus in America itself. Marshall had to contend with a "very large group…opposed to practically anything outside of the United States". The idealistic ambition behind his mission had triumphed over the isolationists. Today the loss of that idealism seems as poignant as Marshall's failure.

Manet, Monet, money

The Rockefellers’ treasures go under the hammer

The mega-auction in New York will raise hundreds of millions of dollars for charity

May 3rd 2018

AFTER the death in 1967 of Alice B. Toklas, longtime partner of Picasso’s patron Gertrude Stein, David Rockefeller made one of the wisest moves of his art-collecting career. The art that Stein had amassed in Paris before the second world war—some of the best paintings Cézanne and Picasso ever produced—has long been considered one of the finest collections of the 20th century. Stein’s heirs wanted it to go to a museum, but Rockefeller, who by then had been a trustee of the Museum of Modern Art (MoMA) for two decades, knew it was beyond any institution’s means.

He put together a syndicate, which bought the collection for $6.8m (around $50m today). The group included his brother Nelson, governor of New York; William Paley, chairman of Columbia Broadcasting System; and John Hay “Jock” Whitney, publisher of the *New York Herald Tribune*. Each was to choose one painting for his personal collection, the rest going to museums. They met on a December afternoon in MoMA's old Whitney wing, drawing lots from a felt hat to decide the order in which the selections would be made. Rockefeller drew last, but the slip he picked was marked "1".

Going first, he chose the picture that everyone but Nelson coveted, a rare early Picasso portrait painted in 1905 when the artist was 24. Rockefeller and his wife, Peggy, hung "Young Girl with a Flower Basket" (pictured) in the library of their Manhattan home, where it joined Matisse's "Reclining Nude with Magnolias". The library was redecorated to match.

Both paintings are among 893 lots from the Rockefeller collection to be auctioned by Christie's in New York over three days, starting on May 8th (671 extra lots will be sold online). The sale is expected to be the biggest ever by a single owner, set to surpass the $484m raised by the Yves Saint Laurent auction in Paris in 2009. The Picasso, from the cheery rose period of 1904-06 that followed his more sombre blue period, is estimated to fetch $100m. No rose-period Picasso has come to market since "Boy with a Pipe" went for $104m in 2004. The Matisse should raise $70m.

The auction also includes art from Africa, India and China, a legacy of Rockefeller's travels as head of Chase Manhattan Bank and friend to successive CIA bosses and Henry Kissinger. But the bulk of it represents the taste of a rich, cultured American of his generation: fine English silver, French Impressionist paintings, Meissen porcelain from Germany and beautiful American landscapes by Edward Hopper, Charles Sheeler, Thomas Hart Benton and Georgia O'Keeffe. There are Monets and Manets, a large collection of antique wooden decoy birds and 67 painted dinner services, none of which goes in the dishwasher. Now it will all be dispersed.

To land the sale, Christie's fended off competition from Sotheby's and provided the Rockefellers with a huge guarantee, ensuring the estate is paid promptly. The auction house spent six months marketing the collection abroad, launching a roadshow in Hong Kong in November, then taking the Matisse to Beijing along with a Monet landscape and a rare blue-and-white Chinese porcelain "dragon" bowl.

Estimated at $100,000 to $150,000, that is bound to fetch much more.

Chinese collectors are keen on buying back their own art as well as on acquiring Western trophy works (three years ago a Shanghai taxi driver turned billionaire paid $170m for a Modigliani nude). In accordance with the terms of Rockefeller's will, all the proceeds will be given to charity.

Tick, tock

Crime, punishment and the end of the world

Sergio de la Pava's new novel is a melting pot of prison, football and metaphysics

May 3rd 2018

Lost Empress. By Sergio de la Pava.*Pantheon; 640 pages; $29.95. To be published in Britain in August by MacLehose Press; £20.*

ON A one-way bus ride to Rikers Island, New York City's infamous prison, Nuno DeAngeles's thoughts turn to René Descartes, whose "mind-body dualism" is "the only out he sees right now…There's two of him and only one's going in." Descartes and Rikers are among the unlikely conjunctions in Sergio de la Pava's expansive new novel, "Lost Empress", a 600-page melting pot of criminal-justice policy, American football and metaphysics.

When her ailing father divides up his football empire, Nina Gill inherits the underdog team, Paterson Pork, while the Dallas Cowboys are left to her brother. Nina vows to usurp the NFL with a rival football league. She also has her eye on a different prize: a long-lost painting by Salvador Dalí, hidden somewhere behind the barbed wire of Rikers. Nuno, a brainy criminal, aims to retrieve it for her before time runs out.

