The Economist

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What could bring down America's economy?

The Economist

Thursday, July 11, 2019

The world this week

Politics this week

Jul 13th 2019

Britain's ambassador to America, **Sir Kim Darroch**, resigned after President Donald Trump said he would "no longer deal with him". The spat came after Sir Kim's confidential cables to London were leaked to a newspaper. They described the White House as "dysfunctional", "clumsy" and "inept", and its occupant as "radiat[ing] insecurity". The British government backed its man, but Boris Johnson, the probable next prime minister, conspicuously did not. Sir Kim took the hint. See article.

Mr Trump violated the American constitution by blocking those whose views he disliked from his **Twitter** account, a federal appeals court ruled. It said the First Amendment forbids a public official to operate in such a way on a platform used to conduct government business. The case was brought by the Knight First Amendment Institute at Columbia University on behalf of seven blocked Twitter users. See article.

Do you hear the people sing?

Carrie Lam, **Hong Kong's** chief executive, declared that a controversial extradition bill was "dead". Protesters were not satisfied. They have demanded the formal withdrawal of the bill, which would allow Hong Kongers suspected of crimes in mainland **China** to be sent there to stand trial. The bill was the initial spark for weeks of massive demonstrations, which now appear certain to continue.

The ambassadors of 22 countries on the UN Human Rights Council have signed a letter criticising China's mass internment of **Uighurs** in camps. Experts believe more than 1m Uighurs—a mostly Muslim ethnic minority in **China**—have been locked up as part of a campaign to make the region less restive. The letter does not have the force of a resolution, but it represents a rare concerted effort at the UN to lobby China over the camps.

Japan accused **South Korea** of failing to enforce international sanctions against **North Korea** fully. The complaint was the latest barb in an escalating row between the two countries, after Japan imposed restrictions on exports to South Korea in protest at judgments against Japanese firms in South Korean courts.

At least 20 people were killed in tribal violence in a remote area in the highlands of **Papua New Guinea**. Pregnant women and children were among the victims.

Master of the house

Kyriakos Mitsotakis, leader of **Greece's** centre-right New Democracy party, won an overall majority at a general election, thanks to a 50-seat top-up that is given to the party that wins the most seats. He has promised tax cuts and a more business-friendly environment. Greece still grapples with serious economic problems that the outgoing left-wing Syriza government, led by Alexis Tsipras, has failed to resolve. See article.

A tape surfaced that purports to be of a conversation between a former close aide to Matteo Salvini, the powerful deputy prime minister of **Italy**, and a number of **Russians** concerning ways of secretly using Russian money to fund Mr Salvini's Northern League party. He denied ever receiving "a rouble, a euro, a dollar or a litre of vodka". See article.

Germany's chancellor, Angela Merkel, suffered what seemed to be a third public episode of uncontrollable shaking. She insists that her health is good.

Upon these stones

A Nigerian court ordered the seizure of $40m in jewellery from a former oil minister, Diezani Alison-Madueke. Muhammadu Buhari, who won a second term as **Nigeria's** president earlier this year, campaigned on a promise to reduce corruption.

The generals running **Sudan** since the fall in April of its dictator, Omar al-Bashir, reached a power-sharing accord with the pro-democracy movement that has been demanding an end to military rule. The deal makes provision for the generals to lead a new Supreme Council, which will be the highest decision-making body, for 21 months. Civilians will take over for a further 18 months before elections. See article.

A deal signed in 2015 to prevent **Iran** from building a nuclear bomb came closer to collapse after its three European signatories (Britain, France and Germany) said they were concerned that Iran was "not meeting several of its commitments”. The accord offered Iran relief from some economic sanctions in exchange for limits on its nuclear programme. But President Trump withdrew **America** from the deal last year and reimposed sanctions. Iran has since breached caps on uranium enrichment. And tensions with the West rose after Britain seized a tanker carrying Iranian oil. See article.

Negotiators for Taliban insurgents met representatives of the Afghan government to discuss a peace agreement for the first time, albeit unofficially. The talks were disguised as part of a bigger meeting of Afghan groups. **America** has held seven rounds of negotiations with the Taliban about a possible withdrawal from **Afghanistan**, but also wants the government and the insurgents to speak directly. See article.

At the end of the day

Mexico’s finance minister, Carlos Urzúa, resigned after claiming that the administration of President Andrés Manuel López Obrador had made his job impossible and had forced his ministry to hire unqualified people. Mr Urzúa, a social democrat, was a voice of prudence in the cabinet of the populist leftist president. The country’s currency, the peso, tumbled after the announcement (though it later recovered). See article.

A UN report accused **Venezuela’s** security forces of killing almost 7,000 people between January 2018 and May this year. It singles out the country’s special forces for carrying out most of the killings and manipulating the crime scenes to suggest that the victims were shot for resisting arrest. It came out days after a reserve captain in the country’s navy died in custody, apparently after being tortured. See article.

The lower house of **Brazil’s** congress approved a reform of the country’s unsustainably generous pension system by a vote of 379 to 131. The measure would save taxpayers 900bn reais ($240bn) over ten years.

João Gilberto, the man who sang “The Girl from Ipanema”, died aged 88 in Rio de Janeiro. Mr Gilberto was a star of bossa nova, a musical style that fuses jazz and samba. See article.

Business this week

Jul 13th 2019

Deutsche Bank revealed details of a long-awaited €7.4bn ($8.3bn) restructuring plan. Its investment-banking division will bear the brunt. The troubled lender will close its global equity-trading unit and cut 18,000 people from its 91,500 workforce. It will also create a “bad bank” to house unwanted assets. Christian Sewing, Deutsche Bank’s chief executive, hopes the move will cut costs by €6bn a year. Analysts responded to the restructuring by saying it was long overdue. See article.

Turkey’s President Recep Tayyip Erdogan sacked Murat Cetinkaya, the governor of the country’s central bank, and suggested that the institution needs an overhaul. Mr Cetinkaya was apparently ousted for refusing the president’s request to lower interest rates. Mr Erdogan seemingly wants greater control of monetary policy, a stance that has previously contributed to runs on the Turkish lira. See article.

Can hack it

Britain’s Information Commissioner’s Office, a data-privacy regulator, said it would fine **British Airways** (BA) £183m ($230m) over a data breach last summer. In June 2018 criminals hacked into BA’s website and stole personal data, including the names, addresses and credit-card details of around 500,000 customers. It was the first fine Britain handed out under the EU’s new General Data Protection Regulation, which greatly increased the size of potential penalties. The second came the next day, when **Marriott**, a hotel group, was told it would be fined £99m for a data breach discovered last year. Both BA and Marriott said they would contest their penalties.

Virgin Galactic said that it was planning an initial public offering. The firm, which hopes to take its first paying passengers into space early next year, could be valued at $1.5bn. Negotiations over a $1bn investment from Saudi Arabia’s sovereign-wealth fund were ended last year after the murder of Jamal Khashoggi, a journalist, by Saudi operatives in Istanbul.

America began an investigation into **France’s planned digital-services tax**. The Trump administration says the

3% levy on the French revenues of big internet firms unfairly targets American companies like Google and Amazon. Its probe could result in America imposing tariffs or other trade restrictions. Several European countries are mulling digital taxes, though all say they would prefer a global deal—which the OECD, a club of rich countries, is trying to broker.

The Trump administration said it would issue licences allowing American companies to sell their products to **Huawei**, a Chinese technology firm, provided that the sales do not threaten national security. In May, after trade talks with China collapsed, America had blacklisted the Chinese telecoms firm over security concerns related to its links to the Communist Party of China. President Trump agreed to allow Huawei to resume sales to American firms last month.

Rocket man

America's stockmarkets soared after Jerome Powell, the chairman of the **Federal Reserve**, hinted that the central bank is looking to cut interest rates this month. Investors piled into shares after Mr Powell cited concerns that the trade war with China and a global slowdown could hurt growth in America. The S&P 500 index of shares touched 3,000 for the first time.

Mr Powell also warned that plans by **Facebook** to build a digital currency called Libra raise "serious concerns". The central banker told America's House of Representatives that Facebook should address fears about privacy, money laundering, consumer protection and financial stability before moving forward with the project. Several executives at the social network are scheduled to be questioned by Congress later this month.

A profit warning from **BASF**, the world's largest maker of chemicals, weighed heavily on the German stockmarket. The company slashed its forecast for full-year earnings by 30%. In response its share price slid by 5%. The company blamed a global economic slowdown, caused by the trade war between America and China, as well as a "particularly strong" downturn in car manufacturing, for the downgrade.

A Brazilian judge ordered **Vale**, a mining giant, to pay full compensation for damage caused when one of its dams in the north of the country broke in January, killing at least 248 people. Vale must stump up for all the effects of the disaster, including the cost of the economic hit to the region. The judge said it was still not possible to calculate a final figure for the total amount Vale will have to pay.

KAL’s cartoon

Jul 13th 2019

Leaders

America’s economy: Riding high
America’s expansion is now the longest on record.

Citizenship in India: Show me your papers
India’s hunt for “illegal immigrants” is aimed at Muslims.

Italy’s public finances: The most dangerous man in Europe
How to defuse the threat that Matteo Salvini poses to the euro.

Investment banking: A nightmare on Wall Street
Deutsche Bank’s retreat ends European hopes of conquering Wall Street.

Diplomatic leakage: Woodygate
The Economist has seen leaks from the US ambassador in London.

Riding high

America's expansion is now the longest on record

What could bring it to an end?

Jul 11th 2019

AROUND THE world investors, businesses and central bankers are grappling with a startling fact: at the end of July America's economy will have been growing for 121 months, the longest run since records began in 1854, according to the NBER, a research body. History suggests there will be a recession soon. And plenty of people are gloomy. Bond markets have been sounding the alarm, as long-term interest rates sink below short-term ones, often a harbinger of a downturn. Manufacturing firms are wary; indices of business confidence are tumbling. Yet equity investors are still buoyant. The stockmarket is going gangbusters, rising by 19% so far this year. And in June America's economy created a whopping 224,000 new jobs, more than twice as many as needed to keep up with the growth of the workforce. The result is a puzzle that matters a great deal. America's economy accounts for a quarter of global output, so if it stumbles the world will, too. But if it proves able to extend the cycle a lot longer, it may be time to rewrite the rules for how all rich economies behave.

The conflicting signals reflect an unusually sluggish and stretched expansion. Some of that is to be expected after the worst financial crisis in 80 years, but as our briefing explains, it is also owing to deeper changes in America's $21trn economy. Growth is slow but more stable as activity has shifted to services and intangible assets. Thanks to new regulations and the recent memory of the bust, there are few signs of wild mortgage lending, over-investment or reckless financial firms. Inflation is remarkably subdued. These forces mean that a placid expansion can continue well beyond historical norms, but also suggest that the way it will eventually end will be different. Recessions used to be triggered by housing bubbles, price surges or industrial busts. Now you should worry about globally interconnected firms, a financial system addicted to cheap money and a political system that is toying with extreme policies because living standards are not rising fast enough.

Average GDP growth during this expansion has been a mere 2.3%, much lower than the 3.6% that was seen in

America's three previous expansions. That reflects some deep malaises. The workforce is ageing. Big firms hoard profits and invest less. Productivity growth has been slow. Robert Gordon, an economist, worries that America's genius for innovation is flagging. Emojis and bitcoins are no substitute for breakthroughs such as jet engines or the internet.

That is the bad news. The good news is that the economy may be less volatile. A third of America's 20th-century recessions were caused by industrial slumps or oil-price shocks, according to Goldman Sachs. Today manufacturing is just 11% of GDP and each dollar of output requires a quarter less energy than in 1999. Services have become even more vital, at 70% of output. Instead of fickle factories and Florida condos, investment has shifted to intellectual property, which now accounts for more than a quarter of the total. After the searing experience of 2008, the value of the housing stock is 143% of GDP, well below the peak of 188%. Banks are rammed full of capital.

Most remarkable of all is very low inflation, which has averaged 1.6% over the course of the expansion. In many past downturns the jobs market overheated, causing inflation and leading the Federal Reserve to hit the brakes. Today the dynamics are different. The unemployment rate has fallen to 3.7%, close to the lowest in half a century, but wage growth is only a tepid 3%. Workers have less bargaining power in a globalised economy. The Fed's credibility helps, too—most people believe that it can keep long-run inflation at about 2%. Given that racing prices are less of a worry and that it lacks the ammunition to deal with a serious downturn, the Fed is being more active at signalling that it will ease policy when growth dips. This week the Fed signalled it would soon nudge rates down from today's 2.25-2.5%, to keep growth going.

All this supports the idea that the familiar triggers for recession are still absent and that the moderately good times can roll on for years yet. The trouble with this logic is that, just as the economy has changed, so have the risks. Inevitably it is hard to identify exactly what might go wrong, but three new kinds of problems loom large.

First, America's glossy corporate champions have unfamiliar vulnerabilities. Although fewer make physical goods, most rely on global production chains that are being shaken by the trade war (see article). This is depressing investment and could yet produce a shock—imagine if Apple was cut off from its factories in China. Tech firms, meanwhile, now account for a third of all investment by listed firms, including intellectual property. Other businesses outsource their need for IT services to a few giants. One of them, Alphabet, spent $45bn in the past year, five times more than Ford. But 85% of its sales come from advertising, which has been cyclical in the past. It and other tech firms also face a regulatory storm.

The second risk is financial. Although house prices and the banks have been tamed, total private debts remain high by historical standards, at 250% of GDP. An edifice of asset prices and borrowing rests on the assumption of permanently low and stable interest rates, making it more fragile than it looks. If rates rise there will be distress among some firms, and trouble in debt markets—there was a sell-off in late 2018. If, by contrast, the Fed has to cut rates to near zero for a prolonged period to sustain growth, it could weaken the banks, as Europe has found.

A recession made in Washington?

The last danger is politics. As the economy has trodden a narrow path, the boundaries of economic policy have been blown wide apart, partly out of frustration at a decade of sluggish wages. President Donald Trump has tried to gin up growth, by cutting taxes and attacking the Fed. Most Democrats are keen to let rip on government spending. More extreme policies hover in the wings. On the left, modern monetary theory (a kind of money printing) and massive state intervention are popular. One of Mr Trump's new nominees to the Fed board supports a gold standard. The greatest threat to America's long and placid expansion is that a new era of wild policy may be just beginning.

Show me your papers

India's hunt for "illegal immigrants" is aimed at Muslims

Many are in fact citizens

Jul 13th 2019

AMIT SHAH, India's home minister, calls them "termites" and "infiltrators". The government will hunt them down and throw them into the sea, he thunders. Unfortunately, it is not just the standard bluster from a nativist politician railing against illegal immigration. Last year bureaucrats in the Indian state of Assam, which has a population of about 33m people, produced a list of more than 4m of its residents whom they consider foreigners, without any right to live there. A further 100,000 people were deemed non-citizens in June (see article).

Mr Shah insists that all these people will be deported. In practice, neighbouring Bangladesh, from which they are said to have migrated, will not accept them, since in most cases there is no evidence that they are anything other than Indians too poor and uneducated to navigate the complex bureaucracy of citizenship. But even if the threatened mass deportations never take place, the process of declaring people aliens, and hauling lots of them off to internment camps, is not only a rank injustice, but also a threat to stability. The supposed illegal immigrants are overwhelmingly Muslim. The purge is therefore exacerbating sectarian tension in a state that saw bloody Hindu-Muslim riots as recently as 2012, when some 400,000 people were displaced. Yet Mr Shah considers the campaign in Assam against illegal immigrants such a success that he wants to replicate it throughout the entire country.

Indigenous Assamese have long complained that they are being swamped in their own homeland by migrants from Bengal, the densely populated region to the south (see article). In colonial times, there was such an influx, since there were no borders to stop poor Bengalis moving north in search of a better life. Assamese nationalists, pointing to Bengalis' ever higher share of the state's population, insist the flow of migrants continues to this day, even though the Muslim part of Bengal has become a separate country, Bangladesh.

Muslims make up a third of Assam's population. The state's shifting demography is mainly the result of a higher birth rate among Bengalis already in Assam, not migration. But that has not stopped the Bharatiya Janata Party (BJP), which dominates both the state and national governments, from vowing to collar lots of illegal immigrants. And since so few of them exist, more had to be invented.

The law the government is eagerly enforcing requires all residents to prove that they or their forebears were in the state by March 24th 1971. That is a big hurdle for poor farmers and itinerant workers, especially women, many of them illiterate. Suspects can be denounced as non-citizens by anonymous tips, an invitation to abuse. There have been lots of mistakes, such as a decorated war hero who was declared not to be Indian. Roughly 60% of those found not to be citizens at the 100 "foreigners' tribunals" the state government is setting up were not even present for the proceedings. Some 3.7m of the 4m people declared illegal immigrants are challenging their designation. There has been a spate of suicides tied to adverse rulings.

Worse, like so many of the BJP's schemes, the hunt for illegal immigrants is openly anti-Muslim. Some Hindus have been caught in the dragnet, but Mr Shah says they do not need to worry, since the government has drafted a bill to make it easy for Hindu refugees to claim citizenship. Christian, Buddhist, Jain, Parsi and Sikh refugees can too—just not Muslims.

Anything that polarises voters by religion benefits the BJP, especially in nearby West Bengal, where Muslims are over a quarter of the population and the BJP is locked in a political knife-fight with a regional party it accuses of coddling Muslims, the Trinamool Congress. West Bengal is one of the places where Mr Shah has railed against termites. But it is not phantom foreigners, rather the BJP, through its stirring of sectarian tensions, that is gnawing away at the foundations of Indian democracy.

The most dangerous man in Europe

How to defuse the threat that Matteo Salvini poses to the euro

There needs to be a deal between the European Commission and Italy

Jul 13th 2019

ON JULY 8TH euro-zone watchers breathed a sigh of relief. The zone's 19 finance ministers backed the European Commission's decision that Italy should not be penalised for allowing its public-debt burden to rise in 2018 in violation of the EU's fiscal rules. Thanks to savings of 0.4% of GDP for the current year, cobbled together by Italy's governing coalition, a damaging confrontation seems to have been resolved.

In truth, however, it has merely been postponed. The grim reality of Italy's public finances remains unchanged. Its deficit is on course to exceed the EU's threshold of 3% of GDP in 2020, its debt is sky high and, worst of all, it is plagued by a persistent absence of growth. If Italy is to dispel the ever-present air of crisis, a much more far-sighted deal will be needed.

Since the euro was introduced, over 20 years ago, Italy has steadily fallen behind the rest of Europe. The average citizen in Germany, France and Spain is a fifth better off, in real terms, than in 1999; incomes in eastern Europe have more than doubled. But the average Italian is no richer.

Dissatisfaction at this record has been skilfully converted into votes by Italy's government, an unwieldy coalition between the Northern League and the Five Star Movement. The League's leader, Matteo Salvini, has been able to whip up anger against two main enemies: the EU, which he says is a "gulag" that imposes wretchedness, and the inflow of migrants from Libya, which he also blames in part on the EU. Six years ago the League managed only 4% at the ballot box; today it is the country's most popular party. Thus Mr Salvini has used the politics of grievance to make himself the most powerful man in Italy (see article). He is not yet prime minister, but he surely intends to be.

This is a recipe for continual confrontation with Brussels. And that, in turn, is the EU's most alarming problem. Italy's public debt is a colossal €2.3trn ($2.6trn), or 132% of GDP. The country is too big to bail out. Its failure to grow makes its finances—and the banks exposed to them—fragile. A row over its budget last year unsettled markets before the coalition made hasty concessions. The latest uneasy truce is unlikely to last.

The Italian coalition says the EU's fiscal rules choke off demand-led growth. Mr Salvini has promised huge tax cuts. Luigi Di Maio, his coalition partner, wants more welfare. Brussels says the problem is structural; anyhow, it has already granted Italy over €30bn of extra fiscal space since 2015, nearly 2% of annual GDP. This vexes northerners, who want the rules enforced.

Neither side is entirely in the right. Italy's economy, hit by slowing global trade, is unlikely to be as near its potential as the commission reckons. But the coalition's attempt at stimulus last year backfired when markets took fright. Though interest rates have since come down, Italy's borrowing costs, once near those of Spain, are now within spitting distance of Greek yields, which have fallen with the prospect of a new centre-right government.

Many of the reasons for Italy's bleak growth prospects date back decades. Courts operate at a glacial pace; bureaucracy is labyrinthine. The services sector is sheltered from competition. Countrywide pay agreements keep wages too high in the south, discouraging formal employment there. Far from tackling these ingrained problems, the government has ignored them and instead undone unpopular but necessary reforms to the pensions system. In light of all this, last-minute concessions to the EU's fiscal rules solve nothing. Confrontation is merely deferred until the next time the commission reviews Italy's books. The threat of an accidental bond crisis never fully recedes.

Instead of haggling over tenths of a percentage point, the commission should enter negotiations over next year's budget aiming for a more ambitious agreement. It should be flexible over public spending, on the condition that Italy enacts growth-enhancing reforms. Those reforms are more likely to work if their implementation is supported by fiscal easing. The public-debt ratio would then fall more quickly.

Such a deal offers something to both sides. Italy's populists may ignore reprimands from Eurocrats, but they do worry about the markets. If they were to accept some curbs on their spending, they would regain some of their credibility with investors, and bank the electoral benefits of higher economic growth to boot. For Brussels, a deal along these lines would defuse the long-term threat that Italy poses to European financial stability. Eurocrats should remember that, as Italy falls further behind, the resentment that has fuelled Mr Salvini's alarming rise will only grow.

Europe’s nightmare on Wall Street

Deutsche Bank’s retreat ends European hopes of conquering Wall Street

The main threat to American banks now is competition from China

Jul 13th 2019

IN THE 1980S the first of what was to become a procession of European banks began an assault on Wall Street. Credit Suisse bought First Boston in 1988. Deutsche Bank swallowed Bankers Trust a decade later. After the turn of the century, UBS, RBS, Barclays and others also waved their chequebooks. The motive was partly to follow customers as business globalised, but also defensive: a response to American rivals’ charge into Europe.

This week Europe’s dream of going toe to toe with homegrown investment banks in the world’s deepest capital market came to a shuddering end with the capitulation of Deutsche Bank. Its overdue restructuring will involve 18,000 job losses, mostly in London and New York. The retreat is a humiliation for a bank that once signalled a desire to knock Goldman Sachs off the top of global investment-banking league tables. Before the financial crisis Deutsche was the biggest-spending and brashest of bulge-bracket firms. In 2007 it was in second place, snapping at Goldman’s heels. Now it languishes outside the top five—and it may have farther to fall.

Today the Europeans are shadows of their former selves. Some have given up on Wall Street to focus instead on consumer and corporate banking at home (RBS) or on wealth management (UBS and Credit Suisse). The top five global investment banks—led by JPMorgan Chase—are all American. In 2007 the Americans’ share of industry revenue was 46%, against 39% for their European rivals; in 2018 it was 52% versus 26%, according to Dealogic. The American banks’ average return on equity is 13%, double the Europeans’.

How were they able to pull so far ahead? The answer lies in a series of missteps by European banks and circumstances beyond their control. Start with the banks’ faults. The financial crisis exposed a vulnerability: European banks with big dollar-funding needs required large liquidity injections from the Federal Reserve. But the banks had misfired long before. They underestimated the cultural challenges of integrating firms steeped in their own lore and stuffed full of prima donnas. They touted injudiciously for business as they scrambled to catch up with the Americans—hence, for instance, Deutsche's willingness to lend to Donald Trump long after American banks began to steer clear. Controls were loosened to help the expansion along. It is no coincidence that the worst mortgage-related blowups and money-laundering and sanctions lapses were at European banks. When trouble hit, many were lamentably slow to flush out bad assets and build up their equity. Some stubbornly refused to restructure, even as headwinds howled.

But the Europeans would have been hamstrung even if they had avoided such mistakes. Their ambitions are built on a less solid foundation: American banks enjoy a giant, homogeneous home market, whereas Europe's remains fragmented. America's economy has grown faster than anaemic Europe. Regulatory fragmentation has taken a toll, too. American firms were forced to face up to their problems quickly, in 2008, taking government money and recognising losses under the TARP programme. With no central authority willing or able to impose it, competitors across the pond received no such tough love. Slow to react to the crash of 2008, European policymakers have since been slow to agree on financial fixes.

America's trouncing of Europe in securities sales, trading and dealmaking has a clear benefit: greater efficiency. Wall Street's homegrown giants are leaner, better managed and able to spend more on technology. But a reduction in competition is to be lamented, especially since advisory and underwriting fees remain fat. The most likely source of competition in the long term is China. Its big banks have zoomed up the league tables in Asia, and their ambitions stretch far beyond the region. Still, managing giant egos and pay packets is not easy. This year CITIC Securities, the biggest mainland firm, has faced an exodus of top staff from its international arm. In the meantime, the Americans can savour their defeat of the European upstarts.

Yet victory has a sting in the tail. The share prices of most of the big American banks have lagged the stockmarket since 2008—none too impressive for masters of the universe. It is worth remembering that, even as thousands of Deutsche bankers are shown the door, the big winners of the past quarter-century have been the industry's employees, not its shareholders.

Top Secret!

The Economist has seen leaks from the US ambassador in London

You think the White House is “uniquely dysfunctional”? Try 10 Downing St

Jul 11th 2019

M ONDAY: Today Theresa May came over. Said she wanted a trade deal to cement her legacy before she quits as prime minister in a couple of weeks. I told her Britain would need to accept our food standards, and gave her chlorinated chicken to show her how delicious our traditional American chow is. I think she liked it, and she has nice manners: when she clears her throat, she lifts her napkin up to her mouth and coughs straight into it. She seemed sad so I gave her a couple glasses of bourbon, which may have been a mistake: she put on “I will survive” and started dancing with one of the security guys before collapsing into a tearful heap. Mrs Johnson put her to bed in a spare room.

Tuesday: Today Boris Johnson came over. Remember him? The guy with weird blond hair who makes no sense…never mind. Seems he’s taking over from Theresa. You don’t have to get elected by the people to be in charge here, just by the Conservative Party. That’s 160,000 old right-wing men. Interesting system. You might want to look into it.