Literally. As well as a searing critique of American society, “Lost Empress” is a countdown to the apocalypse, an impending doom that rests on parallel worlds, a football pass and a biblical flood. The book oscillates between hilarious surrealism and shocking reality. As in his first novel, “A Naked Singularity”, Mr de la Pava (a public defender) deploys his expertise in a maximalist form reminiscent of Thomas Pynchon and David Foster Wallace. Legal transcripts jostle with diagrams of “Time” and the prison’s “Inmate Rule Book”.

Besides Nina’s and Nuno’s, other stories unfold. A 911-call operator reaches breaking point. An Italian pastor attempts to bring God to the incarcerated. Cancerous cells multiply in a young man’s brain. Occasionally the tone of the hyperintelligent narrator blurs the distinctions between the characters. But Mr de la Pava’s psychological insights compensate for that glitch.

With messianic fervour, he conjures up marginalised voices and the horrors of mass incarceration, against a backbeat of sporting thrills and that apocalyptic crescendo. Describing a court motion of Nuno’s, the narrator enjoins readers to “think about a literary work undertaken in the literal pursuit of freedom, which is to say life”. They will not have to think for long: they are reading one.

Obituary

- **Michael Martin: Order and disorder** [Fri, 04 May 05:01]

Order and disorder

Michael Martin (Lord Martin of Springburn) died on April 29th

The 156th Speaker of the House of Commons was 72

May 3rd 2018

THE hardest times came well into the night. At late sittings in the House, MPs tended to get rowdy. That was when Michael Martin felt most on his own. He got nervous about his job, which was to keep them all in order, give them permission to speak, stop them from being long-winded, and make them behave. It helped him then to think of the Commons as a great big machine that had to be maintained. As a sheet-metal worker and an engineer, first for the North British Locomotive Company and then for Rolls-Royce, that was a job he knew he was good at.

There had been Speakers from humble backgrounds before. But he was the first to have grown up in slums, the backcourts of Anderston in north Glasgow, with a father either raising hell from drink or not there at all. He was the first to have worked in a factory, cutting metal with shears in the days before lasers. And then, in 2000, the Commons chose him to be one of the principal officers of the land. Neither the government nor the monarch could dismiss him. He had his own apartment and public reception rooms in the Palace of Westminster. And every morning when Parliament sat he would process to the chamber with his private chaplain, his secretary and the Sergeant at Arms, while a trainbearer held up his black silk robe.

He soon dispensed with some of the flummery. The stockings, buckled shoes and knee breeches were swapped for dark flannel trousers and Oxford shoes. His white hair framed his broad red face well enough without a wig. He originally rejected a coat-of-arms as a silly distraction, but then enjoyed putting his own symbols on it: a chanter for the bagpipes he loved playing, a 12-inch rule from his metal-cutting days, and a fish to represent Glasgow and one of the miracles of St Mungo. For he was also the first Catholic to be Speaker since Reformation times, when Thomas More, another saint, had done the job. His motto, in Gaelic, was "I strive to be fair".

That was the essence of his job, and it was tricky. The Speaker could favour no party. But, like all Speakers, he was still a constituency MP. Since 1979 he had held a solid Labour majority in Glasgow Springburn. This was where he had first gone to work at "the Loco" at 15, with very little schooling. As a long-time shop steward and organiser for the engineering union, he had won the seat with hefty union help. His constituency was infested with heroin addiction, alcoholism, decrepit housing (his chief concern) and, as the old plants closed down, joblessness. He was mindful that he had joined the Labour Party and gone into politics to help working people.

Too mindful, maybe. As Speaker, he went on being chummy with Labour MPs in the members' tearoom. Some said he also indulged them in the House. He even intervened from the Chair himself in favour of Labour government policy. This was not Speakerly behaviour. But on the other hand the MP he once rebuked for her "pearls of wisdom" (more unSpeakerly behaviour) was from the Labour side. And he insisted in 2003 that the House should debate an amendment critical of Tony Blair's decision to go to war in Iraq. He had long known he would not make a minister. But he always felt, as he worked his way slowly upwards through various committees, that he could hold things fairly together.

What faced him on the other side was snobbery and disrespect. That rolling

Glaswegian accent reminded southerners of pub brawls on Saturday nights. His posh diary secretary called him “Mr Martin”, not “Mr Speaker”. His private secretary, public school and Oxbridge, struck him as pompous. Both left. Because he was not too proud to ask his clerks for advice during debates, critics said he was floundering in his job. The parliamentary sketchwriters, the worst of the mockers, called him “Gorbals Mick”. That was brainless—he was from north of the Clyde, the Gorbals lay south. It also proved they were not fit to wipe the boots of Gorbals people.

He defended Parliament just as robustly. That was his job as Speaker, but it was also his undoing. In 2008 journalists discovered that MPs had claimed from the Fees Office, which he controlled, large sums for second homes, moat-cleaning, duck houses and the like. They demanded full public disclosure of expenses, and reforms. He refused, wanting only to know who had leaked the data to the press. Unfortunately he had stretched the rules himself, spending £1.7m on doing up Speaker’s House and letting family members use his official air miles. All this, added to the rest of it, led MPs to urge him to go. In May 2009 he acceded. He was the first Speaker to be forced from office in 300 years.

Not beaten yet

In leaving, he was as defiant as ever. His speech lasted 34 seconds. He would have stayed, he said later, if the press had not attacked his wife (who had run up £4,000 for taxis) as a steel-smelter’s daughter. He left to keep unity in the House, not because “they” had beaten him. They had not.

He picked up a peerage as he left, as Speakers do. He became Lord Martin of Springburn. His old constituency, now Glasgow North East, had prospered on his watch. The shuttered Wills cigarette factory in Dennistoun was now a high-tech hub, and on the site of his sooty tenement in Anderston stood a five-star hotel. He returned home as lord indeed.

Economic and financial indicators

Output, prices and jobs

May 3rd 2018

Output, prices and jobs

% change on year ago

	Gross domestic product				Industrial production	Consumer prices			Unemployment rate, %
	latest	qtr*	2018†	2019†	latest	latest	year ago	2018†	
United States	+2.9 Q1	+2.3	+2.8	+2.5	+4.3 Mar	+2.4 Mar	+2.4	+2.4	4.1 Mar
China	+6.8 Q1	+5.7	+6.6	+6.4	+6.0 Mar	+2.1 Mar	+0.9	+2.3	3.9 Q1§
Japan	+2.0 Q4	+1.6	+1.5	+1.2	+2.2 Mar	+1.1 Mar	+0.2	+1.0	2.5 Mar
Britain	+1.2 Q1	+0.4	+1.5	+1.5	+2.2 Feb	+2.5 Mar	+2.3	+2.5	4.2 Jan††
Canada	+2.9 Q4	+1.7	+2.2	+1.9	+4.5 Feb	+2.3 Mar	+1.6	+2.0	5.8 Mar
Euro area	+2.5 Q1	+1.7	+2.4	+2.1	+2.9 Feb	+1.3 Mar	+1.5	+1.5	8.5 Mar
Austria	+2.9 Q4	+1.6	+2.7	+2.3	+5.1 Feb	+1.9 Mar	+1.9	+2.0	5.0 Mar
Belgium	+1.6 Q1	+1.6	+1.9	+1.8	+0.1 Feb	+1.5 Apr	+2.3	+1.8	6.4 Mar
France	+2.1 Q1	+1.0	+2.2	+1.9	+4.0 Feb	+1.6 Apr	+1.2	+1.5	8.8 Mar
Germany	+2.9 Q4	+2.4	+2.5	+2.2	+2.4 Feb	+1.6 Apr	+2.0	+1.6	3.4 Mar‡
Greece	+1.8 Q4	+0.4	+1.6	+1.9	-1.9 Feb	-0.2 Mar	+1.7	+0.7	20.6 Jan
Italy	+1.4 Q1	+1.2	+1.5	+1.3	+2.5 Feb	+0.5 Apr	+1.9	+1.2	11.0 Mar
Netherlands	+2.9 Q4	+3.1	+2.8	+2.5	+4.1 Feb	+1.0 Mar	+1.1	+1.5	4.9 Mar
Spain	+2.9 Q1	+2.8	+2.8	+2.3	+3.1 Feb	+1.1 Apr	+2.6	+1.4	16.1 Mar
Czech Republic	+5.5 Q4	+3.2	+3.3	+2.8	+2.7 Feb	+1.7 Mar	+2.6	+2.2	2.2 Mar‡
Denmark	+1.3 Q4	+3.7	+1.9	+2.0	+0.5 Feb	+0.5 Mar	+1.0	+1.3	4.1 Mar
Hungary	+4.4 Q4	+5.2	+3.7	+2.7	+3.9 Feb	+2.0 Mar	+2.7	+2.5	3.9 Mar§††