I told Johnson that I was struggling to get my head around his position on whether Britain was going to leave the European Union with or without a deal. He muttered something about “having your cake and eating it”, so I ordered tea and crumpets, as the State Department’s British etiquette handbook recommends. He polished them off, saying he hadn’t had a square meal in weeks, and asked if I had a spare room. Apparently he’s had woman trouble, so I’ve put him up for a few days. I figured you’d sympathise.

Wednesday: Today Mark Carney, the Canadian guy at the Bank of England, came over. I didn’t follow every nuance of his analysis of the economic consequences of a no-deal Brexit, but it involved four horsemen and a substantial number of plagues. He is a great fan of yours, sir, and said something about ensuring the current expansion was not brought to an overhasty close by injudicious monetary tightening. He also mentioned that he's looking to move to a new job in Washington and wondered if you might be ready to put in a good word. I ordered some tea and crumpets, but he didn't touch them. I guess he's too small to carry any extra weight. He's kind of hanging around looking hopeful, so I've put him in the waiting room where I keep old copies of *The Economist* that nobody has read.

Thursday: Today Jeremy Corbyn came over. He's the communist with the beard who vacations in Venezuela. The political counsellor tells me that he's probably going to be PM soon, after the blond one goes down in flames. Nobody likes him, and his party got only 14% in the recent elections, but I guess that doesn't matter here. I ordered tea and crumpets but he said he would prefer carrot juice.

He lectured me about Labour's position on the terms of a trade deal after Brexit. Sir, I know you said that health-service provision should be "on the table" in a deal, but if Corbyn's state is anything to go by, I don't think we should touch it. In the middle of a speech about how the workers, united, would never let America take over their National Health Service, he suddenly collapsed on the carpet, clutching at his heart. Turns out there were rumours about his health, so he went and did a photo-shoot working out in a park with Rihanna's trainer, and it's been a bit much for him. I called a (private) doctor and put him in another spare room.

Friday: Today the queen came over. I asked the staff to bring tea and crumpets, but she gave the crumpets to the corgis, waved away the tea and ordered herself a supersized gin and tonic. We'll need to get the etiquette handbook updated. She put her feet up on the couch and said that, because of our special relationship, she felt she could confide in me: the country was going to the dogs, the Scots would get their independence, Northern Ireland would end up joining the folks in the South and even the Welsh were restless. She didn't think there was any point in being monarch of Britain if it wasn't Great any more.

She was kind of wondering whether we could put aside that difficult episode in 1776, and thought that she might get a gig with us. I said it could be tricky, what with her being British and all, but she's a very determined woman. She tried the line that she had a half-American great-grandson, and then said she's got a great place in Scotland you could have. It has room for lots of golf courses and she'd make you a Thane. Now she seems to have dozed off. The etiquette book doesn't say what to do with monarchs who are snoring on your couch. Could you ask Ivanka? She's good with awkward social situations.

Letters

Letters to the editor: On banks, GPs, othering, Hong Kong, the promotion curse, Greenland, sausages

Letters to the editor.

Leaders	Sections	Briefing

On banks, GPs, othering, Hong Kong, the promotion curse, Greenland, sausages

Letters to the editor

A selection of correspondence

Jul 13th 2019

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

The bank of Facebook

You suggest that Facebook's "Libra Reserve" cannot be a bank, because it holds deposits in private banks and will not have access to central-bank money ("Libralised finance", June 22nd). If so, Walter Bagehot would have disagreed.

During his editorship of your newspaper, hundreds of country banks in England held no accounts at the Bank of England. Instead, they held deposits, in the form of so-called "nostro accounts", inthe privately held City of London clearing banks.

Only the latter had access to central-bank money through their reserve accounts at the Bank of England.

ANTTI JOKINEN
Kongsvinger, Norway

The importance of a GP

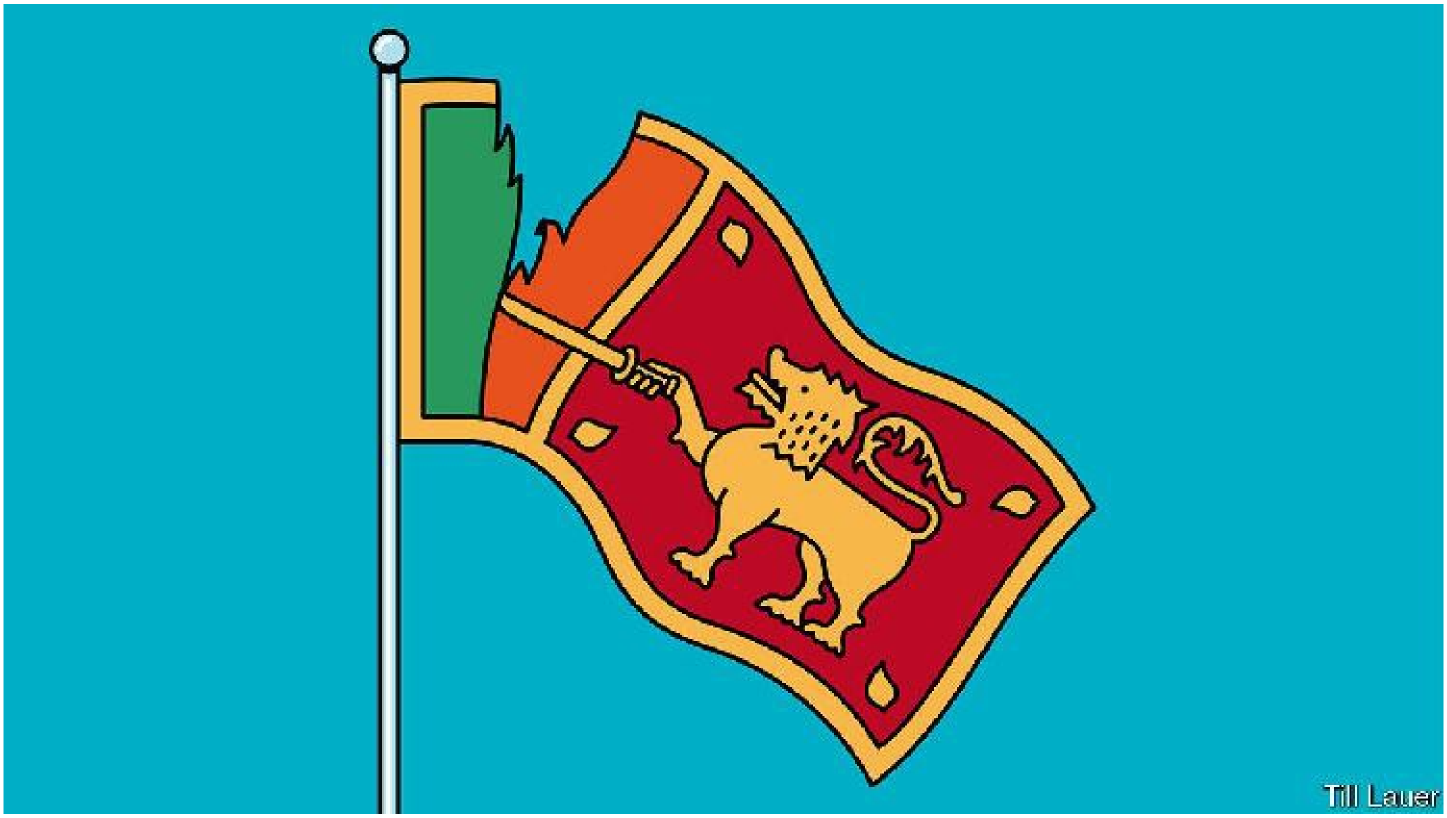
"What's up, doc" (June 29th) detailed a number of world-class general-practice reforms that could help the NHS to meet the rising health-care demand. Employing additional team members, merging back-room operations and working more proactively to prevent illness in local communities are vital means of improving efficiency. However, your article failed to mention a serious counter-intuitive downside to all this sharing—the issue of fragmentation.

Whereas other medical specialties are defined by body parts and diseases, family medicine is concerned with managing the problems of real-life people in glorious psychological, cultural, and social technicolour. We are also set apart by the life-long relationships we build with our patients.

Long-term relationships are highly valued by doctors and patients alike, and have been found to improve health outcomes. Sadly, these relationships are being irrevocably eroded by demographic, economic, and epidemiological forces.

Increased team working is often fantastic, but we need to acknowledge that it expedites the transition to a reductionist medical model where GPs only get to see complicated biomedical problems; sacrificing rich, holistic, long-term relationships on the altar of efficiency.

DR LUKE ALLEN GP
Academic Clinical Fellow
University of Oxford



Perpetual division

Banyan typifies what social commentary has devolved to in the social-media age ("Them v everyone", June 29th). By hastily indicting groups of "others" as othering, you perpetuate the very phenomenon that you seek to condemn. Sri Lanka is intolerant and India is "addicted" to its habit of othering others. South Asians possess an affinity to divide by religion or caste and this article has inadvertently peddled its own stereotypes.

I have no gripe with the substance of the article: I join *The Economist* in lamenting the cocktail of violence and prejudice percolating through South Asia. Still, Banyan avoids a discussion of the social conditions that trigger religious or ethnic insecurity. Surely there are some forces at play that are not just endemic to this area. Just look at the vigour of "us versus them" politics in Donald Trump's America.

ABIR VARMA
New York

People on the streets

The protests in Hong Kong against the bill that would allow extraditions to mainland China are mounting challenges to the authority of Xi Jinping as China’s leader (Chaguan, June 29th).

Frustrated activists have adopted extreme protest tactics including storming the Legislative Council of Hong Kong and the police headquarters. Protesters also worked with Hong Kongers overseas to call for international pressure on the government.

Mr Xi and protesters are both unlikely to make concessions. Given more repression and confrontation Hong Kong will be in the global spotlight as a major battleground of freedom and democracy. It will be a litmus test of how China upholds its promises and respect for human rights that the international community should closely monitor.

ALEX YEUNG
Vancouver, Canada

Beware the curse of overwork

I couldn't agree more with Bartleby's perspective on the promotion curse (June 22nd); it is a particularly pernicious issue in the world of management consultancy. My colleagues and I all worked for many years in the traditional environment of big consulting firms and saw first-hand how counter-productive the laddering promotions structure within these firms is.

Promotions are often based on consultants' ability to sell more work rather than their consulting skills and the internal admin involved in performance management, especially when working towards a promotion, is so arduous that it can take up to 40% of a consultant's time.

For this very reason we offer our consultants no promotions, sales targets or bonuses. Removing the distraction of promotion and all the politics and competition that comes with it has allowed our consultants to focus on doing the best job they can for the client, while developing the skills that actually attracted them to the profession in the first place.

HADLEY BALDWIN
Partner
The Berkeley Partnership
London

Bartleby's update of the Peter principle should be read by all. Not many of us have the ability to become presidents, prime ministers and captains of industry and neither should we wish to.

It is far better for both the organisations for which we work and ourselves if we can enjoy what we do and work on tasks at which we are good in return for sufficient remuneration to lead a comfortable life rather than rising above one's level of competence.

PETER NASH
Fairlight, Australia

Erik the Green?

Your assertion that Greenland's misleading name is the result of a marketing campaign by Erik the Red reflects a rather widespread myth ("Greenland is melting", June 22nd). Erik's success in attracting settlers was first and foremost due to the quality of his merchandise. Furthermore, when you claim that "Greenland may not be green yet, but it is far less icy than in Erik's time", you are simply wrong.

In fact, Greenland in the tenth century had a far warmer climate than today, which made it possible to sustain thriving and viable agrarian communities for centuries. That came to an end with the onset of the Little Ice Age between 1300 and 1870 which eventually led to the Norse communities in Greenland gradually becoming extinct.

ODD GUNNAR SKAGESTAD
Oslo, Norway

Fearing the wurst

I fear that your hankering for European Union linguistic purity may suffer the same fate as porcine aviation ("Silly sausages", June 29th).

Indeed, it seems to me that, conformably with the sage advice (not a herb or culinary flavour enhancer) given to James Hacker, by his principal private secretary, Bernard Woolley in "Yes, Prime Minister", only a cognitively challenged emulsified high-fat offal tube will do if we are to avoid the lanolin-encased naturally ovine fibres being pulled in front of our ocular enabling mechanisms.

MARK COHEN
Waterloo, Australia

Briefing

The world economy: A strangely elastic expansion

For how long can today’s global economic expansion last?.

An awfully long expansion

For how long can today’s global economic expansion last?

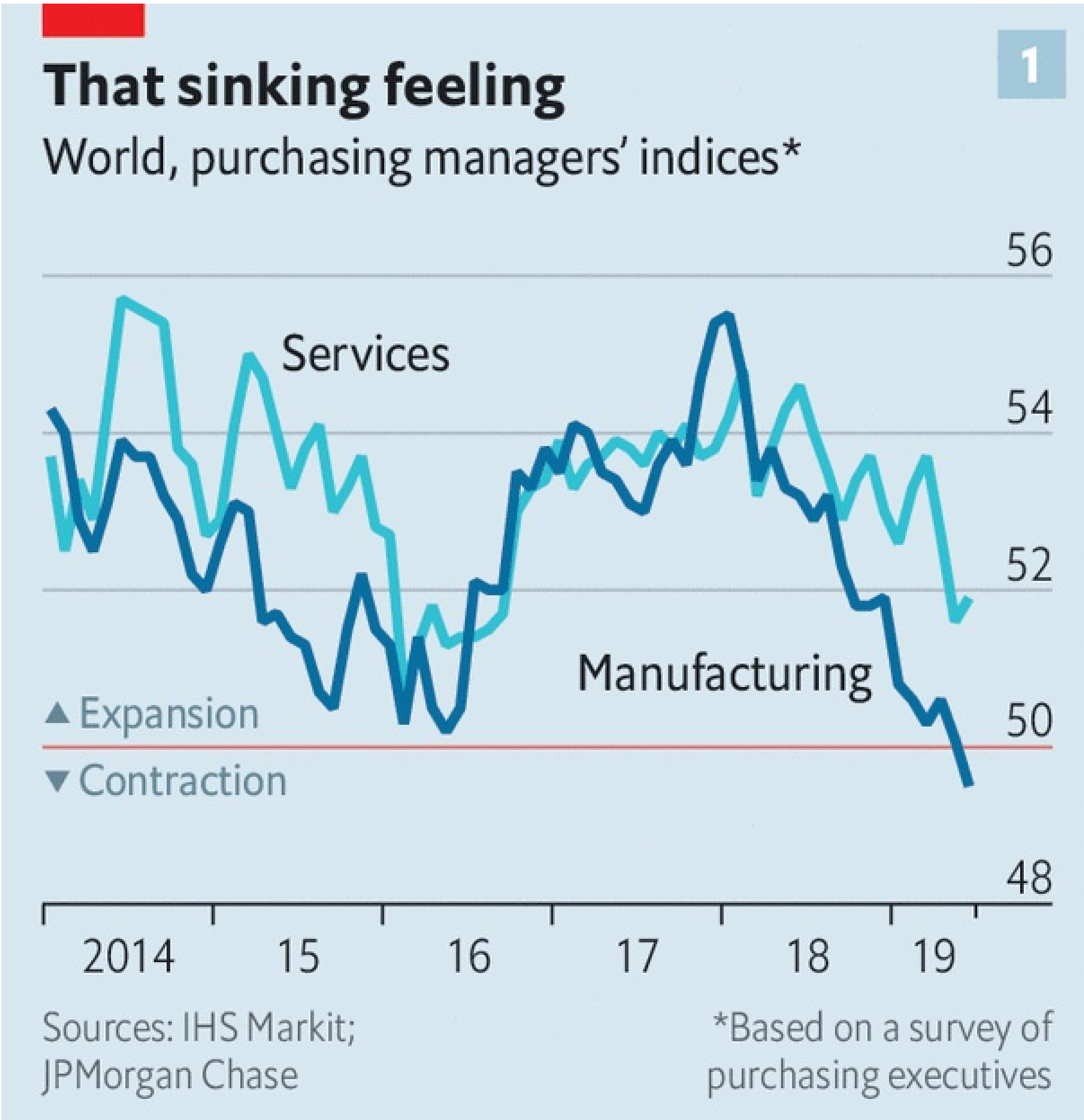
The world’s business cycles are lengthening, but not abolished

Jul 13th 2019

IT IS HARD to summon significant optimism when looking at the world economy. As the trade war between America and China grinds on unresolved, indices of business confidence in America and elsewhere have been falling fast (see chart 1). Surveys suggest that, as trade growth slows, global manufacturing is shrinking for the first time in more than three years. Services have begun to follow manufacturing’s downward trend as domestic demand falters, even in economies with strong labour markets, such as Germany.

Long-term bond yields have been tumbling. Having started the year around 2.7%, on July 2nd America’s ten-year Treasury yield fell below 2% for the first time in Donald Trump’s presidency. Yields on ten-year German debt fell below -0.4% earlier this month. Low long-term rates signal that investors expect central banks to keep short-term rates low for a long time. Yet differences in yield between regular bonds and inflation-indexed ones suggest that they will undershoot the inflation targets they are meant to hit—presumably because their various economies will grow too weakly to generate much upward pressure on wages and prices (see chart 2).

On top of all that, there is the simple fact that the current economic expansion is unprecedentedly long in the tooth. If, as is almost certain, America’s economy proves to have grown throughout the second quarter of 2019, it will have matched the record for the longest unbroken period of rising GDP set in the 1990s. Europe has enjoyed 24 consecutive quarters of rising GDP. As these years of growth have dragged on, it has become increasingly easy to find people sure they will soon come to an end. And yet they have not.



The Economist

If economists took one firm lesson from the financial crisis of 2007-09, it was to refrain from celebrating long periods of growth. In the good years before that crash the dismal science turned chirpy, talking of a “Great Moderation” that had tamed the boom and bust of the business cycle. The high point of hubris, for many, came in 2003 when Robert Lucas, making his presidential address to the American Economic Association, boasted that the “central problem of depression-prevention has been solved.” When the second half of the decade saw the most severe downturn in the world economy since the 1930s, pointing out that it had been merely a great recession, and that an actual depression had indeed been prevented, looked pettifogging.

The Economist

But the length of the current expansion suggests that Mr Lucas and the colleagues he spoke to and for had a point. Modern economics says business cycles are caused by changes in total spending which outpace the ability of prices and wages to respond. Recessions happen when, faced with lower spending, firms sell less and shed workers, leading spending to fall yet further, rather than adjust prices and wages so as to balance supply and demand. The Great Moderation was marked by changes in the economy that made spending less volatile, and by a greater willingness on the part of central banks to promptly increase demand when things looked dicey. A financial crash could still end an expansion, and the crisis that scuppered that of the 2000s was a doozy. But over the long term, stretches of economic growth in America have got longer and longer (see chart 3).

The Economist

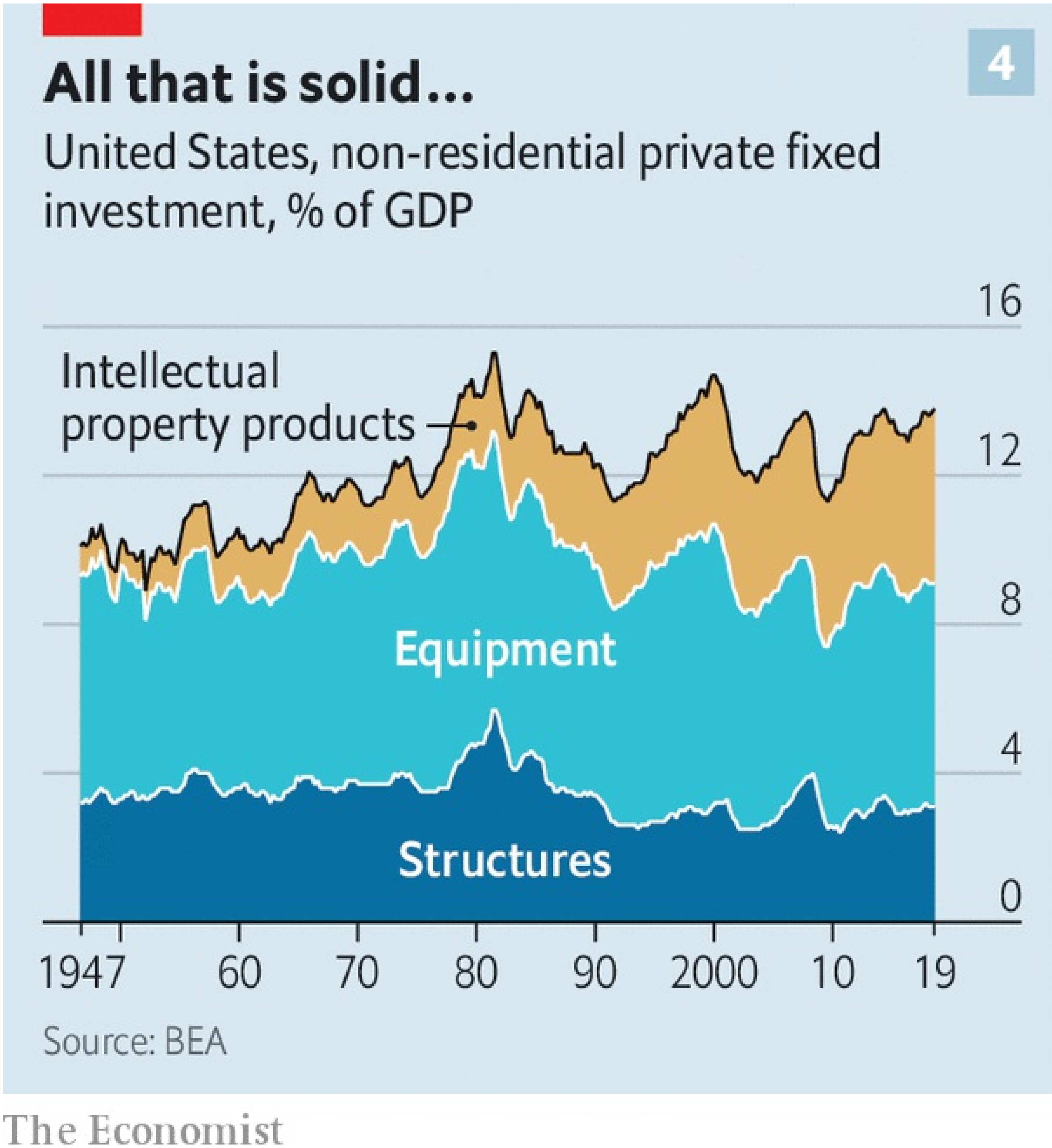
Thus this expansion's remarkable longevity does not mean it will die of old age. It just means that none of the things which usually bring expansions to an end—busts in industry and investment, mistakes by central banks and financial crises—has yet shown up with scythe in hand. Why not? And is their arrival merely delayed, or becoming genuinely unlikely?

First, take downturns in manufacturing. In the second half of the 20th century, people serious about predicting recessions learned to pay a lot of attention to manufacturing inventories; Alan Greenspan, before he became chairman of the Federal Reserve, specialised in forecasting their ups and downs. They mattered because, in the days when companies planned production months in advance, a modest drop in demand often led manufacturers to cut production abruptly and run down their stocks, deepening the downturn.

This factor now seems genuinely less important. Better supply-chain management has reduced the size and significance of inventories. And manufacturing has been shrinking both as a share of rich-world economies and of the world economy as a whole. As the current situation demonstrates, this makes it easier for the rest of an economy to keep going when factories slow down. Manufacturing has swooned in the face of the trade war; but service industries have held up, at least so far, and with them the economy as a whole. The same pattern was seen in 2015, when a slowdown in the Chinese economy led to a manufacturing slump.

Some of the shift from manufacturing to services may be an illusion. Services have replaced goods in parts of the supply chain where equipment is provided on demand rather than purchased. At the same time, some firms that appear to produce goods increasingly concentrate on design, software engineering and marketing, with their actual production outsourced. Such firms may not play the same role in the business cycle that metal bashers did.

This blurring of manufacturing and services has been accompanied by changes in the nature of investment. America's private non-residential investment is, at about 14% of GDP, in line with its long-term average. But less money is being put into structures and equipment, more into intellectual property. In America IP now accounts for about one-third of non-residential investment, up from a fifth in the 1980s (see chart 4); this year private-sector IP investment may well surpass $1trn. In Japan IP accounts for nearly a quarter of investment, up from an eighth in the mid-1990s. In the EU it has gone from a seventh to a fifth.



Recently, this trend has been reinforced by another: investment as a whole is increasingly dominated by big technology firms, which are spending lavishly both on research and on physical infrastructure. In the past year American technology firms in the S&P 500 made investments of $318bn, including research and development spending. That was roughly one-third of investment by firms in the index. Just ten of them were responsible for investments of almost $220bn; five years ago the figure was half that. A lot of this is investment in cloud-computing infrastructure, which has displaced in-house computing investment by other firms.

In general, the rate of investment in IP tends to be more stable than that of investment in plant and property. When low oil prices led American shale-oil producers to pull in their horns in 2015-16, business investment fell by 10%, which in the past would have set off imminent-recession claxons. But investment in IP mostly sailed on regardless, and although GDP growth slowed, it did not stop. Philipp Carlsson-Szlezak of Bernstein, a research firm, cites this episode as evidence that physical investment simply no longer carries the economic significance that it used to.

The persistence of memory

Whether or not that is the case, it would be wrong to think that IP investment can be relied on come what may. When the dotcom boom of the late-1990s went bust IP investment was one of the first things to fall, and it ended up dropping almost as much as investment in buildings and kit. With tech companies increasingly dominating investment of all sorts, it is worth worrying about what could now lead to a similar drop. One possibility might be a crunch in the online advertising market, on which some of the biggest tech firms are highly reliant. Advertising has, in the past, been closely coupled to the business cycle.

It would also be wrong to think that the world weathered the incipient bust of 2015-16 purely because of changes in the investment landscape. The effects of a flood of stimulus to credit in China and a change of tack by the Fed were important, too.

The swift action by the Fed was particularly telling. Central banks' tendency during expansions has long been to continue raising rates even after bad news strikes, cutting them only when it is too late to avoid recession. Before each of the last three American downturns the Fed continued to raise rates even as bond markets priced in cuts. In 2008, with the world economy collapsing, the ECB raised rates on ill-founded fears about inflation. It repeated the mistake in the recovery in 2011, contributing to Europe's "double-dip".