Norway	+1.4 Q4	-1.1	+1.9	+1.8	-1.3 Feb	+2.2 Mar	+2.4	+2.1	3.9 Feb‡‡
Poland	+4.4 Q4	+3.6	+4.2	+3.4	+1.9 Mar	+1.6 Apr	+2.0	+1.9	6.6 Mar§
Russia	+0.9 Q4	na	+1.9	+1.9	+0.9 Mar	+2.4 Mar	+4.2	+3.1	5.0 Mar§
Sweden	+3.3 Q4	+3.5	+2.7	+2.4	+6.7 Feb	+1.9 Mar	+1.3	+1.8	6.5 Mar§
Switzerland	+1.9 Q4	+2.4	+2.1	+1.9	+8.7 Q4	+0.8 Mar	+0.6	+0.6	2.9 Mar
Turkey	+7.3 Q4	na	+4.2	+4.1	+9.9 Feb	+10.2 Mar	+11.3	+9.9	10.8 Jan§
Australia	+2.4 Q4	+1.5	+2.8	+2.8	+1.6 Q4	+1.9 Q1	+2.1	+2.1	5.5 Mar
Hong Kong	+3.4 Q4	+3.3	+2.9	+2.3	+0.7 Q4	+2.6 Mar	+0.5	+2.5	2.9 Mar‡‡
India	+7.2 Q4	+6.6	+7.2	+7.5	+7.1 Feb	+4.3 Mar	+3.9	+4.8	5.9 Apr
Indonesia	+5.2 Q4	na	+5.4	+5.5	-3.5 Feb	+3.4 Apr	+4.2	+3.7	5.5 Q3§
Malaysia	+5.9 Q4	na	+5.5	+5.4	+3.0 Feb	+1.3 Mar	+4.9	+2.9	3.3 Feb§
Pakistan	+5.4 2018**	na	+5.4	+5.2	+5.5 Feb	+3.7 Apr	+4.8	+5.7	5.9 2015
Singapore	+4.3 Q1	+1.4	+3.0	+2.9	+5.9 Mar	+0.2 Mar	+0.7	+0.9	2.0 Q1
South Korea	+2.9 Q1	+4.4	+2.9	+2.9	-4.3 Mar	+1.6 Apr	+1.9	+1.8	4.5 Mar§
Taiwan	+3.0 Q1	+1.3	+2.5	+2.0	+3.1 Mar	+1.6 Mar	+0.2	+1.3	3.7 Mar
Thailand	+4.0 Q4	+1.8	+4.0	+3.4	+2.6 Mar	+1.1 Apr	+0.4	+1.1	1.2 Mar§
Argentina	+3.9 Q4	+3.9	+2.9	+3.2	+6.1 Mar	+25.6 Mar	na	+21.1	7.2 Q4§
Brazil	+2.1 Q4	+0.2	+2.7	+2.9	+2.8 Feb	+2.7 Mar	+4.6	+3.4	13.1 Mar§
Chile	+3.3 Q4	+2.6	+3.2	+3.5	+8.7 Mar	+1.8 Mar	+2.7	+2.3	6.9 Mar§‡‡
Colombia	+1.6 Q4	+1.1	+2.5	+3.1	+1.5 Feb	+3.1 Mar	+4.7	+3.3	9.4 Mar§
Mexico	+1.2 Q1	+4.5	+2.1	+2.4	+0.7 Feb	+5.0 Mar	+5.4	+4.3	3.2 Mar
Venezuela	-8.8 Q4~	-6.2	-15.3	-3.8	na	na	na	12,615.2	7.3 Apr§
Egypt	nil Q4	na	+5.1	+5.4	+4.6 Feb	+13.3 Mar	+30.9	+16.9	11.3 Q4§
Israel	+3.0 Q4	+4.1	+3.9	+3.3	+6.5 Feb	+0.2 Mar	+0.9	+0.9	3.6 Mar
Saudi Arabia	-0.7 2017	na	+1.0	+2.0	na	+2.8 Mar	-0.7	+4.4	6.0 Q4
South Africa	+1.5 Q4	+3.1	+1.9	+2.0	+0.8 Feb	+3.8 Mar	+6.1	+5.0	26.7 Q4§
Estonia	+5.0 Q4	+9.2	+4.0	+3.5	+7.6 Mar	+2.8 Mar	+2.8	+3.5	5.3 Q4§
Finland	+2.2 Q4	+2.5	+2.3	+2.2	+3.4 Feb	+0.8 Mar	+0.8	+0.9	8.8 Mar§
Iceland	+1.5 Q4	+2.6	+4.1		na	+2.3 Apr	+1.9		2.4 Mar§
Ireland	+8.4 Q4	+13.3	+4.5	+3.6	+3.5 Feb	+0.2 Mar	+0.7	+0.8	5.9 Apr
Latvia	+4.3 Q1	+6.8	+3.1	+3.9	+8.7 Feb	+2.2 Mar	+3.4	+2.8	8.1 Q4§
Lithuania	+4.0 Q4	+5.7	+3.7	+3.5	+8.8 Mar	+2.7 Mar	+3.1	+3.2	9.2 Mar§
Luxembourg	+1.7 Q4	-0.4	+3.4		+5.0 Feb	+1.1 Mar	+1.7		5.7 Mar§
New Zealand	+3.2 Q4	+1.5	+3.2	+2.1	+2.0 Q4	+1.1 Q1	+2.1	+1.7	4.4 Q1
Peru	+2.2 Q4	-1.3	+3.7	+3.9	+0.3 Feb	+0.5 Apr	+3.7	+1.5	7.0 Mar§
Philippines	+6.5 Q4	+6.1	+6.1	+6.3	+24.8 Feb	+4.3 Mar	+3.1	+4.5	5.3 Q1§
Portugal	+2.4 Q4	+2.7	+2.3	+2.1	+1.8 Mar	+0.4 Apr	+2.0	+0.8	8.1 Q4§
Slovakia	+3.5 Q4	+4.1	+3.7	+3.8	+1.1 Feb	+2.4 Mar	+1.0	+1.9	5.6 Mar§
Slovenia	+6.0 Q4	na	+4.5	+3.7	+7.5 Feb	+1.5 Apr	+1.8	+1.8	9.1 Feb§
Ukraine	+2.2 Q4	+1.4	+3.0	+2.8	+1.0 Mar	+13.2 Mar	+15.1	+11.2	1.4 Mar§
Vietnam	+6.8 2017	na	+6.9	+6.5	+9.4 Apr	+2.8 Apr	+4.3	+4.5	2.3 2016