But since then there has been no such major monetary policy error in the rich world. Faced with the economy's current weakness, the ECB has postponed interest-rate rises until mid-2020 and is providing more cheap funding for banks. It will probably loosen monetary policy again by the end of the year. In March the Fed postponed planned rate rises because of weakness in the economy. Markets are certain it will cut rates at its next meeting on July 31st; it may do so by double the usual quarter-of-a-percentage-point.

America's monetary loosening allows central banks in emerging markets, many of which are also reeling from the trade slowdown, to follow suit. With America cutting rates they need not worry about lower rates pushing down the value of their currencies and threatening their capacity to service dollar-denominated debts. The Philippines, Malaysia and India have already cut rates in 2019.

Normally, as an expansion wears on, central banks face the fundamental trade-off between keeping rates low to aid growth and raising them to contain prices. But over the past decade that trade-off has rarely been a vexed choice, because inflationary pressure has stayed oddly low. This may have been because labour markets are not as tight as people think; it may be because profits have a long way to fall before rising wages force firms to raise prices; it may be because the globalisation and/or digitisation of the economy are suppressing prices in ways that are still obscure.

Whatever the reason, the only time inflation made interest rates a genuinely hard call was in 2018, when the American economy was revved up by Mr Trump's tax cuts. But the trade war warmed, the world economy cooled and the inflation risk the Fed had worried about subsided. In America core inflation, which excludes energy and food prices, is just 1.6%; in the euro zone, it is 1.1%.

If central banks are not worried about letting inflation rip when they loosen policy, they are distinctly worried about what might happen if they didn't. It is not just that an ounce of prevention is worth a pound of cure. It is that the rich-world central banks may only have ounces to administer. Only the Fed could respond to a recession with significant cuts in short-term rates without moving into the uncertain and contested realm of negative rates. The question of how much damage negative interest rates do to banks is under increasing scrutiny in Europe and Japan.

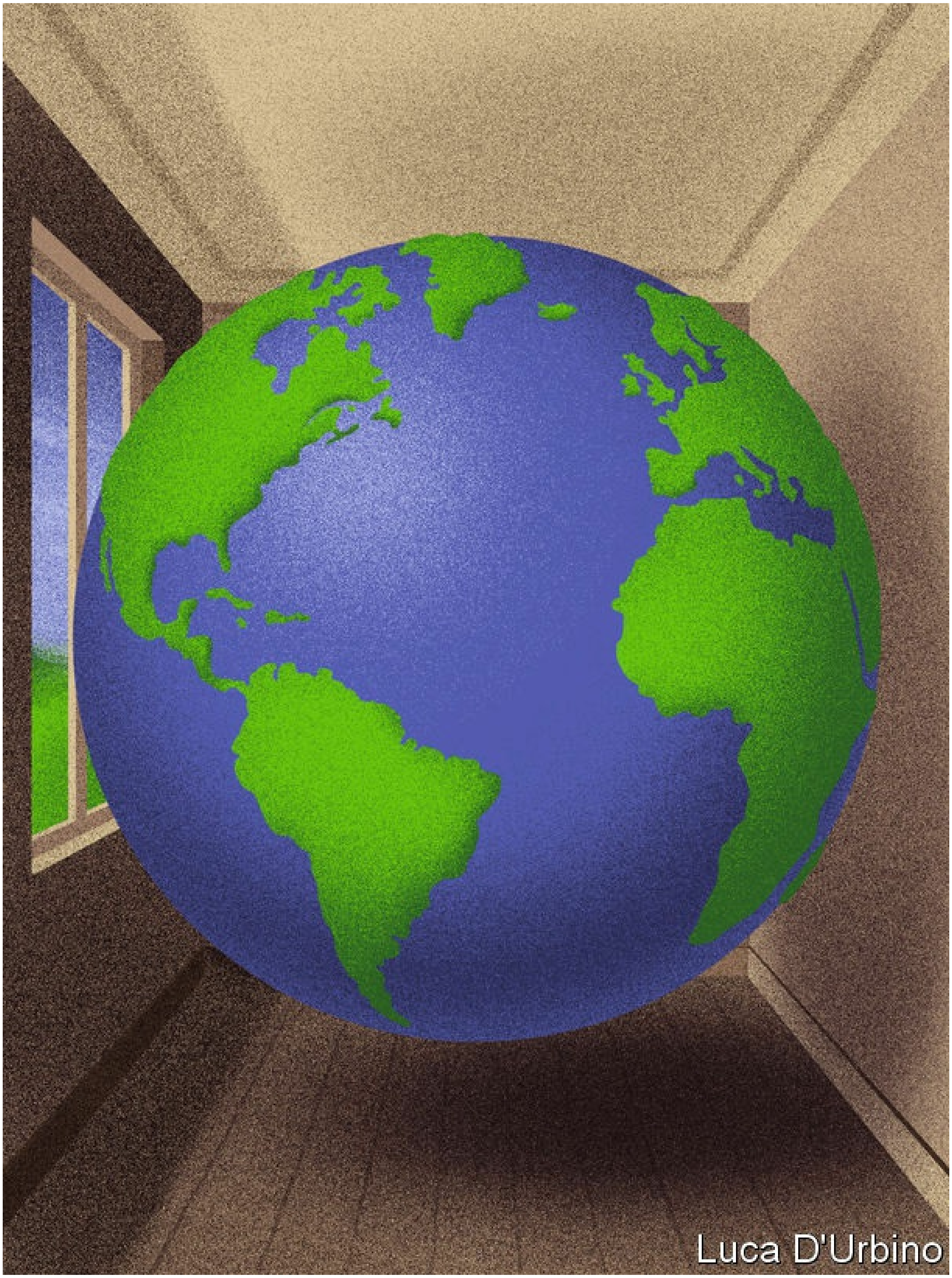
In the face of a significant shock, the Fed and other central banks could restart quantitative easing (QE), the purchase of bonds with newly created money. But QE is supposed to work primarily by lowering longer-term rates. As these are already low, QE might not be that effective. And there is a limit on how much of it can be undertaken. In Europe the ECB faces a legal limit on the share of any given government's bonds it can buy. It has set this limit at 33%. In the case of Germany it is already at 29%. If the ECB were to restart QE—as many expect it to—that limit would have to be raised. But it probably cannot rise above 50%, because that could put the ECB in the awkward position of having a majority vote in a future sovereign-debt restructuring.

Their lack of sea room puts a premium on central bankers' demonstrated good judgment; an unforced error like that of the ECB in 2011 could have dire consequences. Unfortunately, the top of the profession is in flux. Christine Lagarde, who will take over the ECB from Mario Draghi in November, lacks experience of setting monetary policy. The successor to Mark Carney, who will leave the Bank of England in January, is as yet unnamed. Mr Trump's recent nominees to the board of the Fed have for the most part been unqualified and eccentric. And having relentlessly criticised Jerome Powell, the Fed's chair, for raising interest rates in 2018, Mr Trump might well, should he win re-election next year, replace Mr Powell with someone more of his mind when his term ends. A candidate remotely as left-field as Mr Trump's nominations to the board so far would badly damage the Fed's credibility.

The treachery of the image

After busts and central banks, the third killer is the one that struck so emphatically a decade ago: financial crisis. Manias and crashes are as old as finance itself. But during the Great Moderation, the financial sector grew in significance. The enhanced role of an inherently volatile sector may offset the stability gained from the shift from manufacturing to services, according to research by Vasco Carvalho of the University of Cambridge and Xavier Gabaix of Harvard University. The size of the financial sector certainly served to make the crash of 2007-09 particularly bad.

In America, finance now makes up the same proportion of the economy as it did in 2007. Happily, there is no evidence of a speculative bubble on a par with that in housing back then. It is true that the debt of non-financial businesses is at an all-time high—74% of GDP—and that some of this debt has been chopped up and repackaged into securities that are winding up in odd places, such as the balance-sheets of Japanese banks. But the assets attached to this debt are not as dodgy as those of a decade and a half ago. In large part the boom simply reflects companies taking advantage of the long period of low interest rates in order to benefit their shareholders. Since 2012 non-financial corporations have used a combination of buy-backs and takeovers to retire roughly the same amount of equity as that which they have raised in new debt.



Low interest rates also go a long way to explaining today's high asset prices. Asset prices reflect the value of future incomes. In a low-interest-rate world, these will look better than they would in a high-interest-rate world. It may look disturbing that America's cyclically adjusted price-earnings ratio has spent most of the past two years above 30, a level that was last breached during the dotcom boom. But the future income those stocks represent really should, in principle, be more valuable now than then. Higher interest rates would knock this logic over. But higher interest rates are not on the menu.

The apparent lack of speculative action is a problem for economists. People with very different ideas about the role of central banks and the fundamental drivers of the economy can nevertheless agree that, in the long term, low rates produce financial instability. So after a long period of low rates, where is it?

One answer is that it is following a cycle of its own. Analysis by the Bank for International Settlements shows that since the 1980s the financial cycle, in which credit growth fuels a subsequent bust, has grown in amplitude but has kept its length at about 15-20 years. In this model, America is not yet in the boom part of the cycle (see chart 5). America's private sector, which includes households and firms, continues to be a net saver, in contrast to the late 1990s and late 2000s, note economists at Goldman Sachs. Its household-debt-to-GDP ratio continues to fall. It is rising household debt which economists have most convincingly linked to finance-sector-driven downturns, particularly when it is accompanied by a consumption boom. America and Europe had household debt booms in the 2000s; neither does today. The most significant run up in household debt in the current cycle has taken place in China.

The world economy’s unprecedented expansion hardly looks healthy; the trade war may have dampened animal spirits to an extent that cannot be offset by the highly constrained amount of stimulus available to the apothecaries of the central banks. But it remains possible that it will plod on for some time. The longer it does so, the more it will look like the world really has made a change for the moderate.

United States

Nuclear diplomacy

Donald Trump risks undoing decades of nuclear arms control

His foray into North Korea belies the gamble he is taking with Russia

Jul 11th 2019

ON JUNE 30TH, when President Donald Trump took a few paces inside North Korean territory with Kim Jong Un at Panmunjom, the symbolism suggested a determined new push towards easing nuclear tensions. Talks between America and North Korea, stalled since an unsuccessful summit in Hanoi in February, were due to resume in Berlin this week. Away from the world's cameras, however, the broader picture on nuclear arms control looks very different. Things are heading not forwards but backwards, at an accelerating rate.

After the Cuban missile crisis in 1962 took America and the Soviet Union to the brink, they grew serious about nuclear negotiations. In 1972 they signed an agreement capping the number of each other's strategic delivery systems, and a treaty to limit defences against ballistic missiles. Over the next four decades they mustered seven other big nuclear deals. Their combined destructive potential dropped from the equivalent of 1.3m Hiroshima bombs in 1973-74 to about 80,000 Hiroshimas now—less obscene, if still horrendous.

Yet nuclear deals are now unravelling. Mr Trump pulled America out of the multiparty one with Iran, known as the Joint Comprehensive Plan of Action (JCPOA), hoping to press that country into a bigger, better accord, but so far producing only heightened tensions. Iran has now breached the deal's limit for stockpiles of low-enriched uranium and gone above the 4% level of enrichment allowed. Last October Mr Trump abruptly declared that America would withdraw from the treaty on Intermediate-range Nuclear Forces (INF), citing Russia's violation of its ban on ground-launched missiles with a range of 500-5,500km (300-3,400 miles). The treaty, signed by Ronald Reagan and Mikhail Gorbachev in 1987, is set to expire on August 2nd. Its demise could open the way for a new arms race in missiles, whether nuclear or conventional, whose time to target is mere minutes.

That still leaves in place one big nuclear treaty between America and Russia: New START, signed by Presidents

Barack Obama and Dmitry Medvedev in 2010. It limits each country to 1,550 deployed nuclear warheads across 700 delivery systems; its verification regime includes 18 on-site inspections each year and copious data exchanges. But New START will lapse in 19 months' time unless both countries agree to a five-year extension, which their leaders can do without congressional approval. The prospects are not good: Russia is keen; America appears not to be. "There's no decision", Mr Trump's national security adviser, John Bolton, told Free Beacon, a website, last month, "but I think it's unlikely."

For an extension to be agreed upon, some differences would have to be settled. The Americans worry about Russia's plans for new weapons, such as the Avangard hypersonic boost-glide system; the Russians have concerns over the way the Americans got within START's limits, converting nuclear delivery systems into conventional ones rather than destroying them. President Vladimir Putin bemoans the absence of practical moves from the Americans, despite Mr Trump's earlier expressions of interest. Talks need to start now, Mr Putin told the *Financial Times* last month, to settle matters in time. If the treaty ceases to exist, he said, "there would be no instrument in the world to curtail the arms race."

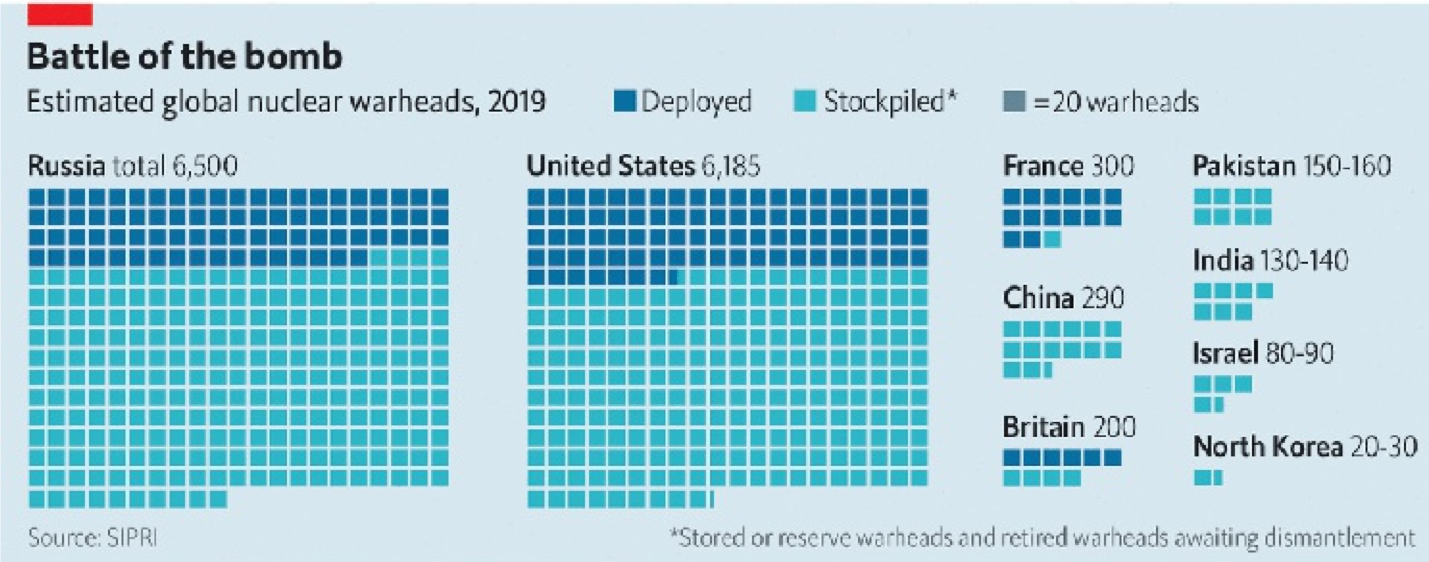
Worse, each side would be left blind. Without a START extension America and Russia "will be without on-the-ground insight into each other's nuclear forces for the first time in about 50 years, which is incredibly dangerous", says Alexandra Bell of the Centre for Arms Control and Non-Proliferation, a think-tank. The verification regime enables policymakers to plan with confidence. A former official involved in negotiating the treaty says it would cost "multiple billions of dollars per year" to gather the intelligence by other means.

Arms and Influence

Why would Mr Trump give this up? It is not for lack of interest in arms control. As far back as 1986 he is said to have wanted to ask Reagan to let him negotiate a nuclear deal and quickly end the cold war. Now he sees an Obama accord and believes he can do better. He envisages not just a bilateral deal with Russia, but a broader one involving China and perhaps others, embracing all weapons systems. He has asked his administration to explore this.

In theory this makes sense. Bilateral nuclear deals had a logic during the cold war, but Mr Bolton has argued that in today's multipolar nuclear world that is "conceptually completely backward". American officials expect China's arsenal to double over the next decade. Arms-control advocates agree that hypersonic weapons and cyber capabilities pose new threats. "We're facing an international security crisis in the arms-control arena as technologies are outpacing the diplomatic and legal frameworks that in the past served us well in nuclear and chemical and biological weapons," says Daryl Kimball, director of the Arms Control Association in Washington, DC.

In practice, though, Mr Trump's approach looks hopeless. For one thing, China shows no interest in it. It has a nuclear arsenal of only 290 warheads, compared with America's 6,185 and Russia's 6,500, according to the Stockholm International Peace Research Institute. It sees no reason to submit to limits just yet. And if numbers fell much more Russia would want French and British weapons included in the mix.



The Economist

Arms-control experts doubt that the Trump administration has the bandwidth to conduct serious negotiations with the Russians, Chinese and North Koreans at the same time. (The State Department office responsible for handling nuclear disarmament has shrunk from 14 people to four during Mr Trump's presidency, the *Guardian* recently reported.) They detect no strategy for conducting such a complex negotiation. Besides, they view Mr Bolton as a wily operator who hates arms control, which he sees as constraining America. Under George W. Bush in 2001 he helped to pull America out of the Anti-Ballistic Missile Treaty; in his current role he has seen off the Iran deal and the INF treaty. The suspicion is that he is using the idea of a bigger deal as a diversion to kill New START.

Some would like to see New START extended first, thus retaining its precious verification provisions, before moving on to a broader arms-control effort, which could take years. They believe both sides' concerns over an extension could be quickly sorted out if there was clear political direction from the top (on that Mr Bolton agrees: "if you really want to negotiate, you can do it fast," he told Free Beacon). Pressure is starting to come from Congress. In May leaders of the House Foreign Affairs Committee introduced a bipartisan bill urging the Trump administration to retain the limits on Russia's nuclear forces until 2026. Mr Trump could yet find himself vulnerable to attack on the nuclear issue by Democratic candidates for his job.

He also risks a rough ride at the five-yearly review conference, next spring, of the Nuclear non-Proliferation Treaty (NPT). It will be an acrimonious affair if the nuclear powers are not seen to be doing their bit to contain the spread of weapons. There is already a deep split over the Treaty on the Prohibition of Nuclear Weapons, approved by the UN General Assembly in 2017, which seeks to delegitimise nukes. "If the United States and Russia can't show up in 2020 and at least say we've extended New START, and hopefully say we've extended and are engaged in further discussion, we're going to be in bad shape," says Lynn Rusten of the Nuclear Threat Initiative, an advocacy group in Washington, DC.

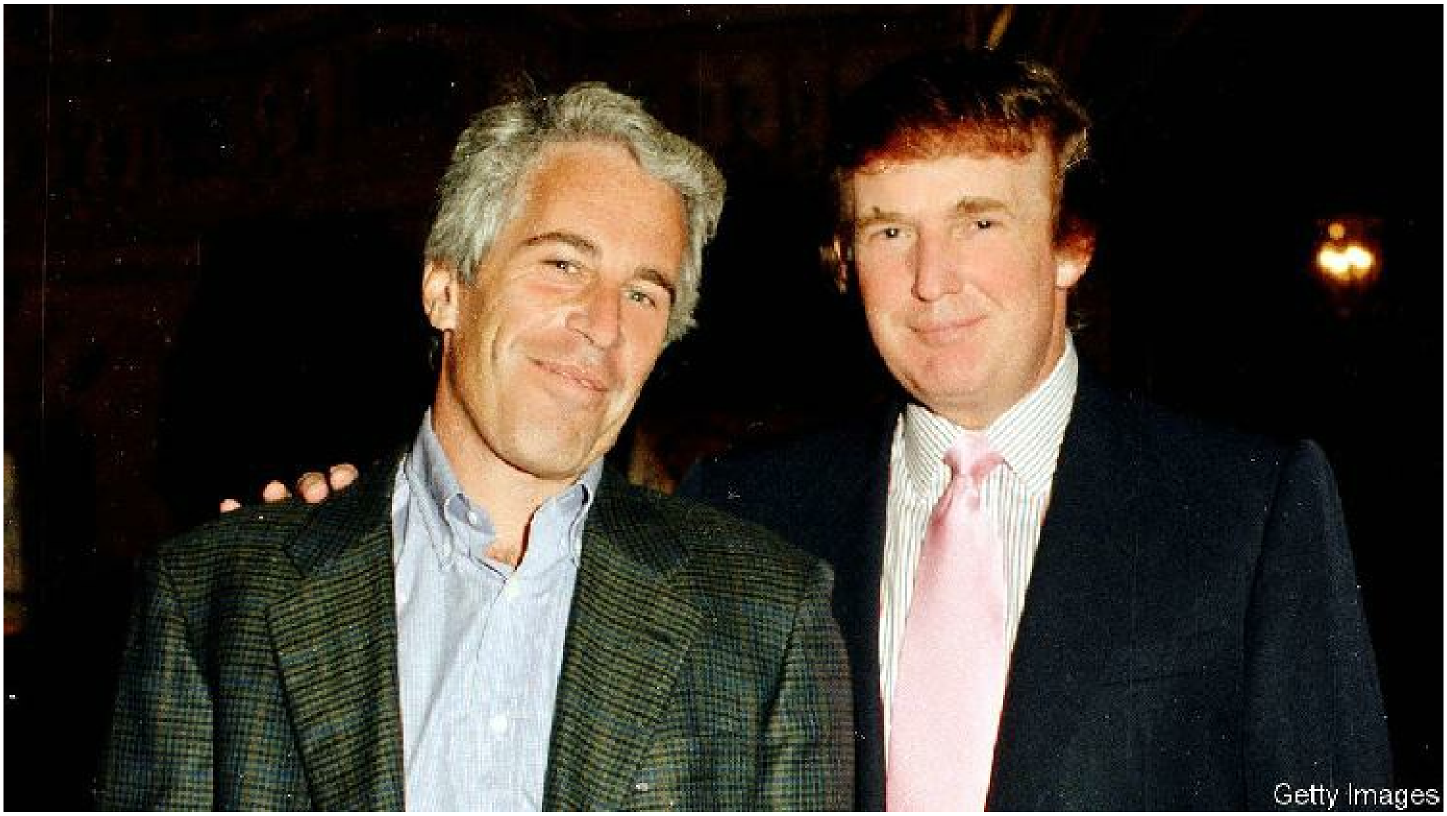
Erosion of the NPT could give more countries an excuse to join the nuclear club. The number of nukes in the world has come down, but could swell again in the absence of controls or trust. Alexey Arbatov, from the Institute of World Economy and International Relations in Moscow, bemoans a lack of understanding of the history of nuclear arms control among the world's leaders today. That could result in miscalculation. "Saving the INF treaty and START while there is still time would be much easier and more productive than searching for palliatives after their demise," he concludes in the current issue of *Survival*, the journal of the International Institute for Strategic Studies.

Time, though, is running out. Finding a way to re-engage with Russia before it is too late will not be easy. But it would probably matter more than those steps across the border at Panmunjom.

Acosted

Was Jeffrey Epstein’s plea deal fishy?

It was soft enough to jeopardise the job of a current Trump cabinet member



Jul 13th 2019 | WASHINGTON, DC

THE INDICTMENT of Jeffrey Epstein on charges of sex-trafficking described a pyramid scheme for the sexual abuse of minors. Mr Epstein would pay hundreds of dollars apiece for sexual encounters with adolescent girls at his mansion in Manhattan’s Upper East Side and then pay them to recruit other underage girls. When police searched the residence they uncovered hundreds of pictures of nude, young-looking women—some on CDs kept in a locked safe with names like “Misc nudes 1” and “Girl pics nude”. Three personal employees apparently aided in the scheme. This is all revolting, but it is hardly a great surprise.

More than a decade ago police and prosecutors stumbled across a similar pattern of conduct in Palm Beach, Florida, where Mr Epstein owns another mansion. In a later civil case, the victims alleged that hundreds of young girls had been abused. Yet Mr Epstein got off remarkably lightly. His plea deal, which was not first shown to the victims as required by federal law, included charges of “soliciting prostitution” from a girl as young as 14 (and thus well below the state age of consent). He received a sentence of 18 months, of which he served 13 months in the private wing of a county jail. Mr Epstein was released for six days out of the week to go to work. Harsher sentences are doled out for forging a check.

The case has thus come to symbolise something larger, about unequal justice for those with the right connections, or who can afford an all-star defence team. Mr Epstein is routinely described as a billionaire. *Forbes*, which chronicles America’s nine-zeroed class, says he is not and points out that his money-management firm, registered in the Virgin Islands, produced no public records and no list of clients. The magazine has never included him in its list of the 400 richest Americans. What is true is that Mr Epstein had money for private jets, a private island and a handful of houses. He was also on first-name terms with two presidents, Bill Clinton (“Jeffrey is both a highly successful financier and a committed philanthropist,” he once said) and Donald Trump ("I've known Jeff for 15 years. Terrific guy. He's a lot of fun to be with. It is even said that he likes beautiful women as much as I do, and many of them are on the younger side," Mr Trump told a magazine almost two decades ago). Since he was charged in 2006 both men have distanced themselves from Mr Epstein.

Wealth, child abuse and presidents are powerful ingredients for conspiracy theories. The truth may be more prosaic. Mr Epstein's original defence team included Alan Dershowitz and Kenn Starr, two lawyers skilled in defending the indefensible. The evidence in the original case appears overwhelming. In an interview with the *Miami Herald* the lead detective recounted phone records, flight logs and instructions for delivering flowers to one of Mr Epstein's young fixations—alongside her high-school report card. But the difficulties of securing convictions in cases of rape or sexual abuse are well known.

Nor is it obvious that the top federal prosecutor who negotiated the deal, Alexander Acosta, had better options available. That may not save him. Mr Acosta is currently serving as Mr Trump's labour secretary. Democrats would now like him ousted. Nancy Pelosi, the Democratic speaker of the House, and Chuck Schumer, the Senate's minority leader, have called for his resignation. So too have many of those vying for the Democratic presidential nomination. Mr Trump so far has lent his support, saying he feels "very badly" for Mr Acosta and noting that "he's been a great, really great secretary of labour". When past cabinet secretaries have attracted negative headlines, Mr Trump has often started out strongly supportive and then soured as the withering critiques continued.

Turbulence in the Trump administration is no new phenomenon. Much of it results from a lack of due diligence. Mr Acosta was not properly vetted until after he was nominated for the post—following the withdrawal of Mr Trump's previous nominee, Andrew Puzder, amid allegations of domestic abuse and failure to pay taxes. Among the portfolios Mr Acosta now oversees are enforcement of child-labour and human-trafficking laws.

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Unintended, uh, whatever, man

The legalisation of recreational cannabis is weeding out teenaged users

A new study suggests a paradoxical relationship between usage and the law

Jul 13th 2019

WHEN JUSTIN TRUDEAU promised to legalise cannabis use across the border in Canada, his main reason for doing so was to protect the young. Cannabis is bad for the developing brain and a worrying number of minors were taking the drug. The counterintuitive proposal was based on the idea that regulated sales would drive out illegal sellers, who do not care how old their customers are. Legal sellers, however, will generally abide by age restrictions in sales to keep their licence.

It is too early to tell whether Canada’s change, at the end of last year, will have the desired effect. Yet there is a wealth of historical data in America, which has been tinkering with various forms of liberalisation since the 1990s. Today 33 states permit medical cannabis, and 11 have legalised recreational use. The most recent legalisation bill, for recreational use, was signed in Illinois on June 25th.

Until now the evidence on youth use was mixed. In Washington state one study found increased use among 8th and 10th graders after legalisation. A different study found that use among these groups actually fell. However, a new study, in the journal *Jama Pediatrics*, attempts a more comprehensive national analysis using data from biennial appraisals of high-school students known as the Youth Risk Behaviour Surveys. It found that relatively permissive laws were associated with a 9% decrease in frequent cannabis use by high-school students. There was no evidence that legalisation of cannabis for medical purposes encouraged use among young Americans.

Although the drop is not large, it is notable given policy variation between states. Some states will have been more successful than others at chipping away at black-market sales, regulating licensed sellers and getting the message across that cannabis is damaging to young brains. Though the study showed only that a correlation between policy changes and a dip in teenaged use, a causal connection is plausible.

Across the country cannabis remains a big, and flourishing, business worth nearly $10bn last year, and projected to rise to nearly $45bn by 2024. Yet California has become the first state to shrink its legal market after legalisation. Its value went from $3bn in 2017 to just $2.5bn last year, according to Arcview Market Research and BDS Analytics.

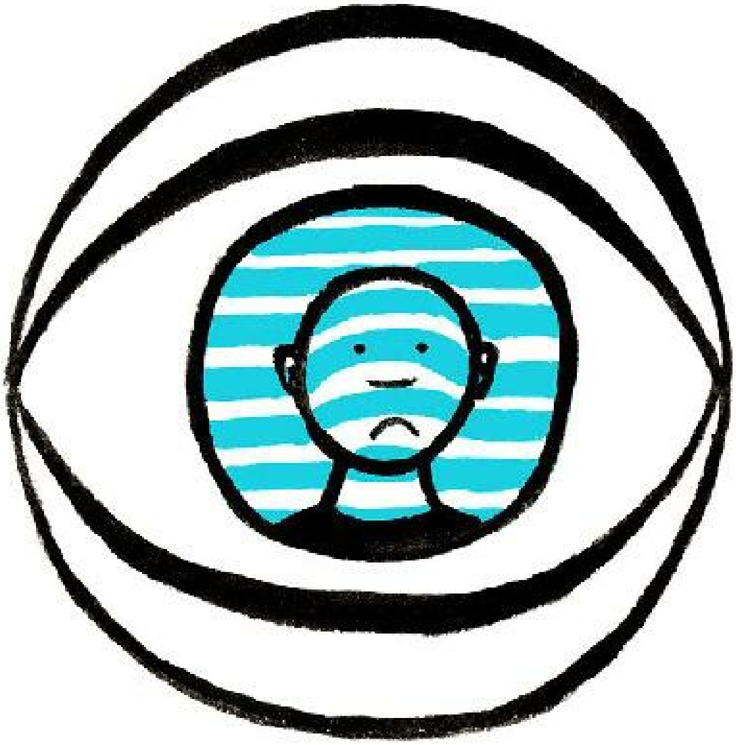
The finding on teenaged use will put wind into the sails of advocates for liberalisation. Most of the public across many demographic groups supports legalising marijuana. At the same time, business growth is turning the pot industry into a force in the lobbies of Washington and of state capitols. Witness the Damascene conversion of John Boehner. The former House speaker, cannabis opponent and member of the Republican Party is now a board member and shareholder of New York-based cannabis firm Acreage Holdings.

Earlier this year, Mr Boehner launched a new industry-funded lobbying group promoting “common-sense federal regulation”. Were federal law to shift to make cannabis legal, his firm Acreage could complete a lucrative sale to Canopy Growth, a big Canadian cannabis firm. On July 10th a Congressional committee held a hearing on “the need for reform”. With the promise of real jobs and investment that could come from federal legalisation, it could even become a vote-winner.

Surveillance technology

America mulls regulating facial recognition

The rare issue that unites left and right



Dave Simonds

Jul 13th 2019 | WASHINGTON, DC

WHEN THINKING about police use of facial recognition, most Americans probably fall somewhere between two extremes. On one side is the approach taken by San Francisco and Somerville, Massachusetts, both of which earlier this year banned municipal agencies, including the police, from using facial recognition.

On the other is the view expressed by Michael McCaul, a Republican congressman from Texas, who during a hearing of the House Homeland Security Committee on July 10th announced: “When somebody is in the public domain…there’s no expectation of privacy.” Imagine a world in which cameras equipped with facial recognition were ubiquitous. In Mr McCaul’s view, a permanent government record of everywhere everyone goes would be the price people pay for leaving their homes.

The Supreme Court has rejected versions of that view in *United States v Jones*, a case in 2012 which held that police violated a suspect’s Fourth Amendment rights by attaching a GPS device to his car without a warrant. *Carpenter v United States* held that obtaining a suspect’s mobile-phone metadata without a warrant also violated his privacy rights. John Roberts, the chief justice, noted that the Court had long “recognised that individuals have a reasonable expectation of privacy in the whole of their physical movements”. A person may have attenuated expectations of privacy in public, but tracking everywhere they go violates them.

Bennie Thompson, who chairs the House Homeland Security Committee, charted a reasonable path between those views in last week’s hearing. “Before the government deploys [facial recognition] further,” he said, “[it] must be scrutinised and the American public needs to be given a chance to weigh in.” His committee’s hearing, on how the Department of Homeland Security uses facial recognition and other biometrics, had been scheduled for some time, but news that broke on July 7th gave it extra salience.

The *Washington Post* reported that over the past several years, federal agents have conducted almost 400,000 facial-recognition searches using state and local databases, including collections of drivers'-licence photos, without warrants or licence-holders' consent. Among the searchers were agents from Immigration and Customs Enforcement (ICE), who appear to have trawled drivers'-licence photos in Utah, Vermont and Washington—all states that provide licences to undocumented immigrants. These states invited undocumented immigrants to come forward. The federal government then used that trust against them.

In May the House Oversight Committee examined the civil-liberties implications of the technology. The committee chairman, Elijah Cummings, plans to hold another hearing before calling for legislation. Privacy may yet prove to be the rare issue on which an otherwise largely divided American public can agree.

Know when to hold ’em

Simulators teach police and their critics when to shoot

Our correspondent tried one out, with disastrous consequences

Jul 11th 2019 | NEWARK, NEW JERSEY

YOU ARE 23 years old, fresh out of the academy and eager to protect and serve, out on what was supposed to be a quiet weekday-afternoon patrol. You pass a red pickup truck, which your partner recognises: it belongs to a guy with a couple of outstanding arrest warrants. You pull him over. Your partner gets out of the car and tells the guy he has to bring him in. The guy promises to come in later this afternoon after he drops off his daughter, who is in the truck, at her mother’s house. Your partner refuses—he’s heard it before. The guy gets agitated. Suddenly the door of the truck opens, and a girl, maybe 10 or 11 years old, starts shouting at your partner for taking her daddy. She steps out of the truck, pointing her father’s hunting rifle at your partner. What do you do?

That is just one of the roughly 500 scenarios on the FATS (Firearms Training Simulator), an interactive machine designed, says Raul Hernandez, a detective who puts nearly 1,000 Newark officers through their paces on the FATS twice a year, “to train our officers to survive an encounter with a person with a weapon.” Around 3,800 agencies in America, and hundreds more around the world, including the Canadian and Singaporean armies and the British Ministry of Defence, use these machines.

The training is like a high-end video game. Holding a gun loaded with compressed air rather than bullets, trainees face a bank of screens as the scenarios unfold: a mentally ill man shouts threats while holding a weapon outside an apartment building, a teenaged girl menaces a boy with a knife, there is a live shooter in a hospital. Trainers can change the scenario as trainees respond. The weapon held by the mentally ill man might turn out to be a hairbrush. Sometimes the right response is a verbal one: the teenaged girl can put down the knife if ordered repeatedly and firmly to drop it.

The machine teaches police when to pull the trigger and when to hold off. But it also shows citizens just how quickly police have to make life-and-death decisions. Mr Hernandez says that some activists and critics of the police have been put through their paces on the machines, and “come out saying, ‘I didn’t realise what a hard job you have’.” An officer from a different department noted wryly that citizens let loose on the simulator “shoot everybody”. Not quite: your correspondent, the father of an 11-year-old, got his partner killed because he could not shoot the girl with the rifle.

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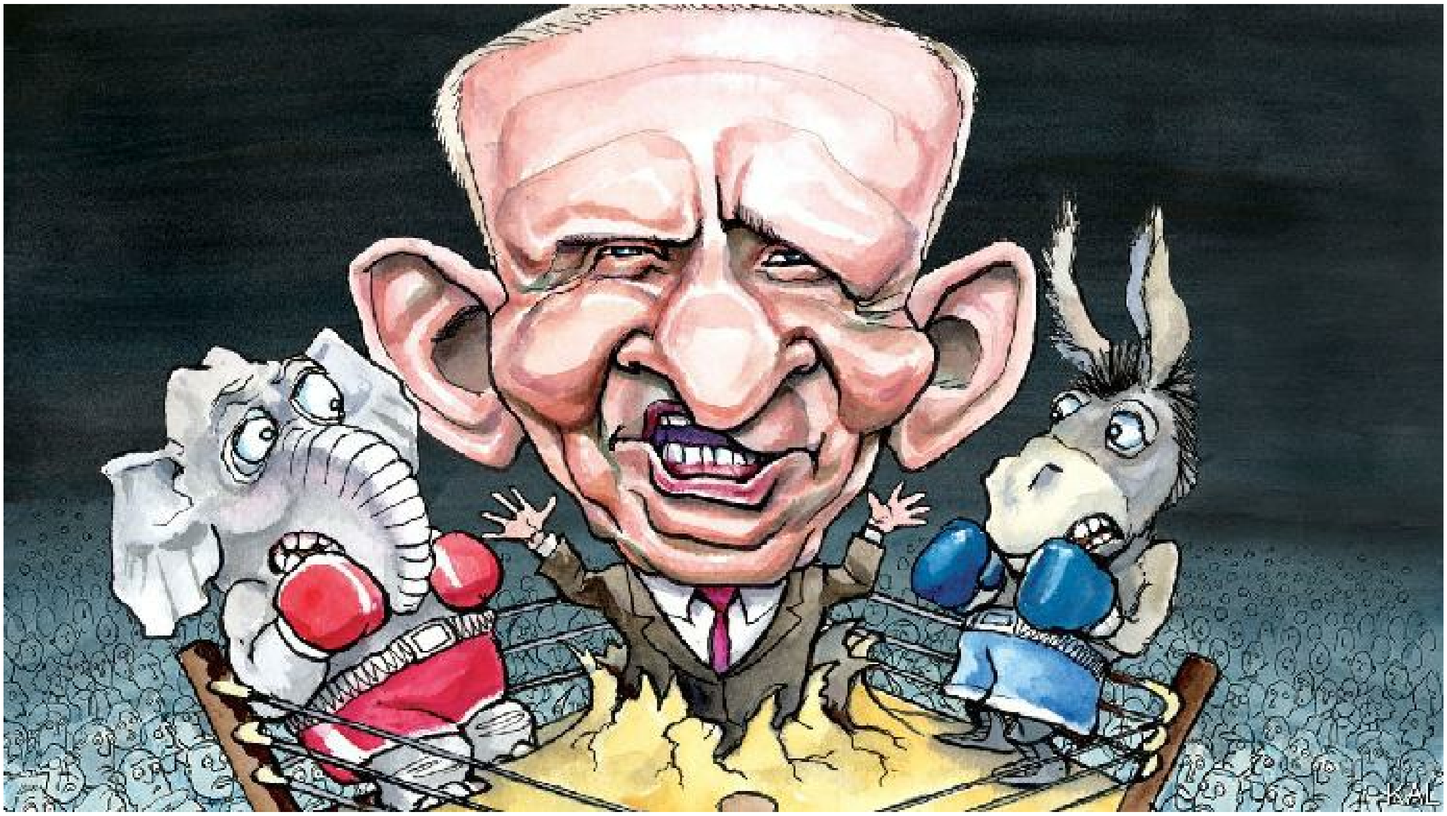
The outsider

Remembering third-party presidential candidate Ross Perot

The billionaire had a moderating effect on American politics



Jul 13th 2019

SANDWICHED BETWEEN Bill Clinton and George H.W. Bush on the presidential debate platform in 1992, Ross Perot looked like a grizzled man-child. At five feet five inches tall, he was almost a foot shorter than the thoroughbred Republican president and Democratic governor. He had to stand—while they slouched on their bar stools—to look them in the eye. A lesser man, running in a different year, might have appeared ridiculous. Yet the Texan billionaire, whose death this week recalls one of America's strangest and most fateful political careers, thrived on the contrast.

America was in the economic doldrums and, after 12 years of Republican rule, aching for a change that slick Mr Clinton was not quite trusted to deliver. This created an opportunity for an outsider that Mr Perot, pint-size, scrappy and quivering with contempt for both parties (as well as hostility towards the president—a Yankee interloper to his beloved state), seized with hyperactive brio.

He had two major policy impulses, a phobia of debt, on which he blamed most of America's economic troubles, and an embrace of protectionism. "You implement that NAFTA", he warned his opponents, "and you're going to hear a giant sucking sound of jobs being pulled out of this country." But his overarching message—the basis for the most successful third-party run in a century—was his vow to tear into Washington, DC, and shake things up.

He was not the first to make that promise—indeed his pugnacity recalled two of the most successful third-party candidates before him, Theodore Roosevelt and George Wallace. Yet as the first billionaire populist candidate, Mr Perot had novel credentials and other advantages. At a time when the downturn and Bush's spending had raised doubts about the Reaganite consensus, his epic success, as a pioneer of the computer-services industry, suggested he might actually know what to do about the economy.

He was also able to cover his campaign costs; he spent $65m in 1992. He retained his eye for economies, though. He generated publicity by appearing on TV chat-shows—he announced his run on Larry King Live—where his folksy, sometimes perplexing, language (“Life is like a cobweb, not an organisation chart!”) and love of high jinks made him popular. In 1979 he launched a paramilitary operation to spring two employees from an Iranian jail. They were freed by a mob, not Mr Perot’s daredevilry, but that did not spoil the story—or the thriller by Ken Follett and subsequent TV miniseries.

He was a genius salesman. And like many men who tell tales for a living, his grip on reality could be strained. He was a sucker for conspiracy theories—his belief that hundreds of American prisoners of war remained in Vietnamese jails was an enduring fantasy. His company headquarters resembled a prison camp, with barbed-wire fences, armed guards and strict dress and behavioural codes. Facial hair and short skirts were banned—but when an employee needed help with a sick child no expense was spared. He was a tycoon from another age, a paternalist with an eccentric edge; more Lord Leverhulme than Bill Gates.

That blend of outlandish achievement and disruptive idiosyncrasy was central to his appeal. Americans wanted to get back to winning and, in the absence of fresh thinking from either party, were open to suggestions. After leading in early polling, Mr Perot eventually persuaded one in five to vote for him. That was despite his bizarre decision to call off his campaign for two months after the Democratic convention—because, he variously suggested, the security of his daughter’s wedding was threatened, or he had been blackmailed, or the Democrats had impressed him.

The similarities with another paranoid billionaire populist are obvious. James Carville, Mr Clinton’s former strategist, called Mr Perot “John the Baptist” to the “disenchanted, displaced, non-college white voter”, to whom Donald Trump appeals. It really is hard to imagine the president without Mr Perot; his protectionist rhetoric is almost verbatim. Yet the comparison shows, too, how much has changed in American politics, mostly not for the better. It may also, more positively, suggest how worse can avoided.

Mr Perot’s success, unlike Mr Trump’s, was based on appealing across the parties (a myth on the right that he cost Bush the election has been serially debunked). That reflected the many more independent voters who were then available; by contrast, the only way a charismatic independent could hope to win power in 2016 was by capturing one of the party’s nominations, as Mr Trump did. Mr Perot therefore pitched for votes in the centre. When not grandstanding on trade, he offered heterodox and mostly worthy ideas: he backed higher spending on education, abortion rights and modest gun control; as well deregulation and a strong defence.

This made him influential in both parties. Before the advent of Mr Trump, his most enduring effect was to have pushed the Democrats—under Mr Clinton then Barack Obama—to embrace fiscal restraint. Indeed, it might not be obvious, given that the national debt has almost doubled as a share of output since 1992, but they overlearned that lesson. The Obama administration’s failure to apply a bigger stimulus in the depths of 2009 reflected its caution as well as Republican opposition. That should now serve as a warning to both parties as, in an effort to assuage the populist passions Mr Trump has aroused, they rush to embrace Mr Perot’s other, more damaging, big idea: protectionism.

A mixed blessing

The anti-establishment tendency in American politics, its so-called “paranoid style”, which Mr Perot and Mr Trump represent, is rooted in subversive sentiment, not policy ideas. More spasmodic than linear, it has always been hard to manage, but mostly short-lived—as, with cooler heads in both parties the current outbreak could be. If only it could expire as graciously as Mr Perot. Asked in his last interview what he wanted to be remembered for, he said: “Aw, I don’t worry about that.” His political legacy is a mixed bag. Yet his record of good-humoured public service was great.

The Americas

Resigning with rancour

Mexico's finance minister falls out with its populist president

Carlos Urzúa's abrupt departure worries investors

Jul 13th 2019 | MEXICO CITY

IN MEXICO'S LEFTIST populist government, Carlos Urzúa, the social-democratic finance minister, was a reassuring figure. The president, Andrés Manuel López Obrador, has unorthodox ideas about how to develop Mexico. Mr Urzúa (pictured, right) would help make sure, investors hoped, that he pursued them without wrecking the economy. But on July 9th, after seven months in office, he quit, abruptly and noisily. In a venomous letter he said his ministry had been forced to employ unqualified people. "I am convinced that economic policy should be based on evidence" and free from "all extremism, whether of the right or the left". This belief "found no echo" in the government, lamented Mr Urzúa. "I've never seen a letter like this in Mexico," says Luis Rubio of CIDAC, a think-tank.

Mr López Obrador (pictured, left), who took office in December, has lost other officials, including the environment secretary and the head of the migration institute. Some have left not because the president is spendthrift, but because he has slashed ministries' budgets to make room for his pet projects. Cuts to health spending prompted the resignation in May of the head of the social-security institute.

Mr Urzúa's departure will hurt more. It dims the aura of a president who still has high approval ratings. It exposes infighting within his team. It will make economic management more difficult at a time when growth and investment are faltering. Most important, it raises the question whether Mr López Obrador's coalition of radical activists new to government, defectors from the establishment and centre-leftists like Mr Urzúa can agree on a sensible governing programme. The markets are worried. The peso dropped by 1.5% after Mr Urzúa quit.

In his parting letter he wrote that decisions "taken without sufficient basis" were among the factors that prompted him to leave. It is not clear what these were. Mr Urzúa took the job fully aware of Mr López Obrador's most contentious proposals, such as building an oil refinery at a cost of $8bn (about 0.7% of GDP) or more and a "Maya train" (with a price tag of $6bn-8bn) in Mexico's impoverished south. Mr Urzúa is thought to have opposed a government plan to force a renegotiation of gas-pipeline contracts with a Canadian firm that the previous government had signed. The plan damaged investors' confidence in Mexico.

The biggest source of tension was probably Pemex, the ailing state oil company. It is soon to present a plan for dealing with its $100bn debt. The finance minister draws up the company's budget, so Mr Urzúa would have been involved. The president views oil as a foundation of Mexico's greatness, insists the state should control it and opposes selling off money-losing parts of the company (see article). Rocío Nahle, the energy secretary, shares the president's views. Mr Urzúa may have clashed with both of them. A plan that fails to reform Pemex would probably result in a downgrade of the firm's credit rating to junk status, says Pablo Medina of Welligence, an energy consultancy.

Mr Urzúa may also have been frustrated by the president's deep cuts to salaries and benefits of civil servants. These prompted the exit of many of the officials who have run the finance ministry for decades.

Mr López Obrador named the minister's successor within an hour of his resignation. His choice of Arturo Herrera, a finance undersecretary, helped calm the markets' nerves. Mr Herrera, who has worked at the World Bank and as finance secretary in Mexico City when Mr López Obrador was its mayor, is thought to be wonkish and to understand the importance of the financial markets.

But Mr Herrera is likely to have the same problems that Mr Urzúa did. In March Mr López Obrador publicly overruled him after he said that the government would delay construction of the refinery and use the money to help Pemex. A test will come in September when he presents next year's budget, which will have to balance Mr López Obrador's spending priorities with the need to maintain public services and hold down the deficit at a time of fragile growth. The president gave no sign that he will take Mr Urzúa's criticisms to heart. In a riposte to his letter Mr López Obrador said: "Sometimes people don't understand that we cannot continue with the same strategies."

But in appointing Mr Herrera, the president has shown that he understands the dangers of alienating moderates in his coalition. If the new finance minister feels forced to quit, the mood among investors will shift from alarm to panic, causing the peso to fall and inflation and interest rates to rise. A rancorous resignation has shown Mr López Obrador how hard it is to reconcile his development dreams with economic reality.

A bloody stalemate

With tenacity and torture, Venezuela's awful regime is hanging on

Negotiations with the opposition hold out hope, but only faintly

Jul 13th 2019 | CARACAS

ALMOST SIX months since Juan Guaidó began his attempt to remove Venezuela's leftist dictatorship, the strain is showing. The 35-year-old's jet-black hair is peppered with grey. His eyes seem weary. He has dropped his snappy slogan, "*vamos bien*" ("we are doing well"). Now his demoralised supporters utter it sarcastically.

But the need to end the rule of Nicolás Maduro is as strong as ever. His mismanagement, plus sanctions imposed in January on Venezuela's oil industry by the United States, will cause the economy to shrink by more than 25% this year. In dollar terms, the drop in output since Mr Maduro became president in 2013 will be around 70%. Francisco Rodríguez, an economist in New York who has advised the moderate opposition, warns of famine.

On July 5th the UN High Commissioner for Human Rights published evidence that security forces loyal to the government, such as the FAES, had murdered at least 6,800 people from January 2018 to May 2019. It documented cases of torture, including the use of electric shocks and waterboarding. The report, written by Michelle Bachelet, a left-wing former president of Chile who had once been sympathetic to Venezuela's government, described health care as "dire" and noted "violations of the right" to food and other necessities. The regime called the report "biased". Days before it was published, Rafael Acosta, a reserve naval captain accused of plotting to overthrow Mr Maduro, appeared in court in Caracas, bruised and unable to say anything but "help me" to his lawyer. He died hours later.

Mr Guaidó, the head of the opposition-controlled legislature, had hoped to lead a velvet revolution. He assumed the interim presidency of Venezuela on January 23rd, on the grounds that Mr Maduro had rigged his re-election last year. The United States, all the big democracies in Latin America and most members of the European

Union recognised Mr Guaidó as acting president. He and his supporters expected American oil sanctions to end the weakened regime. The army would switch sides, forcing its leaders into exile, where they would be consoled by a portion of the money they stole. A return to democracy would ensue.