Source: Haver Analytics. *% change on previous quarter, annual rate. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. ~2015 **Year ending June. ††Latest 3 months. ‡‡3-month moving average.

Trade, exchange rates, budget balances and interest rates

May 3rd 2018

Trade, exchange rates, budget balances and interest rates

	Trade balance	Current-account balance		Currency units, per $		Budget balance	Interest rates	
	latest 12 months, $bn	latest 12 months, $bn	% of GDP 2018†	May 2nd	year ago	% of GDP 2018†	3-month latest	10-year gov't bonds, latest
United States	-830.6 Feb	-466.2 Q4	-2.7	-	-	-4.6	2.35	2.94
China	+409.5 Mar	+164.9 Q4	+1.3	6.36	6.90	-3.5	4.00	3.13§§
Japan	+39.6 Feb	+194.1 Feb	+3.7	110	112	-4.9	-0.03	0.03
Britain	-178.4 Feb	-106.7 Q4	-3.9	0.74	0.77	-2.7	0.71	1.49
Canada	-20.3 Feb	-49.4 Q4	-2.6	1.29	1.37	-2.0	1.69	2.36
Euro area	+281.6 Feb	+469.5 Feb	+3.1	0.84	0.92	-0.9	-0.33	0.58
Austria	-6.3 Jan	+7.7 Q4	+2.4	0.84	0.92	-0.6	-0.33	0.60
Belgium	+26.3 Feb	-0.8 Dec	-0.2	0.84	0.92	-1.1	-0.33	0.82
France	-69.2 Feb	-14.4 Feb	-1.0	0.84	0.92	-2.4	-0.33	0.79
Germany	+283.9 Feb	+310.4 Feb	+7.8	0.84	0.92	+1.0	-0.33	0.58
Greece	-22.8 Feb	-2.2 Feb	-1.2	0.84	0.92	+0.2	-0.33	3.92
Italy	+56.4 Feb	+53.2 Feb	+2.7	0.84	0.92	-2.0	-0.33	1.79
Netherlands	+64.5 Feb	+84.9 Q4	+9.5	0.84	0.92	+0.7	-0.33	0.71
Spain	-29.4 Feb	+25.9 Feb	+1.7	0.84	0.92	-2.6	-0.33	1.21
Czech Republic	+18.4 Feb	+1.9 Q4	+0.7	21.4	24.7	+0.8	0.90	1.75
Denmark	+8.7 Feb	+24.3 Feb	+7.7	6.23	6.82	-0.7	-0.29	0.60
Hungary	+9.3 Jan	+4.0 Q4	+1.9	263	286	-2.6	0.04	2.55
Norway	+19.9 Mar	+20.2 Q4	+6.3	8.11	8.60	+4.9	1.11	1.94
Poland	-0.7 Feb	+0.3 Feb	-0.2	3.58	3.86	-2.2	1.50	3.17
Russia	+122.0 Feb	+41.7 Q1	+2.9	64.0	57.0	-0.9	5.43	8.13
Sweden	-1.1 Mar	+17.1 Q4	+4.2	8.93	8.83	+0.6	-0.37	0.72
Switzerland	+31.8 Mar	+66.6 Q4	+8.6	1.00	0.99	+0.8	-0.73	0.10
Turkey	-86.6 Apr	-53.3 Feb	-5.5	4.18	3.53	-2.8	14.7	12.9
Australia	+6.0 Mar	-32.3 Q4	-2.2	1.33	1.33	-1.2	2.04	2.76
Hong Kong	-64.2 Mar	+14.3 Q4	+4.0	7.85	7.78	+0.8	1.62	2.20