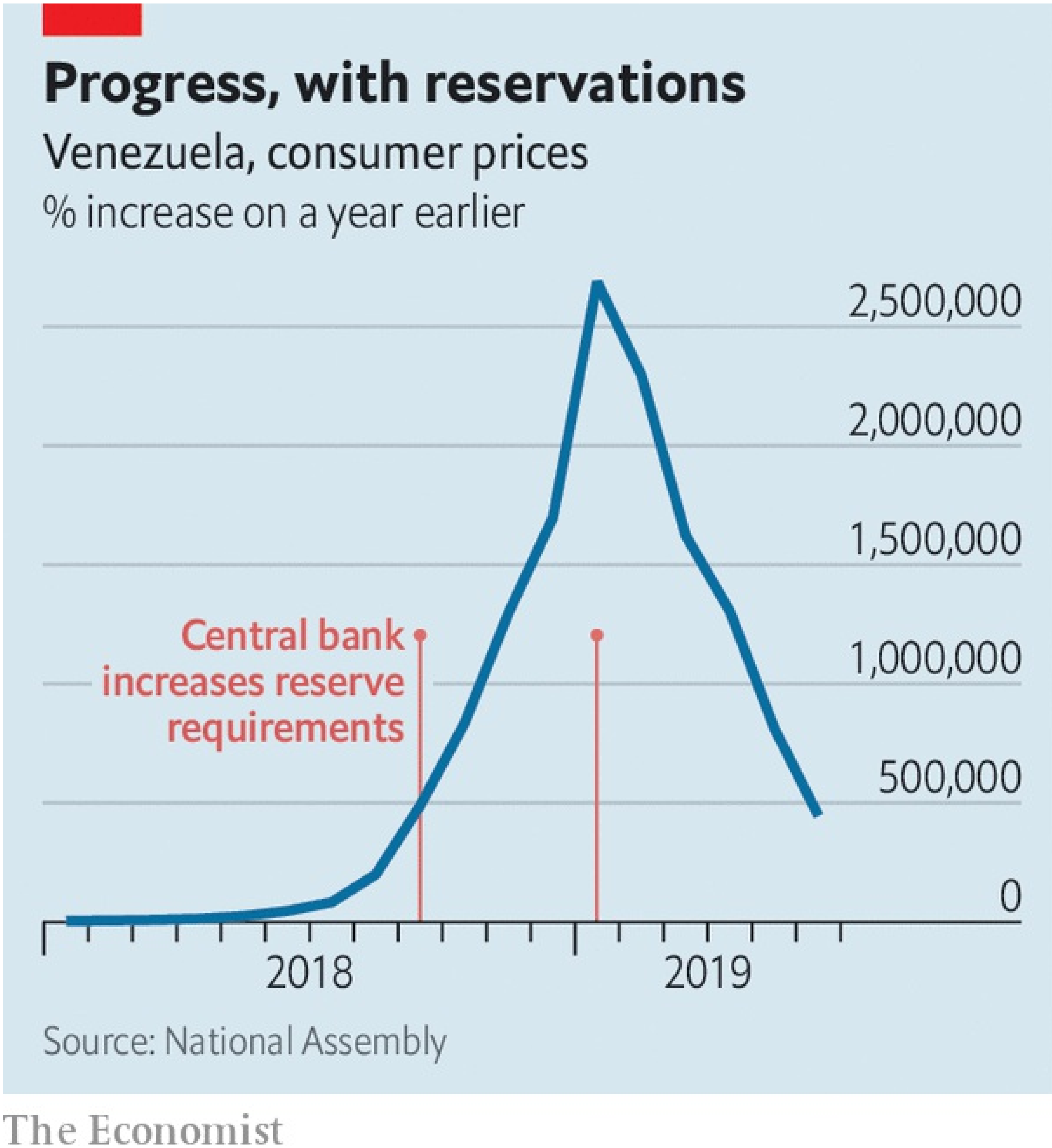
That plan has suffered one reversal after another. In February Mr Guaidó promised to bring in hundreds of tonnes of humanitarian aid, which had been stockpiled on Venezuela's borders, "come what may". Barely any got through. Last month it was distributed to Venezuelan migrants in Colombia. On April 30th the interim president appeared on a motorway in Caracas at dawn flanked by a few dozen rebel national guardsmen and by Venezuela's best-known political prisoner, Leopoldo López, who had escaped house arrest that morning. The regime's "final phase" was approaching, Mr Guaidó declared. But there was no military uprising. "I honestly think Maduro has won this," says Yamila Pérez, an architect who took part in anti-government marches this year.

Although Mr Maduro claims to "sleep like a child" (currently in the Fuerte Tiuna barracks in Caracas), he has cause for insomnia. The April uprising revealed splits in the regime. Cristopher Figuera, the chief of the intelligence service who defected, has said in recent interviews that the defence minister, Vladimir Padrino López, and the supreme court's chief judge, Maikel Moreno, had plotted to oust Mr Maduro but lost their nerve. Both scoff at the claim. On July 7th Mr Maduro said that General Padrino López would stay in his job, perhaps wanting to keep his enemies close.

The state-owned oil giant PDVSA, the main foreign-exchange earner, is trying to shift exports from the United States to Asia (see article). Corruption, mismanagement by executives chosen for their loyalty to the regime and now sanctions have caused output to plunge. Although Venezuela has the world's largest proven oil reserves, much of the country is suffering from shortages of petrol.

Remittances have replaced part of the lost oil money. Some 4m people, 12% of the population, have left Venezuela since the economic crisis became acute in 2014. Net remittances have risen from $200m in 2016 to $2bn in 2018. Another source of cash is gold, much of it mined by wildcatters with scant concern for the environmental damage they cause. These sidelines do not provide enough money to sustain imports. In 2018 non-oil imports were nearly 90% lower than in 2012.

"The regime's entire focus now is survival," says a Caracas-based diplomat. "The rulebook has been thrown away." Mr Maduro has quietly abandoned elements of the socialism brought in by his predecessor, Hugo Chávez. In January the government allowed the bolívar to float almost freely for the first time since 2003, closing the huge gap between the official exchange rates (there were two) and the black-market rate. That ended a bonanza for loyalists who got access to dollars at the overvalued rate. The state and firms it owns have defaulted on more than $11bn of principal and interest due on bonds. Mr Maduro still blames many of Venezuela's woes on the "criminal dollar", but recently the dollar has become accepted almost everywhere, from flea markets in Maracaibo to government-run five-star hotels in Caracas.



Inflation has plummeted, to a still stratospheric 445,482% (see chart). This is partly because hyperinflations always "run out of steam", says Mr Rodríguez. The central bank also dampened inflation by forcing banks to raise reserves. But these moves towards saner economic policies have so far done little to ease hardship for most people.

The main hope for a political transition, and it is a faint one, lies with talks between the opposition and government, which resumed in Barbados this week. It is hard to imagine a resolution to Venezuela's agony that does not include Mr Maduro's departure and a plan to hold elections with international monitoring. If that is to happen, the president will have to sleep less and worry more.

Bello

João Gilberto, the man who sang “The Girl from Ipanema”, has died

The interpreter of bossa nova and his legacy

Jul 13th 2019

IT WAS NOT João Gilberto’s fault, and as a perfectionist no doubt he suffered from it more than anyone, that his greatest hit, “The Girl from Ipanema”, has been mutilated into supermarket Muzak. At its height, in the late 1950s and early 1960s, the Brazilian fusion of samba, jazz, and other things too, known as bossa nova (“new style” in Portuguese) entranced the world. Back home, it formed the soundtrack to a period of cultural originality, from architecture to football, that seemed to augur a bright future for Brazil. As a guitarist and singer Mr Gilberto, who died an impoverished recluse on July 6th, aged 88, was a star of that moment. He lived to see a darker present.

Born in the arid backlands of Brazil’s north-east, Mr Gilberto arrived in Rio de Janeiro in 1950 as a singer in one of the then-fashionable vocal ensembles. After his career stalled he retreated, broke and on the verge of mental illness, to a kind of internal exile. He spent months closeted with his guitar in a bedroom of a sister’s house, obsessively stripping down and rebuilding his way of playing it. He emerged with the terse, syncopated rhythm, complex chords and a gentle, almost spoken, singing style that were the marks of bossa nova.

He returned to a Rio in musical ferment. A loose fellowship of bohemian young, mainly middle-class musicians, whose habitat was beachside apartments and the nightclubs of Copacabana, was striving to escape from traditional Brazilian folklore. Two stood out: Antônio Carlos (“Tom”) Jobim, a prodigiously talented pianist and composer (and fan of Debussy), and Vinicius de Moraes, a hard-drinking diplomat, poet and lyricist. In 1957 Mr Gilberto knocked on the door of Jobim’s house in Ipanema—and began to make history.

It started with “Chega de Saudade” (“No More Blues”, in its American release), a short single which gave its title to an album that sold 500,000 copies in Brazil. Its controlled phrasing was seen as “a kick up the backside” to the era of romantic crooners, according to Ruy Castro, bossa nova's chronicler. Jobim and de Moraes's "The Girl from Ipanema", a languid musing on the wistful contemplation of beauty by age, had its first performance, by Mr Gilberto, in a Rio nightclub in 1962. That was both zenith and swansong for bossa nova. The new music conquered the world, starting with a concert in Carnegie Hall in New York. Mr Gilberto made a hugely successful album with Stan Getz, an American saxophonist. But in Brazil bossa nova was yielding ground to protest music, rock 'n' roll and a return to traditional samba.

According to Caetano Veloso, a popular musician of a later generation, "bossa nova is a rare example of music that becomes popular by becoming more sophisticated." It varied to samba in its harmonic complexity, as well as in the intimate introspection and sensuality of its lyrics.

The bossa nova era was one of two great, creative ebullitions in 20th-century Brazil. The first came in the 1920s when a group of painters and writers embraced modernism under the banner of *antropofagia* (cultural cannibalism). Rather than merely imitating or rejecting foreign works of art, they consumed and then regurgitated them to create something both authentically Brazilian and universal.

That approach came back in the late 1950s, when Brazil was enjoying a precarious period of democracy. Under Juscelino Kubitschek, a dashing social democrat, the country rushed not just to industrialise but to embrace the modern in general. As well as bossa nova, that impulse included the minimalist palaces of Oscar Niemeyer that adorned Brasília, the new capital; the concretist movement of poets and artists such as Mira Schendel and Lygia Clark; and, later, *cinema novo*, in which film directors adopted the techniques of Italian neorealists to address Brazil's social divides.

As Mr Veloso told the *Guardian* in 2013, "what was revolutionary about bossa nova is that a third-world country was creating high art on its own terms and selling that art around the world. It remains a dream of what an ideal civilisation can create."

The dream did not last long. A military coup in 1964 brought the curtain down on the bossa nova era. Now Brazil's restored democracy is headed by Jair Bolsonaro, a socially conservative Pentecostalist who is openly nostalgic for military rule. In its sensitivity, disciplined search for perfection and openness to foreign influence, bossa nova was everything that Mr Bolsonaro's vision of Brazil—vulgar, hate-filled and nationalistic—is not. Muzak rules.

Asia

India’s hunt for “foreigners”: Madness in the hills
India is declaring millions of its citizens to be foreigners.

Afghan peace talks: Happy talk
The Taliban negotiates with Afghan officials for the first time.

Migration in Myanmar: Movers and forsakers
Myanmar’s countryside is emptying and its cities bursting.

Bears v humans in Japan: The bears are winning
In Japan, fewer people means more animals.

Madness in the hills

India is declaring millions of its citizens to be foreigners

The unlucky victims must then prove the opposite in special courts

Jul 13th 2019 | GOROIMARI

IT IS HOTTER than Prague. It does not have the Czech capital's cobbled squares or narrow streets but instead tin-roofed houses and paddies hemmed with palms and mango trees. Yet Franz Kafka would have felt quite at home in Assam. Since 2016 this hilly tea-growing state in India's north-eastern corner has been compiling a National Register of Citizens (NRC). Billed as a scientific method for sorting pukka Indians from a suspected mass of unwanted Bangladeshi intruders, the seemingly banal administrative procedure has instead encoiled millions of people in a cruelly absurdist game.

Rather than find and prosecute illegal immigrants, Assam has instead tasked its 33m people, many of them poor and illiterate, with proving to bureaucrats that they deserve citizenship. Those who fail risk being locked up. Some 1,000 people currently moulder in Assam's six existing detention centres for "foreigners". The Indian public has lately been shocked by stories of people, such as a decorated war hero and a 59-year-old widow, who have found themselves jailed for failing to prove their Indian-ness. But the state of Assam is clearly expecting a lot more to come. Ten purpose-built camps are planned.

The current phase of the NRC game is set to stop on July 31st, the deadline for publishing the completed citizens' register. After that, those left off the list will have to wait for Foreigners' Tribunals, special parallel courts with no right of appeal, to hear their cases. There is no telling how many there may be. When a draft NRC was issued last year, it left out some 4m of Assam's 33m people. In June 100,000 more were deemed suspected foreigners. The majority of the losers are Bengali speakers, some of them Hindu but mostly Muslim; other Assamese were automatically included in the register because they have obvious local pedigrees or belong to recognised "native" tribes.

Not surprisingly, some 93% of those excluded have petitioned for inclusion, presenting evidence that they are Indian-born. But the bureaucratic machinery, primed by Assamese chauvinists aligned with the Bharatiya Janata Party (BJP), which rules both the state and the country, has been incentivised to reject as many as possible. Indeed, the national government is preparing to declare the exercise a great success. It wants to extend the NRC and Foreigners' Tribunals to the rest of the country. Muslims, who are 14% of India's 1.3bn people, fear that they may find themselves, as in Assam, disproportionately sifted into the reject bin. They are right to be worried.

In the hamlets around Goroimari, a largely Bengali-speaking village in the lush flatness of the Brahmaputra valley, it takes little effort to coax out NRC nightmares. Take the case of Somiron Nisa, a recent high-school graduate. Everyone in her family appeared on draft NRC lists as proper citizens, and in the first draft she did, too. But beside her name on the latest draft it says "declared foreigner". NRC officers told her family this was because she has been tagged a "D" or doubtful voter by the state's election commission, which means she will automatically have to defend herself at a Foreigners' Tribunal. When it was pointed out that Ms Nisa is the only "foreigner" in her family, and is also too young to have ever registered to vote, the officers shrugged.

The Economist

Or listen to Shamas Uddin, 93, an illiterate farmer. He was born in this village when it had just a handful of houses, he says. His name appeared on all the NRC drafts but then, in March, a certain Debajit Goswami officially objected to his inclusion. Mr Uddin does not know his accuser. No one in the village does, and indeed lawyers with a local NGO failed to track down Mr Goswami at his registered address. Nor did he show up at either of the NRC hearings to which Mr Uddin was summoned, in two different towns 150km apart.

Perhaps this is because Mr Goswami's name appears on hundreds of "objection" letters, demanding the removal of suspected foreigners from the NRC. Under rules set by India's Supreme Court, no less, such individuals were given licence to denounce any number of fellow citizens, and also excused from appearing to face those they accuse. In this district alone, a suspiciously small number of objectors, all believed linked to Assamese nativist groups, somehow gained access to a local NRC database and together penned 30,000 such objection certificates. Across the state, some 220,000 such poisoned letters were filed before a deadline in May. Indigenous activists in other parts of north-eastern India, in turn, have begun to waylay migrant workers from Assam, demanding to see proof that they are on the NRC and turning away those who cannot provide it.

"No one here is from Bangladesh," scoffs Rahum Ali, one of Mr Uddin's neighbours. "Where would they settle? There is no land. Brothers are fighting over land." Mr Ali is 70 but was not included in the NRC drafts, although three brothers and two sisters were. Summoned to an NRC office, he was told his case is PFT or "pending Foreigners' Tribunal". He was subsequently summoned four more times, to offices in different towns, each time wondering if he would be thrown in jail, only to be told the same thing. But although he is told there is a case, no case number is cited, so he has no idea which out of some 100 Foreigners' Tribunals he should appear before. A local lawyer says that 46 people in the village are similarly PFT and being "driven mad" by repeated summonses.

How did this Kafkaesque situation arise? As so often in India the blame lies partly with British rule and partly with toxic Indian politics. Under the Raj millions of Bengalis, mostly Muslim, were encouraged to settle in Assam. With independence, local politicians thrived by playing up the "threat" that intruders posed to native language and culture. With the rise of Hindu nationalism, the religious component has been magnified and the threat recast as one to India's national security.

As a result, claims of ever bigger numbers of supposed illegal migrants have been bandied about. With Assamese chauvinists repeatedly asserting that 5m or even 8m "infiltrators" have invaded their state, right-wing politicians have scented the possibility of erasing much of the typically left-leaning Muslim "vote bank" from the rolls. They are substantiating the baseless estimates by declaring millions to be "foreigners". "It's like Chernobyl," says a lawyer, "They are trying to hide a lie at the cost of disaster."

No one seems to know what the ultimate fate of Assam's "foreigners" will be. They cannot be deported; Bangladesh flatly rejects the whole exercise as an internal Indian matter. Millions of people cannot be shunted to some other part of India, either. The BJP has offered a solution for some: cocking a snook at the secular constitution, it is pushing an amendment to citizenship laws that will allow refugees who are Hindu, Buddhist, Sikh or Christian to apply for citizenship, but specifically ban Muslims. Nani Gopal Mahanta, chair of political science at Assam's Gauhati University and a BJP supporter, has some suggestions for those who still fall foul. He thinks that the Foreigners' Tribunals may not act very quickly, taking perhaps 20 years to sort through their case load. Those declared non-citizens need not be made stateless, but could simply be stripped of civil rights, perhaps for a limited time. "Citizenship, whether you like it or not, is not a very democratic concept," he says. Kafka would certainly have agreed.

Happy talk

The Taliban negotiates with Afghan officials for the first time

Getting the two sides to meet was a negotiation in itself

Jul 13th 2019 | ISLAMABAD

IT WAS A breakthrough, albeit only by the forlorn standards of the 40-year conflict in Afghanistan. After two days of talks with Afghan officials at a posh hotel in Qatar, envoys of the Taliban promised that their insurgents would not attack schools, hospitals or bazaars. The Afghan government, too, said it would try to stop killing civilians. But more important than their woolly resolutions was the fact that the two sides were speaking at all. Officially, the Taliban insists that the Afghan government is an illegitimate puppet regime; it was only “in a personal capacity” that its envoys met Afghan officials, alongside politicians and representatives of NGOs.

The meeting was partly to break the ice and partly to brainstorm over a “road map for peace”. In addition to the resolution about avoiding civilian casualties, the vague, non-binding declaration also provided an outline of sorts for future negotiations on a peace deal. Women’s rights, the Taliban agreed, would be protected, albeit within an “Islamic framework”. By the same token, “institutionalising an Islamic system”, the delegates decided, would not involve dissolving government institutions such as the army.

The American government, which is hoping to find a face-saving formula to withdraw from Afghanistan, has long called for such a meeting. With the Afghan government sidelined, talks between America and the Taliban had naturally focused on America’s chief concern: how to withdraw its forces without allowing Afghanistan to become any more of a haven for international terrorists, such as Islamic State and al-Qaeda. Yet a deal between the Taliban and America is not enough to secure peace in Afghanistan. Even before American troops invaded in 2001, the country was aflame. To allow American troops to depart without leaving chaos and bloodshed in their wake, the Taliban must find a way to rub along with the Afghan groups they once fought and persecuted.

Discrepancies in the translation of the declaration agreed in Qatar give an idea of the difficulties. The English version did not mention an American withdrawal. The Pushtu version reportedly had no mention of protecting women's rights. Under the Taliban, women have been unable to leave home without a chaperone and have been denied work or education.

Filling in the details will be contentious. Who, for example, will decide what is acceptably Islamic? "People will accept concessions, but they are not going to accept an emirate," says one Western official. Under the Taliban's interpretation of democracy, only people with sufficient Islamic knowledge should be allowed to vote. "As you can imagine, all those people are men with white beards."

The Taliban's delegation to the talks was indeed a collection of men with white beards—some of them former detainees at the American military prison in Guantánamo Bay in Cuba. The Afghan officials included several women, most notably the country's first female governor.

Taliban fighters in the field often say they cannot negotiate for anything less than a strictly Islamic system. "Without that Islamic regime, a deal for me personally would offend and dishonour those thousands of Taliban and leaders we sacrificed," says a commander in Ghazni, a town 150km south of Kabul, the capital.

The Taliban also refuse the main demand of the Afghan government: a ceasefire. While vowing to protect civilians, the Taliban nonetheless say the war must continue. It is the pressure of war, they say, that has led to negotiations, so they must keep it up. In the past week the Taliban have attacked government buildings in Ghazni and Kabul, wounding scores of children in schools nearby. By the same token, an Afghan commando raid on a hospital in the province of Wardak, just west of Kabul, reportedly killed at least two of its staff.

The Taliban and America are in the middle of their seventh round of talks. There have been hints of progress on a timetable for an American withdrawal and on assurances that the Taliban will not harbour terrorists. Talks among Afghans will be longer and messier. But they are the only way to end the country's decades of agony.

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Movers and forsakers

Myanmar’s countryside is emptying and its cities bursting

Migration is reshaping the urban and rural economies

Jul 13th 2019 | HLAINGTHAYA

WHEN SHE moved from her village to Yangon, Myanmar’s biggest city, Ma Thet Thet Nwe was afraid. Her husband had just died and she needed to provide for five children. She found work at a garment factory in Hlaingthaya, an industrial zone, and saved enough money to buy a one-room, bamboo house in a nearby shantytown. Now she is pleased with her lot. Two of her daughters work in garment factories, while she cares for her other children and runs a roadside café. Factory work is easy, she says with a smile—much better than toiling in the fields.

Ms Ma Thet Thet Nwe is part of a wave of migrants from the countryside to the city in the past decade. Data are sparse but a national census in 2014 found that out of a population of 50m, 9.2m people had moved townships (the equivalent of counties) in their lifetime. Of those, over one-third had moved since 2009, mostly to Yangon. One in three lived in cities.

Many were forced to leave their homes by Cyclone Nargis, which struck southern Myanmar in 2008, killing around 140,000 people. Hundreds of thousands were left destitute and moved to the cities to start over. But the disaster also laid bare the shortcomings of the country’s military dictatorship. In subsequent years the army relaxed its grip on power. Among other reforms, restrictions on internal migration were eased and foreign investment, previously shunned, was eagerly courted.

That helped usher in a period of rapid growth. From 2008 to 2018 the economy expanded by an average of 6.3% a year, thanks in part to a thriving garment sector. Exports of clothes and shoes increased tenfold over the same period, reaching $5.3bn last year, about 8% of GDP.

That created plenty of jobs in Hlaingthaya. Garment factories' walls are adorned with lists of vacancies; it took Ms Ma Thet Thet Nwe just five days to find work. Job security, rather than higher wages, draws ever more country folk. Factory hands earn around 3,000 kyat ($2) per day, about half what they could on a farm, but the work is much more reliable.

The rapid influx of migrants has created sprawling slums around factories. A government survey in 2017 found 475,000 people squeezed into one neighbourhood of eight square kilometres. Most houses have one room and are made from bamboo, nipa-palm fronds and tarpaulin.

Living conditions are grim. Crime is rife and rubbish piles up between houses. Floods occur frequently during the monsoon season, spewing untreated sewage onto the streets and so spreading disease. A study by the ministry of health found that slum-heavy townships were worst affected by waterborne ailments, like tuberculosis.

The municipal government's plan to build more cheap homes around Yangon seems far-fetched. The allotted sites remain undeveloped; private investors are yet to be found. The Asian Development Bank estimates that, to provide housing for those in the slums and to cater to a growing population, the city needs to build 100,000 low-cost units a year for the next ten years. Between 2010 and 2016 it built around 3,000 units a year.

Life in Hlaingthaya is precarious even for those with jobs and homes. Khin Thet spent 1.1m kyat on her house, but worries she will be evicted when a new railway line is built. Few receive benefits required by law, such as redundancy pay, because they work in the informal economy or their employers have failed to complete the relevant paperwork (and pay the associated taxes). Exploitation is a constant risk. Most migrants to the slum are single; over half are women. Pimps seek out workers dismissed from factories.

For those who cannot find steady work, life is little better than in the village. Kyaw Zepa Tua and his family came to Hlaingthaya three years ago. He and his wife struggle to feed their children and have fallen into debt with their landlord, who charges 40,000 kyat a month for a poky room in a grimy bamboo hostel. Four other families share the hostel, all in similar states of instability. If things do not improve, says Mr Kyaw Zepa Tua glumly, they will have to go back to the village.

Returning migrants will find that urbanisation has changed village life, too, by creating a shortage of people. In the Ayeyarwady region, to the west of Yangon, this is particularly clear. That is partly because of proximity. But Ayeyarwady also has low rates of land ownership, giving locals less reason to stay put, and was in the path of Cyclone Nargis. As a result, the villages are emptying. A survey of six by the International Organisation for Migration found that two-thirds of families have at least one member who has left.

The working-age population are disproportionately likely to move. That is changing the culture of the villages, says Ko Win Zaw Oo, who works for a local NGO. There are fewer people to perform communal tasks that used to fall to young adults, such as repairing roads and bridges and helping to organise Buddhist festivals. The quality of village councils, which do things like settle disputes and interact with the central government, is also suffering. Previously the cleverest people in the village would have joined the council. Now bright sparks head to the city. "Only the drunks and drug addicts will be left," says a gloomy expert.

Remittances from relatives in the cities are also changing things. Mom-and-pop stores work as intermediaries for cash-transfer firms, allowing locals to send and receive cash swiftly. In 2016, 1% of the population used an app or a cash-transfer firm to move money. Now 80% do, says Brad Jones, boss of Wave Money, one such firm. It handled $1.3bn in Myanmar in 2018 and has already surpassed that figure this year.

The exodus has had a big impact on agriculture, in particular. Khin Aye, a farmer in the Ayeyarwady region, has 14 acres of paddy fields, which can be seen through the back window of his farmhouse. Over the oink of pigs, he explains how hard it is to find labourers. He says he has to pay double his previous daily rate. One study found that agricultural wages in the area jumped 40% between 2011 and 2016. Some farmers, struggling to make ends meet, have sold their paddy fields or switched to less labour-intensive crops. Automation is another option. Buffaloes are becoming a rarity, but ploughs pulled by tractors are a common sight. Mr Khin Aye started renting one two years ago. The amount he pays the rental firm is about the same as he used to pay for labourers, but now the work is done much quicker.

A recent study by Myat Thida Win and Ben Belton of Michigan State University and Xiaobo Zhang of Peking University found that the share of farms in southern Myanmar using machines to harvest increased from 10% to 54% between 2011 and 2016. They also looked at the annual sales of five local farm-vehicle dealerships. They found that between 2013 and 2016 the number of two-wheel tractors purchased doubled to 20,684. Sales of four-wheel tractors and combine harvesters soared 12-fold from 460 to 5,572. The paddy fields of Ayeyarwady region are one of the few places on Earth where a wave of automation is seen by nearly everyone as a relief.

Grin and boar it

In Japan, fewer people means more animals

Deer, bears and boars are becoming more numerous—and bolder

Jul 13th 2019 | TOKYO

FOR A LONG time hikers in Japan have considered a bear bell essential. Its tinny ring is said to scare off the huge creatures. Nowadays, however, bear bells are increasingly useful on the way to the shops as well as in the wild. “The number of animals—whether bears, boars or monkeys—is expanding, and they are going into villages and towns,” says Hiroto Enari of Yamagata University.