India	-160.3 Mar	-39.1 Q4	-2.1	66.7	64.2	-3.5	6.21	7.73
Indonesia	+8.1 Mar	-17.3 Q4	-2.0	13,948	13,312	-2.5	5.76	6.80
Malaysia	+24.4 Feb	+9.4 Q4	+2.8	3.93	4.33	-2.8	3.70	4.16
Pakistan	-36.5 Mar	-16.6 Q1	-5.0	116	105	-5.5	6.40	8.50†††
Singapore	+46.2 Mar	+61.0 Q4	+21.2	1.34	1.40	-0.7	na	2.63
South Korea	+86.6 Apr	+71.7 Feb	+5.0	1,076	1,131	+0.7	1.65	2.75
Taiwan	+17.6 Mar	+84.1 Q4	+14.2	29.8	30.0	-0.8	0.66	1.03
Thailand	+11.8 Mar	+50.2 Q1	+10.4	31.7	34.5	-2.3	1.15	2.55
Argentina	-9.8 Mar	-30.8 Q4	-5.0	20.9	15.3	-5.5	22.7	4.19
Brazil	+65.7 Apr	-8.3 Mar	-1.2	3.55	3.16	-7.0	6.24	7.89
Chile	+10.1 Mar	-4.1 Q4	-0.6	619	667	-2.1	0.47	4.45
Colombia	-7.9 Feb	-10.4 Q4	-2.9	2,833	2,946	-2.0	4.92	6.47
Mexico	-9.5 Mar	-18.8 Q4	-1.8	19.1	18.8	-2.3	7.84	7.54
Venezuela	-36.2 Oct~	-17.8 Q3~	+2.1	68,910	10.0	-15.5	14.5	8.24
Egypt	-34.7 Feb	-9.3 Q4	-4.0	17.6	18.1	-9.8	18.4	na
Israel	-18.3 Mar	+10.5 Q4	+3.5	3.63	3.61	-2.4	0.16	1.85
Saudi Arabia	+43.4 2016	+15.2 Q4	+3.7	3.75	3.75	-7.3	2.39	na
South Africa	+4.0 Mar	-8.6 Q4	-2.7	12.7	13.3	-3.6	6.90	8.32
Estonia	-1.9 Feb	+0.8 Feb	+2.3	0.84	0.92	-0.3	-0.33	na
Finland	-2.7 Feb	+2.2 Feb	+0.9	0.84	0.92	-0.7	-0.33	0.72
Iceland	-1.7 Mar	+0.9 Q4	+4.5	102	106	+1.2	4.68	na
Ireland	+50.9 Feb	+42.8 Q4	+7.4	0.84	0.92	-0.2	-0.33	0.98
Latvia	-3.0 Feb	-0.1 Feb	-0.2	0.84	0.92	-1.2	-0.33	na
Lithuania	-2.8 Feb	nil Q4	+0.8	0.84	0.92	+0.6	-0.33	1.15
Luxembourg	-7.4 Feb	+3.3 Q4	+4.7	0.84	0.92	+0.9	-0.33	na
New Zealand	-2.5 Mar	-5.5 Q4	-2.7	1.43	1.44	+1.0	2.03	2.85
Peru	+6.3 Feb	-2.7 Q4	-1.8	3.26	3.25	-3.5	3.24	na
Philippines	-31.6 Feb	-2.5 Dec	-0.2	51.9	50.0	-1.9	3.45	6.18
Portugal	-16.5 Feb	+0.6 Feb	+0.1	0.84	0.92	-1.0	-0.33	1.67
Slovakia	+3.0 Feb	-2.6 Feb	-0.6	0.84	0.92	-1.2	-0.33	0.73
Slovenia	nil Jan	+3.2 Feb	+5.7	0.84	0.92	+0.2	-0.33	na
Ukraine	-6.5 Feb	-2.3 Q1	-4.2	26.1	26.6	-2.6	17.0	na
Vietnam	+8.2 Apr	+6.4 2017	nil	22,761	22,750	-6.2	4.80	4.66

Source: Haver Analytics. †*The Economist* poll or Economist Intelligence Unit estimate/forecast. ~2015 §§5-year yield. †††Dollar-denominated bonds.