Japan is home to many species of wild animals, including both black and brown bears. Estimates of their numbers are wobbly, but since the 2000s the number of bear sightings has been rising. There were close to 13,000 in 2018 alone. The resurgence has its roots in human demography: the shrinking of Japan’s population is especially acute in rural areas, where it is exacerbated by ongoing urbanisation. The dwindling quantity of people, in turn, has emboldened animals. Bears are less inhibited about entering villages in broad daylight if there are few folk around, Mr Enari says. Indeed, the biggest jumps in sightings have been where the population is falling fastest, such as Akita, a prefecture in the north-west of Honshu, Japan’s most populous island.

Hunting is declining in Japan, too. Government data suggest that the average hunter is now 68 years old. The country’s many forests and mountains provide an expansive habitat for wild animals. Indeed, true wilderness is growing as foresters and farmers die off. Bears become particularly bold in years when acorns are scarce, sneaking into orchards to steal persimmons.

While some welcome the ursine renaissance, others suffer from it. Every year bears injure scores of people, and kill a handful. Deer cause damage to farmland and spur erosion by, for example, gobbling up grass. Simple solutions, such as changing the layout around villages or putting up fences, are rarely used. Instead, many bears are captured or killed. In 2013 the government resolved to halve the number of certain types of deer, boars and monkeys by 2023. Japan is struggling to adapt to the “changing power balance between animals and people”, says Mr Enari.

China

Letter from Zhongguancun: Home-grown

China’s Silicon Valley is transforming China, but not yet the world.

Chaguan: A generational divide

Few things worry China’s elite more than getting their kids into Harvard.

Home grown

China's Silicon Valley is transforming China, but not yet the world

A huge portion of China's brain power is concentrated in Zhongguancun

Jul 13th 2019 | BEIJING

AS A TEENAGER, Wang Hanyang was fascinated by the electronics markets of Zhongguancun. He wandered the aisles of hard drives and graphics cards like a kid in a zoo, asking questions and learning. By 2009, government attempts to foster a tech hub in Mr Wang's patch of Beijing had yielded little else to inspire a 14-year-old's imagination. There were a few successful Chinese tech firms mimicking their American counterparts in search and social media, along with other startups. But in general Zhongguancun, a byword for cheap knock-offs, was still a disappointment.

No longer. Today Mr Wang, 25, is at the helm of his second startup, Generalized Aviation, which creates software for drones. Trendy coffee chains and boutique supermarkets dot the streets. Zhongguancun has spread out from the electronics markets into a sweeping quadrant of northwestern Beijing that takes in its two leading universities, Peking and Tsinghua. Zhongguancun is now a concept as much as a place, China's "Silicon Valley".

It is also China's best hope for the domestic innovation that might insulate the country from a world perturbed by its rise. The government calls this "self-dependent innovation", an idea that the trade war with America has given urgency. In January, during a visit to the new Binhai-Zhongguancun Science and Technology Park (conceptually part of Zhongguancun, but geographically distinct), Xi Jinping, China's leader, emphasised the need for Zhongguancun to generate "high-quality" economic development. As Mr Wang puts it, the country must accelerate a shift from assembling tech products to creating them. Surrounded by the world's largest, fastest-growing market for such goods, Zhongguancun is creating new apps, services and devices more speedily and cleverly than ever before.

The ingredients for success are in place, though it is hardly assured. The amount of money pouring into Chinese technology companies has grown rapidly over the past ten years (see chart), with the total annual levels of venture-capital investment now reaching parity with America. Armed with capital, a new company can stake out office space easily and quickly, and tap into annually refreshed stocks of technically minded graduates from the most prestigious universities in Beijing.

China has long since moved beyond producing merely Chinese versions of Silicon Valley companies. WeChat, an all-encompassing chat and payment app introduced in 2011 by Tencent, an internet giant in the southern city of Shenzhen, has inspired copycattery from Facebook. The newest firms in Zhongguancun employ business models that do not exist yet in America. One company lets doctors in small family practices order up complex lab tests for their patients on their phone. Another sells robotic arms to knife factories, which use them to sharpen the blades automatically. The international popularity of TikTok, a video-sharing app made by Bytedance, a Beijing company, shows that even in areas where Silicon Valley dominates globally, like social media, Zhongguancun can compete.

Its young companies start not in garages, but in cramped offices, tucked away in the low-rise towers that host what is left of the electronics market, the heart of old Zhongguancun. Mr Wang points out the dingy nook in which DiDi, China's ride-hailing giant, got its start. A larger office next door is for rent. Some 66 square metres are available, and the landlord is explicitly looking for tenants who "love Apple products". As they grow, startups migrate north, to larger office blocks. Tencent, Baidu, Lenovo and Sina all have sprawling campuses in the more distant reaches of the city.

New companies all rely on one of the most important geographical features of Zhongguancun: its proximity to the best schools in Beijing. The area is home not just to universities like Tsinghua and Peking, but also to highly regarded primary and secondary schools. The headquarters of one of China's most important private education companies, New Oriental, which offers coaching for English-language exams, sits across the road from the electronics markets. Elite Chinese students come here before heading off to America for university.

Often they come back and start a company, as Mr Wang did after he dropped out of the University of Waterloo in Canada. The schools of Zhongguancun predate its tech boom, and are foundational to it. As tech companies grow larger, the universities supply young talent while the promise of good schooling helps lure older recruits with families. The concentration of bright minds, in turn, attracts more brain power. "Beijing has a lot of terrible things like the air or the traffic, but the best thing is that you can talk to the smartest people in China within an hour," says Mr Wang.

Most of those smart people are not working on fundamental technologies, says Zhou Wei, the boss of China Creation Ventures (CCV), an investment firm based in Beijing's Wangjing district. Hawkish officials in America may be kept up at night worrying about China's advancement in semiconductors and artificial intelligence. But Zhongguancun's real strength is in developing new applications and services for the Chinese market, to be provided through smartphones. Chinese consumers are even more primed for such services than their counterparts in the West. In America or Europe, digital services must compete with existing infrastructure. Chinese digital services are often the first of their kind.

They are also heavily in demand. Mr Zhou points to one of CCV's investments, YunHu Health, as an example. The firm offers medical tests for patients at primary-care clinics, eliminating the need to wait in long queues at oversubscribed hospitals. Instead, samples are whisked away to local labs on a moped, with results sent back to the patient and their doctor in a day or two. Just two years old, the company already serves some 100,000 clinics throughout the country.

The application of technology to situations where demand outstrips supply is a guiding investment thesis for Mr Zhou. He has invested in software to help process medical imagery, reducing waiting times at hospitals, and in an interactive educational app that (purportedly) eliminates the need for a human teacher. DingDong Class charges the equivalent of $1 per hour for its automated English lessons, which use recorded videos of human teachers tailored to individual students. (Mr Zhou contrasts DingDong's method of teaching English favourably with his own learning process: watching every episode of "Friends", a situational comedy, at least ten times.)

The Chinese government has adopted a *laissez-faire* approach to such companies. "If there is no regulation, they let you run," says Mr Zhou. This does mean that new services risk leaving some people behind. "China is moving so fast that companies don't pay much attention to less technical people," Mr Zhou says. It is tricky now, in Beijing, to track down a taxi cab without using the DiDi app on your phone. To pay for a macchiato without using WeChat is to face a barista's exasperation with paper currency, or, at trendier coffee shops in Beijing and Shanghai, outright rejection.

Arms for knives and bras

Where CCV is focusing on technological fixes to gaps in the Chinese markets for education and health, Shunwei, another venture-capital firm, is focused in doing the same for China's manufacturing industry. One of its investments, Rokae, runs its research and development centre out of a warehouse in Zhongguancun. The ground floor is packed with white robot arms with a variety of appendages attached to their wrists. One arm is set up to sharpen knives, plucking raw blades from a box and grinding them to an edge on a stone. Rokae says it has sold hundreds of robots to a large knife factory in Guangdong province, where the arms have directly replaced human workers. Rokae is also teaching its arms to manufacture bras, and says it is working with Adidas to test whether the arms are able to sew the three white stripes of the German firm's logo onto garments. Because Rokae can produce robot arms more cheaply than Western competitors, it can appeal to businesses that might not otherwise have had enough capital to invest in automation.

Shunwei also aims to address Zhongguancun's greatest weakness—a reliance on imported components and technology. The firm has investments in Chinese companies that make chips which manage charging devices wirelessly, or that fuse camera data into three-dimensional scans. It is also investing in companies that design new materials—antibiotic ones for fabrics and mattresses, ceramics for phones. Today, most Chinese companies import these sorts of products from America, Europe, Japan or South Korea. If Zhongguancun is to blossom as a global, not just a regional, tech hub, and if it is to insulate China against protectionism, it will need to nurture its own suppliers.

The local government is doing its bit. Haidian district, where Zhongguancun is located, recently opened a business park dedicated to fostering Chinese chip companies. The idea behind Zhongguancun IC Park (the IC stands for integrated circuit), according to Wu Chunyan, one of the park's sales team, is that it will smooth the way for new chip companies, and not just through subsidised rents. It offers software for designing circuits, and handles licensing negotiations on behalf of its young tenants with other chip architecture firms such as Arm. Bitmain, a Chinese company which makes chips for mining Bitcoin, and GigaDevice, which makes memory chips, have already committed to moving in. Even though the campus seems quiet and somewhat empty, the canteen is bustling.

The latest crop of startups have set their sights on foreign markets. Rokae is planning to sell its robot arms to Europe. Mr Wang wants Generalized Aviation to flourish globally. They see the trade war not as a threat, but as an opportunity—to fill the gaps in Chinese supply chains and then compete in the West. But to become a world-shaping force like Silicon Valley, Zhongguancun will have to overcome Western concerns about the potential misuses of Chinese technology. So far, very few Chinese tech companies have managed to go global, Huawei and Bytedance being the most prominent. And Huawei, in particular, is under threat due to security fears raised by Western governments.

In the meantime, even Mr Wang cannot keep up with the pace of change in Zhongguancun. As he rides an escalator up into the last remnants of the electronics market, he sees that an entire floor has been emptied. He exclaims: "Oh no, they closed this one down?" The spaces which inspired him to go into the tech business are fading into history. "I feel a bit upset, but it's ok," he says. "Everything goes forward. We live life forwards, not in the past."

Chaguan

Few things worry China's elite more than getting their kids into Harvard

Many think Donald Trump is targeting their children for racist reasons

Jul 13th 2019

DIZZIED BY TRUMPIAN flip-flops and clashing policy announcements, China's ruling classes no longer know quite what to expect from America—with one exception. Chinese elites appear sure that President Donald Trump's America is willing to hurt their children, as part of a racist scheme to keep China down.

Outsiders might think it odd to spend time fretting about the roughly 360,000 Chinese youngsters studying in America, and whether they face tougher visa rules or unfair scrutiny from FBI agents hunting spies on college campuses. After all, tariffs worth billions of dollars are at stake in the trade war. Depending on what Mr Trump's dealmaking gut tells him, America may or may not be bent on crushing Huawei, the telecommunications giant key to China's hopes of becoming a technological superpower.

Yet when Chinese officials meet Westerners, America's treatment of Chinese students and scholars comes up time and again. For many, the issue is personal: in China as elsewhere, few things matter more to the elite than getting their offspring into Stanford. Chaguan spent July 8th and 9th at the World Peace Forum, a conference attended by Chinese leaders and foreign grandees, hosted by Tsinghua University in Beijing. In public debates and in private corridor conversations, Americans were repeatedly scolded by Chinese government ministers, professors and retired generals, and even ambassadors from Western allies. The charge is that, in the name of national security, America is treating Chinese students and scholars as a new "Yellow Peril", in a witch-hunt worthy of Senator Joseph McCarthy.

In part, this is a useful propaganda line. Chinese state media have been cranking out America-bashing commentaries ever since trade talks broke down in May. It is especially potent to point out ways in which rich-but-flawed, crime-ridden America is not safe for Chinese youngsters. A hit television drama this summer, "Over

The Sea I Come To You”, depicts Chinese parents who accompany children studying in a rather bleak America. In one episode a Chinese father saves his son from a school shooting, heroically dodging a bullet then punching the gunman to the ground before an American SWAT team eventually arrives.

Such horrors aside, it turns out to be just as potent to argue that Chinese students are being singled out for discrimination by American authorities, as part of a vindictive campaign by an ageing superpower to hold China back. The vice foreign minister, Le Yucheng, gave a speech at the peace forum arguing that America’s many problems, from the bitter legacy of wars in Afghanistan and Iraq, to yawning inequality and crumbling infrastructure, should not be blamed on China’s rise. After the speech, the first question to the minister came from a professor, lamenting visa delays for “our students” who hold offers from American universities, as well as cases in which Chinese scholars had seen ten-year American visas cancelled. Mr Le was sympathetic. China sends teenagers to study in America without worrying if they will be brainwashed, and then they are treated as spies, the minister tut-tutted. Chinese scholars have been harassed in airports and hotels by American intelligence, and, he asserted, cancer researchers have lost jobs at American institutions because of their Chinese ethnicity. How can America be so lacking in confidence? These actions are based on “blood lineage and race”, Mr Le charged. Chinese people find this “hard to understand”.

In vain American participants at the forum noted that Western scholars in China have endured harsh visa restrictions for years. Chinese universities face ever-tougher state surveillance. It is not unreasonable to charge Communist Party bosses with hypocrisy for clamping down on academic debate at home, while the past four Chinese leaders all sent a child to study in America (President Xi Jinping’s daughter was at Harvard).

Still, it is a wrinkle of the human condition that hypocrisy and sincere indignation can co-exist in the same breast. Since the first Chinese students attended Yale and other universities in the 19th century, an American education has stood for critical thinking, an escape from rote learning and freedoms that are both invigorating and alarming. The desire to give Chinese youngsters a horizon-broadening education unites flintily ideological officials and aspirational middle-class Chinese who care nothing for politics.

The key to their angst—and to this tense moment in Chinese-American relations—lies in a particular sense that just as China is poised to join the world on an equal footing, giving its young chances of which their elders could only dream, a selfish, resentful America is slamming shut its doors.

If young Chinese are welcome, say so

America’s government has done little to explain its side. Visa policies are always rather secretive. There seems little doubt that America’s rules have become tougher for Chinese applicants, notably in science subjects, with more students languishing in “additional administrative processing” for so long that some must abandon their studies. FBI chiefs have repeatedly briefed Congress about how China uses scholars to steal secrets. It would not hurt the FBI director to invite Chinese students to a speech to explain how much espionage actually goes on in America, state that the vast majority of Chinese are not under suspicion, then take lots of questions. Chinese censors might keep news of such a speech from parents and youngsters back home. (No speakers at the peace forum either knew or were willing to acknowledge that Mr Trump recently praised Chinese students as “tremendous assets”.)

America has a story worth telling. It is one about open societies, and how openness to people and ideas, though it can be seen as a vulnerability, represents their greatest strength. That America is losing a propaganda war, unbeknown to most Americans, is an extraordinary failure. Some day, China’s brightest youngsters may no longer want to come.

Middle East and Africa

Violence in Congo: Ituri’s injuries
Killings in Congo’s north-east spark fears of a return to war.

Eritrea: A gulag state totters
Eritrea’s gulag state is crumbling.

Syria’s oil crisis: Tankers away
Oil shortages in Syria are starting to hurt.

Israel’s black Jews: Problems in the promised land
The killing of a black Jew sparks protests in Israel.

Beirut rebuilt: Anti-cementism
Beirut is still arguing over its post-war reconstruction.

Ituri's injuries

Killings in Congo's north-east spark fears of a return to war

Militias are killing and possibly eating civilians

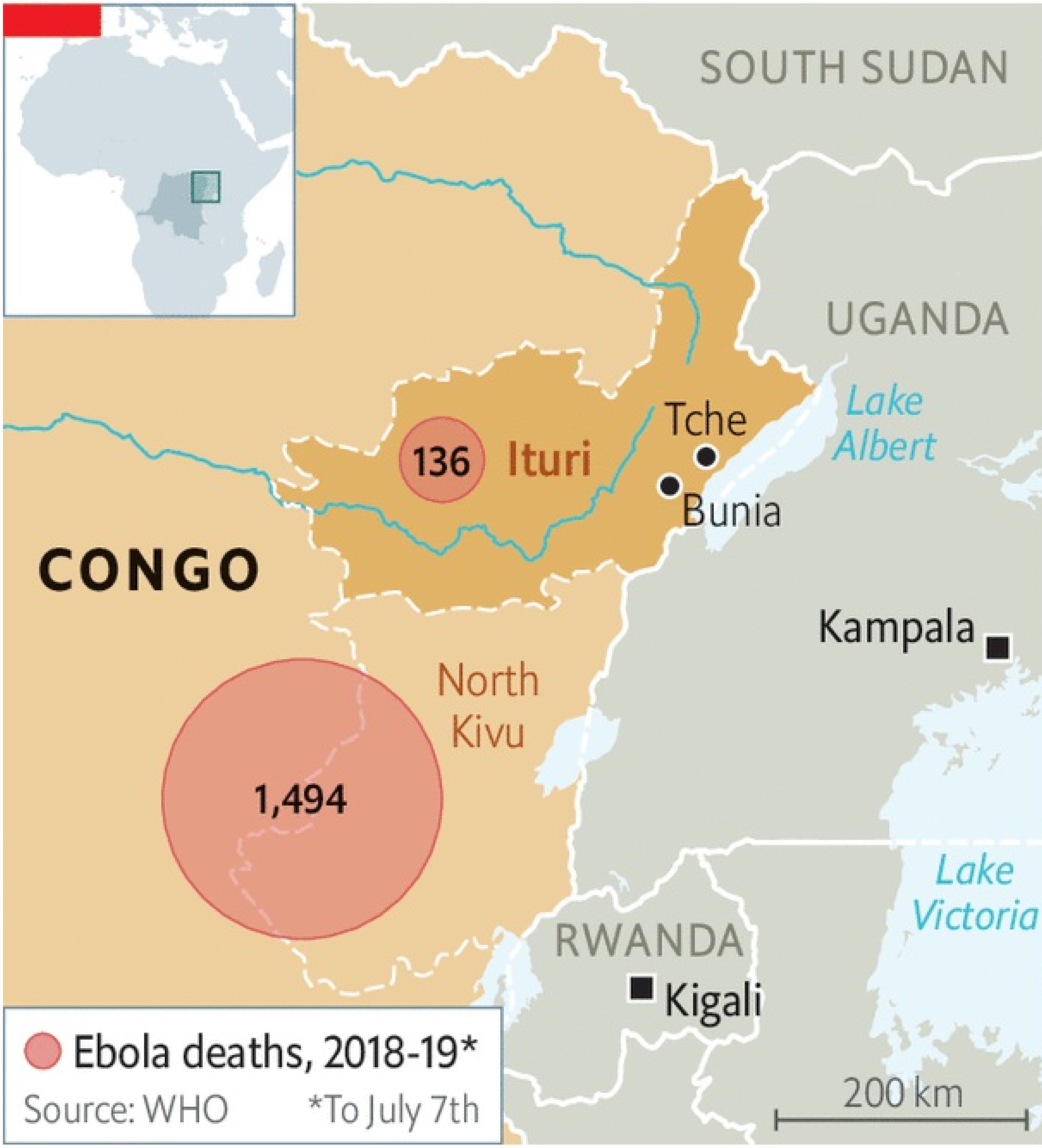
Jul 13th 2019 | BUNIA

AS HE SLIPPED out of consciousness, Batsi Lokana watched the militiamen who had attacked him slice off his mother's head. When he came to, her body was gone. "Either they ate her, or they threw her into the river," he surmises from his hospital bed in Bunia, the capital of the Democratic Republic of Congo's Ituri province. Given Ituri's history of gore, it is not a far-fetched conclusion. The past two decades have seen civil war, mass killings, systematic gang-rape and a vile scramble for loot. For some militias, cannibalism is just another way to terrify one's enemies.

Last month saw a reprise of the violence as Ituri's cattle-herding Hema and seed-sowing Lendu ethnic groups again turned on each other. Armed men emptied villages, burned down houses, hacked bits off their occupants and ripped the fetus out of at least one woman. A mass grave found in the village of Tche contained 161 bodies, babies and small children among them.

At least 276 people have been killed, estimate activists in Bunia. Some 300,000 more have fled, aid workers reckon. Most of the victims have been Hema. It was the worst violence since late 2017 and early 2018, when scores were killed and hundreds of thousands more fled before an uneasy calm returned.

Outsiders often assume that the fighting springs from ancient ethnic hatred. It does not. True, the Hema and Lendu have been at each other's throats for some time. But their enmity has been fostered, and perhaps even brought into being, by outside forces. Belgian colonists favoured the Hema, just as they did the Tutsi in neighbouring Rwanda. Mobutu Sese Seko, Congo's post-independence dictator, gave plum posts to the Hema, who acquired much of Ituri's finest land. The more populous Lendu looked on resentfully.



The Economist

Such tensions are easy to exploit. Hema and Lendu militias have been armed in the past by outsiders with an eye on the gold that studs Ituri's riverbeds and the oil beneath Lake Albert. Mr Lokana reckons that the men who killed his mother were members of CODECO, a Lendu agricultural collective established in the 1970s. Farming support groups are not normally peopled with killers. CODECO, however, is long believed to have had a sideline in mysticism and fetishism. Nursing land-related grievances against the Hema, it is also accused of radicalising and training Lendu fighters.

Hema representatives say that CODECO fighters have started much of the violence (although some Lendus have been killed too). Its fighters, some wearing hats with a bullet dangling from them as a charm, have been accused of ritually eating Hema flesh. Many suspect that the group, which seems to have petrol, weapons and ammunition in abundance, is backed by one of Congo's meddlesome neighbours. The violence was far from spontaneous, says Victor Ngona, a Hema leader in Bunia. "This was planned. You don't just wake up one morning and start cutting people up as if they are trees."

Ituri was one of the bloodiest theatres of the second Congo war of 1998-2003. Militias butchered at least 55,000 people. Much of the violence can be blamed on the invading Rwandan and Ugandan armies. Both countries used proxy militias to plunder Congo's mineral resources. Uganda backed and armed Lendu militias. Rwanda threw its weight behind the Union of Congolese Patriots (UPC), a Hema militia that had previously enjoyed Kampala's support.

The tit-for-tat massacres reached a peak as Uganda, under international pressure, withdrew its troops from Bunia in 2003. Lendu militiamen, some wearing human livers round their necks, poured into the town. The UPC then displaced them. Each time Bunia's civilian residents paid the price. Child soldiers sauntered drunkenly down streets lined with corpses that had been half chewed by Bunia's dogs. Ducks gobbled up pieces of human flesh. Tens of thousands fled to UN compounds, but the peacekeepers, lacking a mandate to protect civilians, could do little—even when the militiamen taunted them by tossing bodies over the razor-wire.

With some people warning of genocide, foreign powers were galvanised into action. French troops cleared Bunia of the militias. Order was mostly restored, holding for more than a decade. The International Criminal Court jailed Thomas Lubanga, the UPC's leader, for 14 years in 2012. Bosco ("The Terminator") Ntaganda, a commander in the militia, may face a life sentence after the court convicted him of war crimes on July 8th. Two Lendu militia leaders were also tried. One was acquitted.

Yet much was also left undone. Grievances over land and marginalisation have remained largely unaddressed. A wave of land-grabbing in recent years has increased resentment among the Lendu. Although most of the militias were disbanded, little effort was made to reintegrate their members into society. Drifters from the conflict, skilled in pillage but unable to find gainful employment (of which there is little), have left a deep pool from which groups like CODECO can recruit.

Although there are officially no foreign troops on Congolese soil, Ituri is in danger of reliving its past. As in 2003, tens of thousands of terrified civilians are again sheltering in schools, churches and a handful of cash-strapped camps. Ebola, which broke out in neighbouring North Kivu province last year, is adding to the misery, killing 136 people in Ituri. New cases were reported in Bunia last month.

The Congolese army is a bit more disciplined than in 2003, when its soldiers in Ituri sold their weapons to Lendu rebels. It recently chased the militiamen out of their hideouts in the woods. Halting the fighting will be tough, however. The army has dispatched some troops, as has the UN peacekeeping force in Congo, but most are pinned down by conflicts elsewhere in the country. The militiamen may have been beaten back, but they are still armed and hiding out. A desire to avenge recent attacks is likely to grow. Unless the violence can be checked, Ituri's residents will fear that the ghosts of their recent past are being reawakened.

Where’s the peace dividend?

Eritrea’s gulag state is crumbling

Issaias Afwerki made peace a year ago. His people want the dividend

Jul 13th 2019 | ADDIS ABABA AND ASMARA

ABIY AHMED’S arrival in Asmara on July 8th last year was as colourful as it was historic. Thousands thronged the streets of the Eritrean capital to witness the first visit by an Ethiopian leader since the two countries fought a bloody war from 1998 to 2000. Both national flags fluttered along the boulevard from the airport; women carried plates of popcorn which they threw over the crowds in celebration. Eritrea’s ageing dictator, Issaias Afwerki, beamed as he embraced his young counterpart and signed a peace deal to end two decades of enmity. “There is no border between Ethiopia and Eritrea,” Abiy declared. “Instead we have built a bridge of love.”

The promise of peace was tantalising. Telephone lines and flights between the two countries were restored. Two months later the land border opened. For the first time in years Eritreans could leave their country freely. Many thought that, with the war over, Issaias would soon enact other reforms. They particularly hoped he would end the system of indefinite conscription that the UN likens to mass enslavement—and which has helped earn Eritrea the nickname “the North Korea of Africa”.

A year later Eritreans are still waiting. “Nothing has changed,” says Milena, a 16-year-old who faces being called up next year. The government has yet to say whether an old 18-month limit on conscription will be restored. Some recruits are now paid salaries and put to work in government offices, rather than brutal army bases in the desert. But there are no signs that Issaias will end conscription entirely.

Without explanation, Eritrea has once more closed all its border crossings with Ethiopia, ending a short-lived boom in cross-border trade. Food prices are rising. Markets in Asmara, which briefly bustled with Ethiopian traders, are quiet. Businesses and factories are closing, some because of a shortage of raw materials. Some water-bottlers, for instance, have shut for want of imported plastic.