The Economist commodity-price index

May 3rd 2018

The Economist commodity-price index

2005=100

	Apr 24th	May 1st*	% change on one month	% change on one year
Dollar Index				
All Items	154.9	157.1	+3.2	+10.1
Food	157.4	163.3	+3.2	+7.3
Industrials				
All	152.2	150.8	+3.1	+13.5
Nfa†	142.7	143.1	+3.1	+3.5
Metals	156.3	154.1	+3.2	+18.0
Sterling Index				
All items	201.7	210.2	+6.6	+4.7
Euro Index				
All items	157.7	163.0	+5.6	+0.1
Gold				
$ per oz	1,328.4	1,304.5	-1.9	+4.0
West Texas Intermediate				
$ per barrel	67.7	67.3	+5.9	+41.1

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

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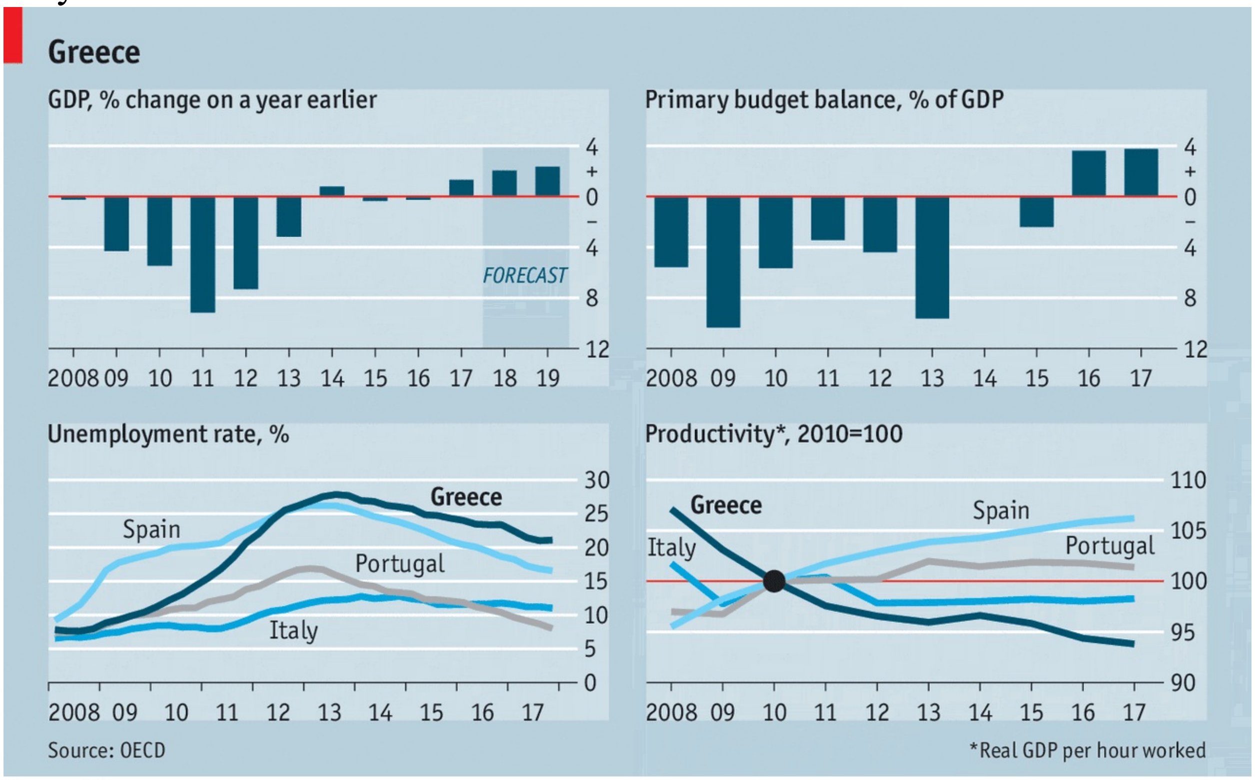
Greece