Local authorities have stepped up the demolition of unlicensed homes. After the peace some residents began renovating or building new houses, wrongly assuming the government would loosen rules that effectively bar private construction. They are being bulldozed.

Even officials are perplexed. Some have stopped coming to work because they have not been told what to do. Their offices, in departments such as trade and education, stand empty. Issaias has held only one cabinet meeting since the peace deal.

Patience in Addis Ababa, the Ethiopian capital, is starting to wear a little thin. A draft trade agreement was sent to Asmara for comments late last year, according to insiders, but nothing has been heard of it since. Landlocked Ethiopia's dream of using Eritrean ports, a huge potential benefit of the thaw, seems a long way off. The Eritrean Red Sea town of Massawa is "as dead as always", remarks a visitor.

The most vexing issue of the peace deal, the physical demarcation of the border, appears to have been kicked into the long grass. Disputed areas such as Badme, the one-goat village over which the war started, remain under Ethiopian administration. Troops eye one another across the dusty frontier.

With neither a war to justify his repressive dictatorship, nor any promise of reforms to placate long-suffering citizens, Issaias's grip on power seems to be weakening. For the first time in years, says a military officer, people are openly complaining in neighbourhood meetings, despite the threat of being denied state rations for doing so. "I see many people calling for his resignation," he says. In recent weeks residents of Asmara have woken up to fresh graffiti calling for an end to conscription. Seditious pamphlets printed in Ethiopia, as well as two new television channels linked to the exiled opposition, are stirring anger. "Silent protest is growing," says another army officer. "When we meet in the military camps, we talk about the wrongdoings of this government."

But rather than taking to the streets, Eritreans are emigrating. Despite the closed border, many steal away. Soldiers, who once shot at those trying to sneak across the frontier, now turn a blind eye. More than 60,000 Eritreans have registered as refugees in Ethiopia since September.

Issaias does not face much international pressure. In November the UN lifted an arms embargo first imposed in 2009. He has also mended fences with Sudan and Somalia, and has drawn closer to the United Arab Emirates and Saudi Arabia.

Even so, he seems concerned about the possibility of protests. He appears less frequently in public. He has shut down health centres run by the Catholic church (apparently because its bishops criticised him) and is arresting people at random. Social media have been blocked for weeks. Some internet cafés have been closed. "The government seems to fear the Sudan revolution might happen in Eritrea," muses an employee at the agriculture ministry.

Yet unlike in Sudan, where protests forced out a veteran despot, Omar al-Bashir, there are few young folk left in Eritrea. Barely 1% of the population uses the internet, so it is hard to organise protests online. "It will not be done on the streets," says Zecarias Gerrima, a former journalist who is now in exile. A coup is more likely, though Issaias may be able to hang on. His country, meanwhile, is emptying.

Tankers away

Oil shortages in Syria are starting to hurt

Production has slumped and supplies of Iranian crude are being squeezed

Jul 13th 2019 | CAIRO

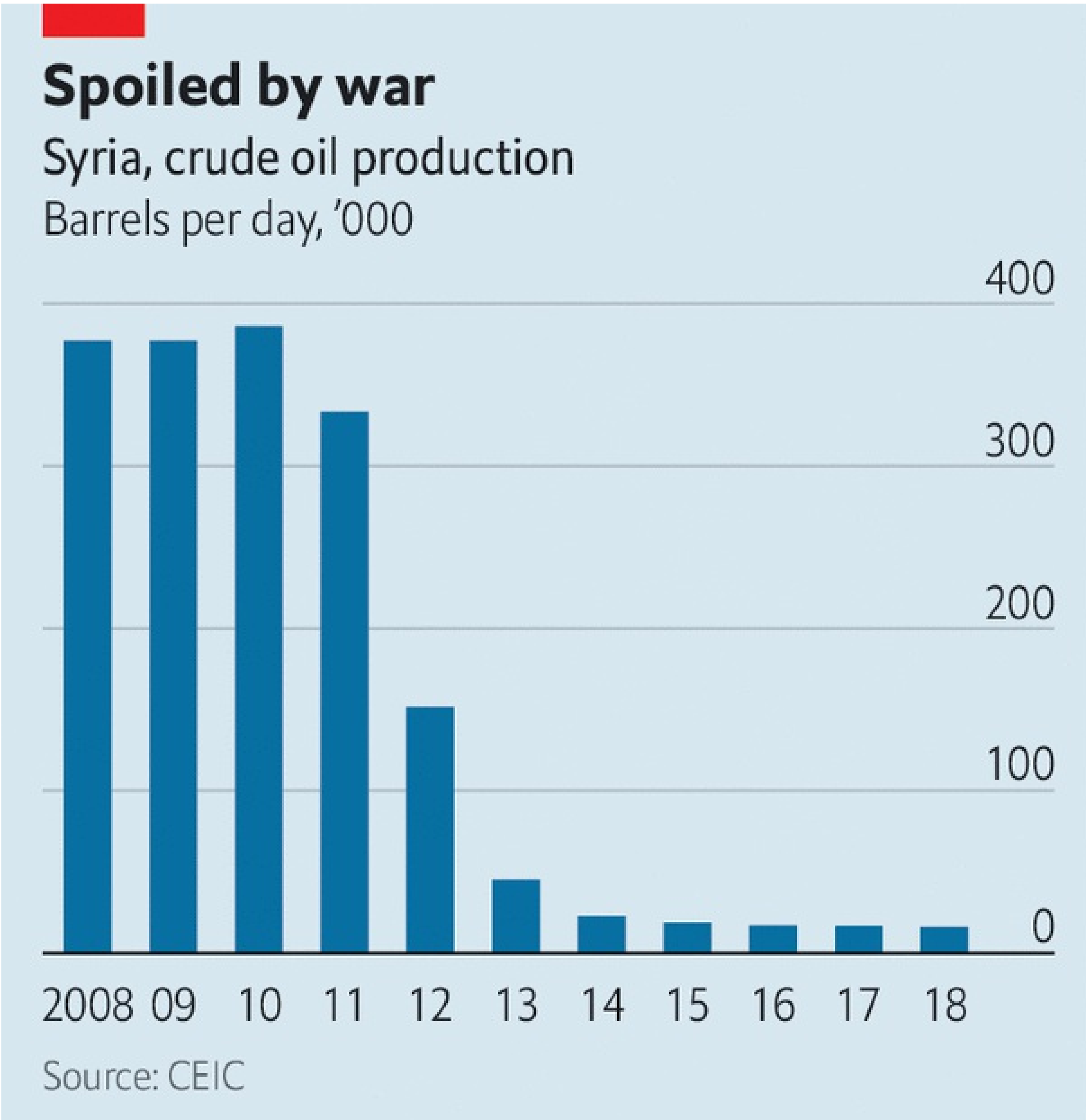
THERE WAS little grace to the *Grace 1*'s journey, a 12,000-mile (19,000km) slog around the Cape of Good Hope that came to an inelegant end off the coast of Gibraltar. In the early hours of July 4th British marines roped down from a helicopter to seize the tanker, which held 2m barrels of Iranian oil. Britain says the cargo was bound for Syria, and that by traversing European waters it violated European sanctions. It has not been a good summer for tankers trying to reach Syria. Last month mysterious explosions damaged undersea pipelines that carry oil from vessels to the refinery at Baniyas, temporarily halting imports. Bashar al-Assad's regime blamed saboteurs.

Throughout Syria's savage civil war, loyalists liked to daub a slogan on walls: "Assad or we burn the country." They got both. Syria's GDP, as best anyone can tell, is 60% lower than pre-war levels. The Syrian pound trades at 500 to the dollar instead of 50. Rebuilding will cost $250bn, reckons the UN, four times Syria's annual economic output before the war. Mr Assad rules the ruins—and is finding it hard to keep the lights on, especially with one of his closest allies deep in its own economic crisis.

With its finances in tatters, the regime has been forced to cut subsidies. The price of petrol has almost tripled since the start of the year. A full tank would cost a civil servant half a month's pay. In any case, filling up is impossible because rationing was imposed in April. Most drivers can only buy 20 litres every five days. They wait in long queues for this meagre allotment.

Before the war Syria produced about 385,000 barrels of oil a day. Most was put to domestic use. Output is now less than one-tenth of that. Iran helped fill the gap for several years, supplying about 50,000 barrels a day on easy terms, equivalent to more than one-third of Syria's current consumption. But with Iran under harsher

American sanctions that has become untenable. It stopped the handouts in October. Fuel shortages soon followed in Syria, as did blackouts during a cold winter.



The Economist

Syria can still buy Iranian oil at market prices—indeed, it is one of the few customers willing to ignore sanctions to do so. Even that is fraught, however, as the saga of the *Grace 1* illustrated. The tanker switched off its transponder in April to load cargo, a common practice for ships that wish to avoid scrutiny while taking on Iranian crude. Then it steamed south-east on its roundabout route to the Mediterranean.

The Suez Canal would have been more direct, but the heaviest tankers cannot sail straight through. They must offload their cargo first and have it piped to the other side. The pipeline is partly owned by Saudi Arabia, which forbids Iran from using it. And maritime-traffic data suggest that Egyptian authorities may be blocking lighter vessels from crossing Suez if their destination is Syria. One tanker, the *Sea Shark*, has been anchored near the canal's southern entrance since April. America's Treasury Department had added it to a list of vessels that carry oil to Syria.

That leaves the long route around Africa, and the risk of interception in European waters. Iran cried foul after the *Grace 1* was seized. Abbas Araghchi, Iran's deputy foreign minister, says it was not going to Syria but "somewhere else". Iran also threatened to retaliate. On July 10th a British warship drove off Iranian boats trying to "impede" a British tanker. Relations are already fraught. Iran is angry that European powers have not done more to offset America's sanctions and preserve the deal it reached in 2015 to restrict its nuclear programme in exchange for relief from some sanctions. The tanker incidents will not help.

As for Mr Assad, he may seek help from his other close ally. Russia is already shipping wheat from Sevastopol, in occupied Crimea, to its military port in Tartous, Syria. Oil may be the next commodity. But Vladimir Putin will probably not be generous with the terms—and Mr Assad can ill afford to pay. "Let's grant that he won the war. He did that," says a European official. "But he can't win the peace."

Problems in the promised land

The killing of a black Jew sparks protests in Israel

Most of Ethiopia’s Jews moved to Israel. Not everyone welcomed them

Jul 13th 2019 | JERUSALEM

THE VIOLENT protests that shook Israel on July 2nd had all the hallmarks of race riots. A young black man had been shot dead by an off-duty policeman in unclear circumstances. Thousands of Ethiopian Jews took to the streets, throwing stones at police officers, blocking roads and overturning police cars. Their claims of systematic racism and police brutality were met, on the whole, with condescending denial. Politicians chided them for the violence, while issuing vague expressions of sympathy. Few bluntly mentioned the word racism. Media outlets and pundits supporting the government aired conspiracy theories suggesting that left-wing organisations had incited the violence.

Nearly all the Jews in Ethiopia, whose ancestors had lived in Africa for centuries, moved to Israel quite recently. Big airlifts began in the 1980s, when Ethiopia suffered tyranny and famine. A sympathetic Israel welcomed them with open arms, though rabbis had long debated whether the Beta Israel, as they are known, were really Jewish (and therefore eligible for Israeli citizenship). Today there are 150,000 of them in Israel (1.7% of the population).

They have suffered a range of indignities (though none to compare with life as it was back in Ethiopia). The Chief Rabbinate, which regulates marriage, demanded that they undergo a full conversion process to Judaism. Health authorities rejected their blood donations, fearing HIV.

Complaints of racism have been generally dismissed. In 2012 an immigration minister scolded Ethiopian-Israeli activists, telling them to “say thank you for what you have received”.

Ethiopian-Israeli minors are three times as likely to be arrested as their non-black counterparts. In 2016 Israel’s police commissioner said it was “natural” for his officers to be more suspicious of Ethiopian-Israelis (and indeed Israeli-Arabs). The justice ministry’s anti-racism unit says the number of arrests has dipped since then, but the Ethiopians still feel “overpoliced”.

“Despite all the efforts to integrate into Israeli society, the feeling of young men and women confronted every day with racist remarks is that when they get pulled over by police they have nothing to lose,” says Asher Seyoum, a former member of parliament and the first Ethiopian-Israeli to have been appointed head of the Jewish Agency in Addis Ababa, Ethiopia’s capital.

Unlike most previous waves of immigrants to Israel, who often arrived well-schooled and credentialled, most Ethiopian Jews had been subsistence farmers. Few arrived with the skills to thrive in a high-tech economy.

It is taking time for them to catch up. Among the younger generation of black Jews, most were born in Israel or have spent most of their lives there. In the past decade only 22% who left high school went on to higher education, half the national average. That is progress, of course. Children raised in families with little tradition of literacy seldom do as well as those from more bookish backgrounds. But many would like to see them catch up faster.

A classic Israeli comedy sketch shows each wave of Jewish immigrants over the past century or so—from Russia, Poland, Yemen, Germany and Morocco—arriving on the promised land’s shore and immediately joining those already on the beach to hurl abuse at the next wave. The most recent wave, from Ethiopia, faces tougher obstacles than most.

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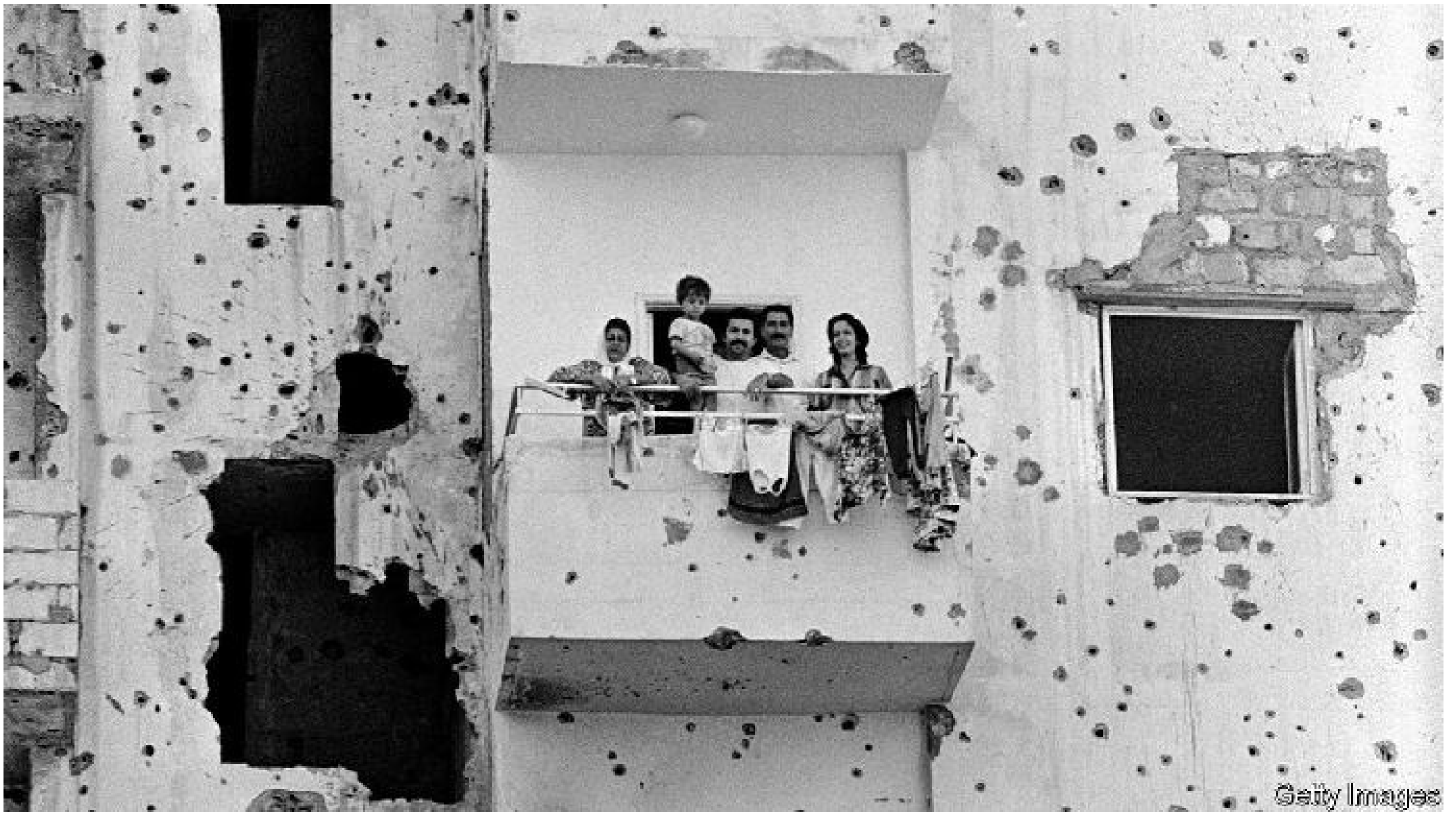
Anti-cementism in Lebanon

Beirut is still arguing over its post-war reconstruction

Not everyone is happy at how the “Paris of the east” has been rebuilt



Jul 13th 2019 | BEIRUT

ASIDE FROM its name, Beirut Souks could be anywhere. Gone is the labyrinth of alleys that rambled down to the port. Instead, soulless walkways lined with shops sporting global brands have buried the maze of spice and gold markets that once were filled with the braying of donkeys. The grand edifice pockmarked by shells that formerly housed *L’Orient-Le Jour,* Lebanon’s French-language newspaper, is a lone reminder of the grandeur that used to prevail around the Souks.

Few projects arouse Lebanese passions as much as the rebuilding of Beirut. Some praise it for raising the city, phoenix-like, from the ashes of its 15-year civil war that ended in 1990. Others complain that it has let tycoons and politicians evict a jovial medley of religions and classes from the old city to grab its best real estate.

For the project’s supporters, it is enough that Beirut has revived at all. The war had left Lebanon bankrupt. So a building magnate, Rafik Hariri, was elected its prime minister. He let Solidere, a new company in which he was a shareholder, requisition chunks of land in the centre. But before he was assassinated in 2005, he equipped the city centre with its own electricity and fibre-optic network, while the rest of Beirut suffered blackouts and a snail-paced internet. Hariri built tunnels en route to the airport, avoiding hellish traffic jams. Devastated churches and mosques rose up again. The Place de l’Etoile, a star-shaped plaza with a clock-tower in the middle, resurfaced as if the war had never happened. “Solidere brought Beirut back from the dead,” says Jamal Saghir, a Lebanese former bigwig at the World Bank.

But critics say Solidere ousted ordinary folk—and destroyed more houses than the war had done. It aimed to attract a new class of people with the new, pricey buildings. Glitzy stores selling Gucci bags pushed out local schools and old shops. Politicians, including Hariri’s son Saad, Lebanon’s present prime minister, took up residence behind barricades guarded by private-security firms. “But you have to imagine how keen Lebanese were to get on with things and erase the memory of the war,” explains one of its planners.

Still, Place de l’Etoile feels as empty as it once did when it was a no-man’s-land that people scuttled across for fear of snipers. It serves as a buffer between the Christian, Sunni and Shia zones into which the war divided the city. “Reconstruction destroyed downtown as a space for mixing,” says Mona Fawaz, a professor of urban planning at the American University in Beirut. “It finished the work of the war.”

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Europe

[Italy: The captain sets course for the rocks]
Will Matteo Salvini wreck the euro?.

[Greece: Farewell, Syriza]
Greece’s new prime minister promises less drama.

[Filming in Siberia: Arctic zombie apocalypse]
The pitfalls of making movies in Siberia.

[Charlemagne: Wurst among equals]
Wurst among equals.

Il Capitano

Will Matteo Salvini wreck the euro?

The most powerful man in Italy is perhaps the most dangerous in Europe

Jul 13th 2019 | MILAN, ORVIETO AND ROME

“HE’S ALMOST here...he’s arrived! He’s arrived!” bawls the mayoral candidate, as a sea of blue and white flags declaring *Prima L’Italia*, Italy First, wave in the summer evening air of the ancient Umbrian hill city of Orvieto. And as the cheers and the shouts of “Mat-te-o! Mat-te-o!” swirl around the medieval buildings, the man the crowd is really here to see walks onto the stage: Matteo Salvini in chinos and an open-neck shirt, sleeves rolled up, slightly tubby, as ordinary-looking as any of the adoring fans jammed into the little square.

They call him *Il Capitano*. No Italian can fail to hear an echo of Mussolini’s nickname, *Il Duce*. Critics see neo-fascist overtones everywhere—from the fact that Mr Salvini recently published a book using a publishing house with links to a far-right outfit, CasaPound, to the observation that he has been seen in a jacket made by a designer the CasaPounders favour. His personality cult, driven by dozens of daily tweets and Facebook posts, expertly crafted to show him as a man of the people, on the side of the little guy against the elite, comes in for similar suspicion.

But you don’t have to believe that Mr Salvini is a neo-fascist, or could succeed as one in a place as pluralistic as Italy, to be alarmed by his rise. Nominally, his party, the right-wing Northern League, is the junior partner in an unlikely and unstable coalition government with the anti-establishment Five Star Movement (M5S). In reality, Mr Salvini has been the most powerful man in Italy since shortly after he became a deputy prime minister in June last year. His relentless rise in the opinion polls, and the League’s stunning victory at the European Parliament elections in May, mean that he, more than anyone, makes the political weather. It is quite a feat for a man and a party that six years ago won just 4% of the vote. The League took 17% in last year’s general election, 34% in May, and is polling even higher now.

The problem is that Mr Salvini has not risen to pre-eminence by solving or showing how he might solve any of Italy's obvious malaises. Its economy is stagnant. Between 2008 and 2018 Italy's GDP fell by 3% in total, compared with a 13% rise in Germany, a 10% rise in France and a 4% rise in Spain, the three other big euro-zone economies. It has stubbornly high unemployment, at around 10%. He has won support, rather, by the well-tested populists' method of finding others to blame. And that carries big risks, for Italy and for Europe.

There are two favourite enemies: migrants and Brussels. As he revs up the crowd in Orvieto (the local candidate he was there to back last month went on to win the mayoralty easily in what has traditionally been Italy's central left-dominated "red belt"), Mr Salvini takes swipes at both. He tells listeners that he respects the right of people to believe in other gods, "Just so long as that God does not come and tell me that women are worth less than men and that they must go around in a burqa." Vast applause ensues. "More *carabinieri*! Fewer irregular aliens!" he cries. Loud cheers.

Since taking the additional post of interior minister in the coalition government, Mr Salvini has used his powers to clobber migrants. As one of his first actions, he closed Italian ports to NGO boats carrying people rescued from the sea, and has now passed a new law making those who try to land them vulnerable to huge penalties. (Carola Rackete, the 31-year-old German captain of one such vessel, is currently facing charges after docking in Lampedusa.) The coastguard does land small numbers of rescued migrants, but these days patrols a much smaller area of sea than before. Mr Salvini has slashed funding for reception centres, and tightened the criteria for migrants being granted protected status. The flood of arrivals, at 181,000 in 2016, has become a trickle, just over 3,000 so far this year. Mr Salvini has scooped up the credit for this, even though the decline is mostly the result of tough actions by the previous government.

The Economist

Migrant-bashing carries few costs for Mr Salvini, except in the court of liberal opinion, for which he cares little. His fellow European leaders mostly turn a blind eye. They do not want to help Italy cope with its migrants, or take many more themselves. Emmanuel Macron, France's president, openly detests Mr Salvini (and complains that populism is spreading across Europe "like leprosy"), but has pointedly refused to take the rescue ships that Mr Salvini turned away. Mr Salvini's skilful stoking of anti-migrant feeling has made him the most popular politician in the country. But since so few migrants are now arriving, this has its limits.

The enemy beyond

The other enemy Mr Salvini rages against is more likely to fight back. But threatening a showdown still pays electoral dividends. "We will put up a fight in Europe, because if you don't even put up a fight, like the governments in the past, who went to Brussels cap in hand and their trousers round their ankles, it's clear you can't win," Mr Salvini told selfie-snapping supporters in Orvieto.

This has the markets and other European governments spooked. Mr Salvini's confrontation with Brussels waxes and wanes, but never goes away; and until he abandons it, the threat to the euro zone itself is real, and potentially deadly. In the past Mr Salvini has spoken of a desire to take Italy out of the euro, and perhaps even the EU itself, which he has called a "gulag". That is not his current policy, doubtless because there is no majority support for either. But he clearly chafes at their restrictions, and no one knows when he might decide to try to break free of them, by ignoring the rules despite the risk of a bond crisis, or even by going back to his earlier position and leaving altogether.

The drama has been going on for a year now. When the populist coalition came into office in June 2018 its costly economic promises posed immediate problems. M5S, led by Luigi Di Maio, had pledged a guaranteed income for the hard-up; the League a low, flat rate of income and corporation tax. Both had vowed to reverse unpopular reforms that had raised the state pension age. Together they showed little regard for the EU's fiscal rules. These require that Italy's vast public-debt burden—over 130% of GDP, second only to Greece in Europe—fall towards 60% at a prescribed pace.

Twice now Brussels has threatened to penalise Italy for its excessive debt, and twice the government has meekly toned down its deficit plans. In autumn last year ten-year government-borrowing spreads over German bunds approached 3.4 percentage points, leading the coalition to curb its deficit plans for 2019 from 2.4% to a cunningly precise 2.04%. In June Brussels made threatening noises again as it became clear that Italy's debt ratio had risen in 2018, rather than fallen. On July 1st the coalition promised a round of savings and spending cuts, worth €7.6bn (0.4% of GDP). This week euro-zone finance ministers declared themselves satisfied by the concessions. Spreads are narrower: as of July 10th they stood at two percentage points.

But a bigger confrontation is looming. The government has begun its "citizens' income" scheme for the poorest households. Nodding slightly at the notion of a flat tax, it has lowered tax rates for some self-employed people. But these watered-down versions of electoral promises have underwhelmed supporters. Both coalition partners face pressure to do more next year; especially M5S, whose popularity has collapsed. Even without extra commitments, Brussels expects Italy's budget deficit in 2020 to break through not just the 2% ceiling that is there to get the debt under control, but the larger 3% one that all countries are meant to stick to. If no compromise is reached, Italy could eventually be fined as much as 0.2% of GDP (€3.5bn). That is unlikely: no country has ever been punished in this way. But the threat of it would alarm markets.