May 3rd 2018



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Markets

May 3rd 2018

Markets

	Index May 2nd	% change on one week	% change on Dec 29th 2017 in local currency	% change on Dec 29th 2017 in $ terms
United States (DJIA)	23,925.0	-0.7	-3.2	-3.2
United States (S&P 500)	2,635.7	-0.1	-1.4	-1.4
United States (NAScomp)	7,100.9	+1.4	+2.9	+2.9
China (SSEA)	3,226.9	-1.2	-6.8	-4.6
China (SSEB, $ terms)	316.0	-1.3	-7.5	-7.5
Japan (Nikkei 225)	22,472.8	+1.2	-1.3	-1.1
Japan (Topix)	1,771.5	+0.2	-2.5	-0.2
Britain (FTSE 100)	7,543.2	+2.2	-1.9	-1.4
Canada (S&P TSX)	15,627.9	+0.8	-3.6	-6.0
Euro area (FTSE Euro 100)	1,236.1	+2.0	+2.2	+1.7
Euro area (EURO STOXX 50)	3,553.8	+1.9	+1.4	+1.0
Austria (ATX)	3,475.8	+0.9	+1.6	+1.2
Belgium (Bel 20)	3,920.9	+0.7	-1.4	-1.9
France (CAC 40)	5,529.2	+2.1	+4.1	+3.6
Germany (DAX)*	12,802.3	+3.1	-0.9	-1.3
Greece (Athex Comp)	858.1	+3.9	+6.9	+6.5
Italy (FTSE/MIB)	24,265.6	+2.0	+11.0	+10.6
Netherlands (AEX)	555.9	+0.7	+2.1	+1.6
Spain (IBEX 35)	10,088.9	+2.3	+0.4	nil
Czech Republic (PX)	1,116.9	-0.4	+3.6	+3.0
Denmark (OMXCB)	909.9	+4.0	-1.9	-2.3
Hungary (BUX)	37,969.8	-0.2	-3.6	-5.2
Norway (OSEAX)	985.1	+3.5	+8.6	+9.5
Poland (WIG)	60,066.5	+1.4	-5.8	-8.5
Russia (RTS, $ terms)	1,136.6	-0.1	-1.5	-1.5
Sweden (OMXS30)	1,591.0	+2.2	+0.9	-7.5
Switzerland (SMI)	8,896.3	+1.8	-5.2	-7.5
Turkey (BIST)	104,725.7	-2.5	-9.2	-17.6
Australia (All Ord.)	6,136.7	+2.1	-0.5	-4.4
Hong Kong (Hang Seng)	30,723.9	+1.3	+2.7	+2.3
India (BSE)	35,176.4	+2.0	+3.3	-1.1
Indonesia (JSX)	6,012.2	-1.1	-5.4	-8.0
Malaysia (KLSE)	1,852.0	nil	+3.1	+6.0
Pakistan (KSE)	45,196.4	-1.1	+11.7	+6.6
Singapore (STI)	3,615.3	+1.3	+6.2	+6.2
South Korea (KOSPI)	2,505.6	+2.3	+1.5	+1.0
Taiwan (TWI)	10,618.8	+0.6	-0.2	-0.2
Thailand (SET)	1,791.1	+0.7	+2.1	+4.9
Argentina (MERV)	29,614.0	-1.1	-1.5	-11.3
Brazil (BVSP)	84,547.1	-0.6	+10.7	+3.4
Chile (IGPA)	28,648.7	+0.5	+2.4	+1.8
Colombia (IGBC)	12,427.2	+0.9	+8.3	+14.1
Mexico (IPC)	47,810.0	-0.5	-3.1	-0.9
Peru (S&P/BVL)*	21,328.9	-0.1	+6.8	+6.0
Egypt (EGX 30)	18,173.2	+0.3	+21.0	+21.6
Israel (TA-125)	1,333.7	+0.6	-2.2	-6.4
Saudi Arabia (Tadawul)	8,158.1	-0.9	+12.9	+12.9
South Africa (JSE AS)	58,450.4	+2.6	-1.8	-4.3
Europe (FTSEurofirst 300)	1,519.4	+1.9	-0.7	-1.1
World, dev'd (MSCI)	2,076.7	nil	-1.3	-1.3
Emerging markets (MSCI)	1,151.4	+1.0	-0.6	-0.6
World, all (MSCI)	506.9	+0.1	-1.2	-1.2
World bonds (Citigroup)	949.0	-0.6	-0.1	-0.1
EMBI+ (JPMorgan)	799.1	-1.0	-4.4	-4.4
Hedge funds (HFRX)	1,263.5‡	-0.2	-1.0	-1.0
Volatility, US (VIX)	16.0	+17.8	+11.0	(levels)
CDSs, Eur (iTRAXX)†	54.9	-2.6	+21.7	+21.2
CDSs, N Am (CDX)†	61.3	-1.0	+24.9	+24.9
Carbon trading (EU ETS) €	13.1	-3.2	+60.6	+60.0

Sources: IHS Markit; Thomson Reuters. *Total return index.
†Credit-default-swap spreads, basis points. ‡May 1st.

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