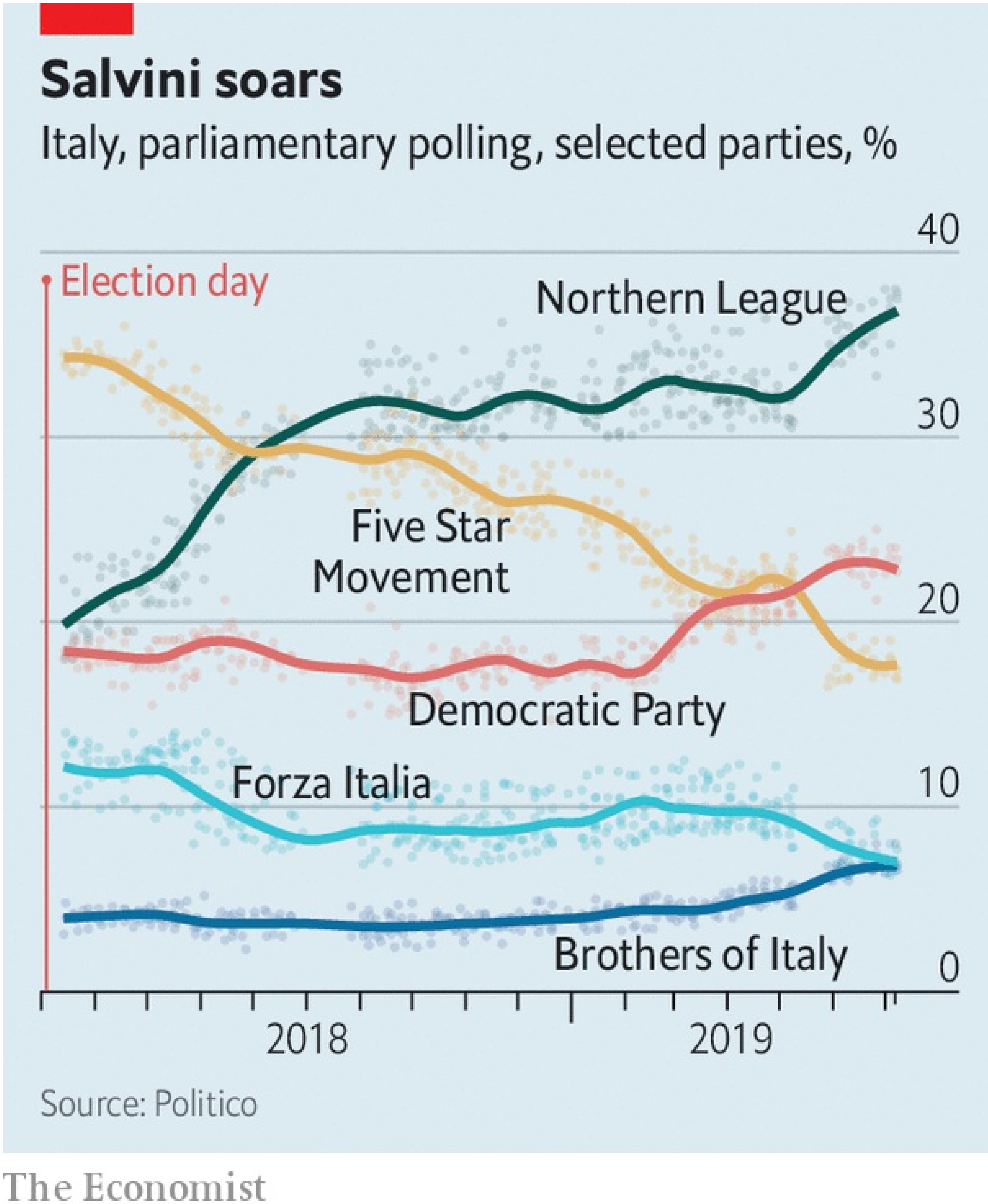
Other sources of anxiety are growing. Although Mr Salvini and other ministers have since the election said they have no plans to leave the euro, occasional noise from others adds confusion. On May 28th the parliament passed a non-binding motion asking the government to consider issuing "mini-BOTs", low-value bills designed to help the state pay commercial suppliers. The clause on mini-BOTs had reportedly been inserted into the motion at the last minute, catching many lawmakers unawares. Claudio Borghi, a Euro-sceptic League economist and close adviser to Mr Salvini who heads parliament's finance committee, has previously argued that mini-BOTs could be "spent anywhere to buy anything", raising suspicion that they would act as a parallel currency in preparation for leaving the euro. As investors became uneasy, Giovanni Tria, the finance minister, was forced to respond, attempting to rule out the idea. But Mr Salvini has said he still considers it an option.

Mr Tria and Giuseppe Conte, the technocratic prime minister, would surely resign and bring down the government rather than permit mini-BOTs. But an election (which he might well choose to trigger anyway) could bring Mr Salvini to power as prime minister of a right-wing coalition with the far-right Brothers of Italy. But either way, an accidental bond crisis triggered by the issue remains possible.

The battle round the corner

The coalition's truce with the commission on the public debt is anyway likely to prove fleeting. The next flashpoint is close: the government must thrash out next year's budget by October or thereabouts. If Mr Salvini and Mr Di Maio keep their promises and enact lavish spending rises and tax cuts, investors and ratings agencies may again panic. If instead they cave in and choose to comply with the EU's rules, as they finally did last year, they will either need to back down from their plans, or find a way to plug a hole in the public finances of tens of billions of euros. Either of those options will be politically very tricky.

The commission already expects Italy to run a budget deficit of 3.5% of GDP next year, at odds with the government's projection of 2.1%. The difference comes down to whether or not a value-added-tax increase, which has already been legislated for, comes into effect. The commission points out that such stopgap clauses have consistently been repealed in recent years. Both Messrs Salvini and Di Maio, aware of its unpopularity, have already promised to avert the increase. That means somehow finding an additional €23bn. No one knows where that money would come from. Mr Di Maio has already ruled out cuts to welfare spending. And on top of the expected big deficit, Mr Salvini wants to cut taxes further in pursuit of his promised flat tax of 15% for companies and individuals.

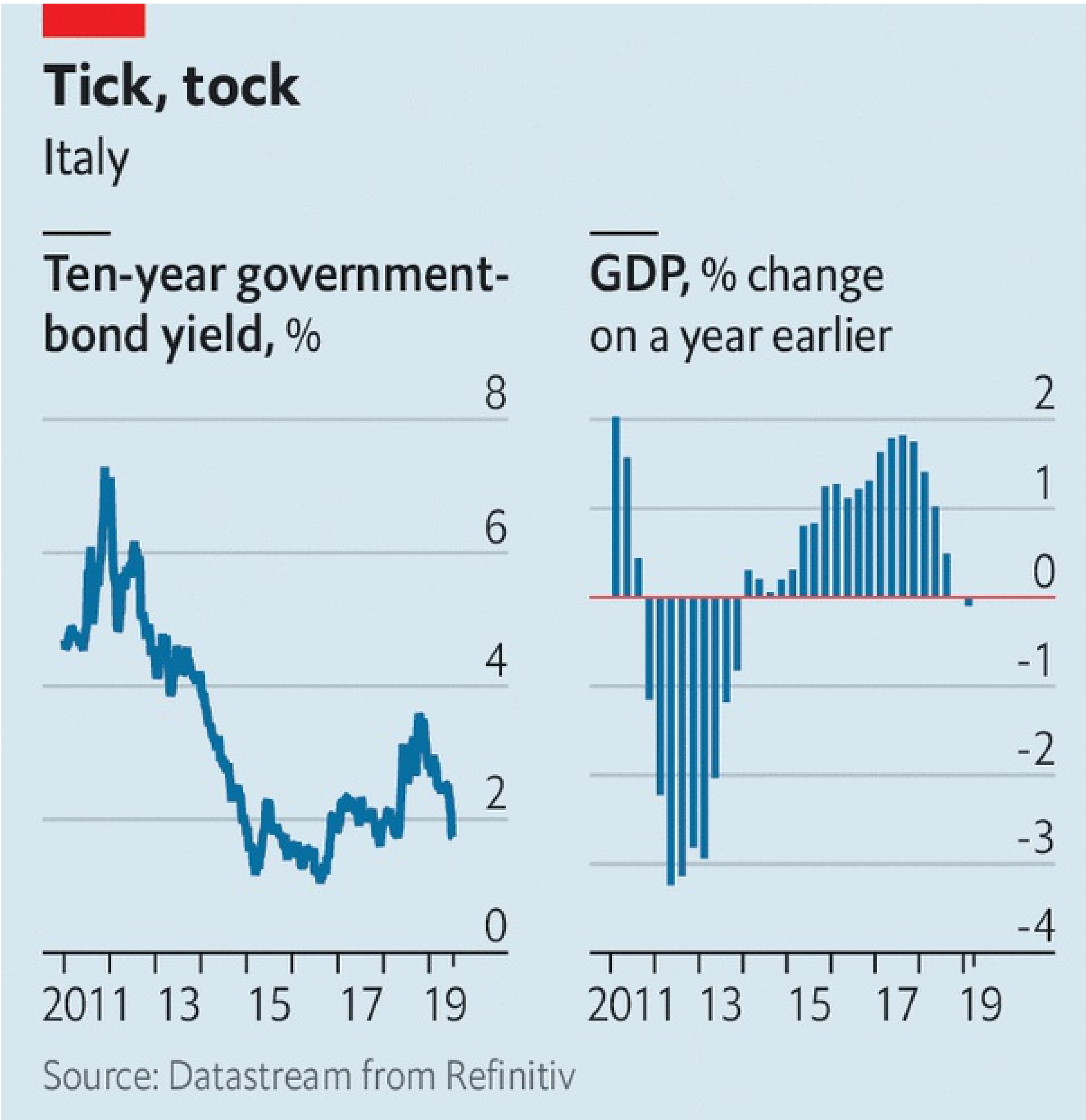


Mr Salvini's call for more fiscal flexibility is not by any means absurd: many economists reckon the EU's rules are too tight. The problem is that Mr Salvini has antagonised the commission and northern member states, which are wary of being on the hook for other countries' profligacy. So Mr Salvini is not likely to get much slack from European leaders. Though the European Parliament elections in May were a triumph for him domestically, at the European level they were a disaster. He had staked out a claim to lead a pan-European alliance of nationalists that would change the face of European politics, the nationalist cause failed to make headway beyond Italy. Mr Salvini's reckless rhetoric has made it less likely, not more, that Germany and the "New Hanseatic League" of fiscally orthodox northern European countries will indulge him.

Mr Salvini has done nothing to help his cause in Europe by courting Vladimir Putin. He has been spotted wearing a Putin T-shirt, is a frequent visitor to Moscow and has allowed the Veneto region, run by the League, to recognise Crimea, a chunk of Ukraine that Russia has illegally annexed. This infuriates the eastern Europeans who might otherwise be his allies. The suspicions of a sinister Moscow-Rome axis have been stirred by tapes, published this week and confirming earlier reports, that appear to show a former close aide to Mr Salvini meeting unidentified Russians in Moscow to discuss the secret funding of the League with money derived from a dodgy oil deal. Mr Salvini says he has never taken "a rouble, a euro, a dollar or a litre of vodka", and there is no evidence that any money was ever actually paid to anyone.

Long range effects

Even if a crisis is again averted this autumn, a deeper fear about Mr Salvini remains. It is not so much what he has done, as what he has failed and will fail to do. Matteo Renzi, prime minister from 2014 to 2016 and a genuine reformer, is scathing. "He seems macho, but what has he ever done that is brave?" he asks. "He is not a leader, he is an algorithm." Certainly the first year of Mr Salvini's pre-eminence has seen nothing that suggests that the all-populist government has any interesting plans for doing anything about Italy's chronically low growth. Fighting with Brussels and turning away boatloads of migrants are good ways to fire up supporters, but such gestures do not create jobs.



The Economist

Italy's problems remain what they always were: a labyrinth of regulations that discourage companies from growing, and labour laws that entrench the power of unions in larger companies, doing more to protect those already in work than open up chances for those outside it. Francesco Grillo of Vision, a think-tank in Rome, notes that Italy spends more than four times as much on pensions as on education. And yet one of the early acts of the new coalition was to undo modest pension reforms that would have made the system more affordable. If you join the workforce at 18 and work continuously, you can now retire at 60.

The new government has done virtually nothing that would help with any of this. The League has, to be fair, pushed for new procedures that could speed up the approval of infrastructure projects. The proposed *sblocca cantieri* ("unblocking works") bill, however, has so far been opposed by the M5S. One of the M5S's main appeals to voters has, after all, been the promise to crack down on corruption, and short-circuiting the approvals process risks undermining that fight.

Added to that, the government policies that have been enacted have been shoddily executed. The size of the "citizen's income" that the state will hand out was set arbitrarily, says Tito Boeri, formerly the head of the national social-security administration. It is too generous to single people, particularly in the south. Payments taper off as soon as a recipient earns more, which risks discouraging the unemployed from taking up work.

The government has also done little or nothing to tackle vested interests. Important reforms such as broadening the tax base, eliminating tax loopholes and overhauling the judicial system have fallen by the wayside. This lack of focus on economic growth and lingering doubts over the commitment to the euro might be why Italy's bond spreads are higher now than before the elections in 2018.

Mystery man

The next few months will reveal if the coalition prizes its credibility with investors. Financial markets have been relatively calm this year, with investors pricing in compromise, not confrontation, with Brussels. But spreads could quickly widen if the coalition does not restrain its budget plans. The banking system too is vulnerable: holdings of Italian sovereign debt account for a tenth of Italian lenders' assets, well above the euro-area average. Part of that portfolio would be repriced as bond prices fall, eroding banks' ability to withstand losses. A hit to the economy would close the "doom loop", where weak sovereigns and banks drag each other down.

Past experience, in 1992 and in 2011, shows that governments tend to buckle under pressure from the markets. So far this coalition has been no different. And the elements of a compromise do exist. Mr Salvini could further moderate his programme of tax cuts. A small increase in VAT might help plug the gap, and have the virtue of signalling a commitment to fiscal discipline. Meanwhile Brussels may be content to accept a slightly higher deficit, provided it does not breach the 3% threshold.

But Mr Salvini may decide otherwise. He may stick to his guns; or he may surrender. He may force an early election; he may not. The troubling fact for Europe is that no one knows what this meteor that has flashed across Italy's skies will do next. ■

Farewell Syriza

Greece's new prime minister promises less drama

Kyriakos Mitsotakis ousts a leftist government and offers moderation

Jul 13th 2019 | ATHENS

CENTRAL ATHENS was uncannily quiet for an election night. Where were the firecrackers and the cars filled with party workers waving Greek flags that would normally race around Syntagma Square blaring out patriotic songs? After Kyriakos Mitsotakis, leader of the centre-right New Democracy (ND), claimed victory at around 10.30pm on July 7th, a small crowd outside the party's headquarters applauded and shouted, "Prime minister, prime minister!" A beaming Mr Mitsotakis made a brief speech thanking his supporters and went home to his family.

It may be no bad thing if the drama has gone out of Greek politics, at least for a while. Under Alexis Tsipras, the charismatic outgoing prime minister, and his left-wing Syriza government, it was a roller-coaster ride: from brinkmanship with EU partners in the summer of 2015 over whether Greece should leave the euro, to last year's €112bn ($132bn) debt-relief package from its European creditors. The economy is looking up. Tourist numbers will probably match last year's record of more than 30m arrivals. Owners of family businesses are more cheerful. Stelios Alexakis, a hotelier on the island of Crete, says: "We still keep cash under the floorboards just in case, but I have a business plan again."

Mr Mitsotakis, a former McKinsey consultant, wants to accelerate reforms that would make Greece more competitive and encourage foreign investment. With 158 seats in the 300-member parliament his government is stable enough to make progress. The new prime minister says he will push through big laws on taxation and cutting bureaucracy by August. Tax on corporate profits will be cut from 28% to 20% by January 1st 2021.

Yet some worry that when Mr Mitsotakis's political honeymoon is over, old rivalries and clientelism in ND will resurface and undermine his efforts to reform. Others see him as just the latest manifestation of the old establishment that got Greece into trouble in the first place. He is the son of a previous prime minister; his older sister served as mayor of Athens; and the mayor-elect of Athens is her son.

Yields on Greek sovereign bonds plunged to a record low the day after the election. But Greece's official creditors were less enthusiastic than hedge-fund managers about the change of government. Hours after Mr Mitsotakis was sworn in, Klaus Regling, the head of the euro zone's bail-out fund, warned sternly that Greece's commitment to run high budget surpluses until 2022 was a "cornerstone" of the debt-relief package. Eurocrats fear that Mr Mitsotakis wants to knock as much as a percentage point off the promised surplus of 3.5% of GDP, in order to promote faster growth, though he has pledged not to take any such action without consulting the country's bail-out creditors.

Mr Mitsotakis's 51-member government is a mixture of seasoned conservative politicians like Christos Staikouras, the new finance minister, and bright but untested technocrats serving as deputy ministers. "It's a hopeful sign that he's found so many international experts in their respective fields who are keen to make a difference," said Antonis Kamaras, a political commentator and expert on Greece's diaspora. The government includes only five women, however; the most senior is Niki Kerameus, 38, a Harvard-trained lawyer charged with clearing up the muddle in the education system left by Syriza's policy of disregarding academic excellence.

Mr Tsipras declared the day after the election that Syriza would not "disappear". He stressed that under his leadership his party grew from a splinter group with just 3% of the vote to become the mainstream party of the left. Syriza won 31.5% of the vote this time (compared with 39.9% for ND), only some four points down from its winning percentage at the previous general election in September 2015.

True to its communist background, Syriza will focus on self-castigation over the next few months, say analysts, before holding a party congress. That may be the moment for Mr Tsipras to transform Syriza into a left-of-centre party that could command broader support. In the meantime, he promises that his party intends to practise "dynamic" opposition—which is left-wing code for street protests, strikes and sit-ins. Mr Mitsotakis has been warned. ■

Arctic zombie apocalypse

The pitfalls of making movies in Siberia

The flies are like horses galloping across the screen

Jul 13th 2019 | YAKUTSK

CINEMA CAME to Samorsun, a small village in Russia's far-eastern republic of Sakha, by way of VHS in the late Soviet era. There, a young Stepan Burnashev devoured pirated Hollywood films. At the time, movies in the local Yakut language barely existed. Mr Burnashev, like many of his peers, admired one: "Setteekh Sir" (Cursed Land), a 1996 horror flick about spirits that torment a young family in a Yakut village.

One evening in June Mr Burnashev called "action" on a Setteekh Sir sequel. These days the film industry is booming in Sakha, which is five times the size of France but has only 1m people. Half of all Russian movies made outside Moscow and St Petersburg are from there. At cinemas in the capital, Yakutsk, local productions often outgross Hollywood blockbusters. In recent years, Yakut directors have been featured at festivals from Berlin to Seoul.

This is all the more remarkable given the challenges filmmakers face. First, budgets. Mr Burnashev's previous film, about a zombie apocalypse triggered by a virus released from melting permafrost, had a budget of just 3.4m roubles ($53,000). Then there are the elements. "The hardest thing to negotiate is nature," says Anastasia Pitel, an assistant director on Mr Burnashev's film. Winter temperatures can dip below –50ºC. Camera batteries run out rapidly. In the summer, swarms of mosquitoes emerge from the swampy earth. "When one buzzes in front of the lens, it looks like a horse is galloping across the frame," Ms Pitel says. Operators must spray rings of bug repellent around their cameras.

Yakut identity holds clues to the films' success. Many are shot in the Yakut language, a Turkic tongue with little resemblance to Russian. Scripts draw heavily on Yakut folklore, a tradition rich with fantasy, mysticism and otherworldly realms. Beat that, Hollywood.

Charlemagne

Wurst among equals

Contrary to popular belief, Germany does not in fact run the EU

Jul 13th 2019

ONE CAN almost hear Wagner's "Ride of the Valkyries" in Brussels these days. Big Mercedes cars with German plates swoosh up and down its streets. Bigwigs from Berlin bestride the bureaucracy. The full might of the German political and diplomatic network in Brussels is working overtime to secure the presidency of the European Commission, the EU's executive, for Ursula von der Leyen, who faces a confirmation vote by the European Parliament on July 16th or 17th. The multilingual German defence minister is, after all, one of its daughters: she grew up nearby while her father ran the competition directorate.

It is often claimed that Germany really runs the EU. Angela Merkel has been the bloc's dominant figure for years. The presidents of the European Court of Auditors, the European Stability Mechanism and the leaders of several of the European Parliament's groups, including the largest, are Germans. The secretaries-general of the parliament and the commission are, too. The latter, Martin Selmayr, is credited with securing German backing for Jean-Claude Juncker, the outgoing commission president.

Germany's critics hold its pre-eminence responsible for all manner of evils. The Trump administration spies Germany's hand in the European Central Bank's (ECB) loose monetary policy, which it says hurts American exporters. Southerners resent Germany for austerity policies imposed in the crisis years. British politicians fear German power: in Westminster on July 4th Bill Cash, a Brexiteer, described the prospect of a German president of the commission as "a grave concern" and proof that Britain should escape "Germany's increasing dominance". European governments shape their strategies around this assumption. British ministers once claimed that German car exporters would press the rest of the EU into doing a favourable Brexit deal. Emmanuel Macron tried to advance his plans for closer EU integration by wooing the German establishment. It is telling, however, that neither gambit succeeded—because Germany does not in fact have Europe stitched up.

Take Brussels. More French, Spanish, Italian and Belgian citizens work in both the commission and the parliament than do Germans, who also hold fewer of the commission's most powerful "director general" roles than do Italians. The Germans in Brussels are a mixed bunch and do not take orders from Berlin. They tend to be more Francophile and federalist than politicians back home. Mr Selmayr in particular is regarded with suspicion in Berlin, where officials fret about his influence over Mrs von der Leyen's team. It was Mr Macron who first proposed her and German social democrats and greens who are leading the opposition in the European Parliament to her candidacy.

Germany does not always get its way on policy. The ECB's loose monetary stance appals many German savers. Fiscal rules designed to soothe German concerns are routinely strained by euro states like Italy and now France. On other matters, from refugee quotas to emissions targets and from takeover rulings to energy policy, the commission has defied Berlin's preferences. An example is the package of incoming candidates for the EU's top jobs: Mrs von der Leyen's federalist instincts put her closer to Mr Macron than to Mrs Merkel in some respects, and Christine Lagarde, a Frenchwoman, will take the helm of the ECB. Charles Michel and Josep Borrell, the incoming European Council president and EU foreign policy supremo, are both closer to Paris than Berlin.

Why, then, is Germany less mighty than it looks? First, its size can be a weakness. Hans Kundnani of Chatham House, a think-tank, describes the country as a "semi-hegemon": too small to dominate Europe (proportionally it is about as big in population terms as California in America) but big enough that others feel daunted and seek to contain it. Central Europeans banded together during the migration crisis, for example, to block what they saw as a heavy-handed German preference for open borders. So neuralgic is France about Mr Selmayr's perceived influence that Mr Macron wants the secretary general moved (perhaps to the ECB) and replaced by a Frenchman.

Second, Germany's establishment is different. America has a powerful executive, Britain has a high degree of centralisation and France has both, but in Germany power is diffuse and plural. Opinion is more diverse than the notion of a monolithic German interest and outlook allows. Plenty of prominent figures in German politics and academia share French and southern European criticisms of her government's stances. Among them are the Greens, who have come first in some recent polls.

Many Germanies

So multilayered and multifaceted are German politics and public life that the country can be in fact frustratingly introverted. Even at the peak of her powers, Mrs Merkel was more a crisis manager than a visionary leader. On European debates about the euro, technology, defence and foreign policy, Germany does not so much block or impose but is rather semi-engaged, caught up instead with its own, often petty domestic squabbles. In 2011 Radek Sikorski, then Poland's foreign minister, admitted that he now feared German inaction more than German action—a remarkable confession given his country's past.

A Germany insufficiently engaged with European matters can hardly create the "German Europe" that its critics fear. And that will not change if Mrs von der Leyen leads the next commission (it might even produce a slightly more French Europe). But as a face familiar to German voters and with influence in Berlin, where change is in any case in the air as the Merkel era draws to a close, a President von der Leyen might at least help confront that disengagement among her sleepy compatriots by better explaining the EU and pressing the need for more reform and integration on them. She might thus produce not a more German Europe but a more European Germany. ■

Britain

Foreign policy: A specially strained relationship
Britain humbled after Donald Trump pushes out its ambassador.

The politics of welfare: Moving out of Benefits Street
British attitudes to welfare have undergone a quiet revolution.

London taxis: The Courts of Justice, please
Uber drivers claim London’s congestion charge is racist.

Immigration: A crack in the wall
Britons are warming to immigration. Will their next prime minister?.

Election forecasting: Polling in the deep
Britain’s four-party politics looks like a lottery.

Sectarianism in Scotland: On the march
Orange Order parades cause growing tension in Scotland.

A specially strained relationship

Britain humbled after Donald Trump pushes out its ambassador

The Brexiteers' promise of Global Britain looks forlorn

Jul 13th 2019 | LONDON AND WASHINGTON, DC

"THE CURRENT situation is making it impossible for me to carry out my role as I would like." Thus did Sir Kim Darroch resign as Britain's ambassador to Washington, the country's top diplomatic post, on July 10th. His departure came days after the *Mail on Sunday* published a selection of his cables that were highly critical of President Donald Trump. In the end, Sir Kim was undone by a one-two from the West's leading populist duo, Mr Trump himself and his apprentice, Boris Johnson, Britain's probable next prime minister. The former froze him out of dealing with the American government, before the latter refused to back him.

The furore will test the "special relationship", on which Western defence is founded, as it has not been tested for many years. Few can remember a time when the ambassador of a close ally was so humiliated by an American president. It has also sparked a domestic political storm. Just when it should be preparing for a post-Brexit "Global Britain", the Foreign Office finds itself fighting fires both at home and in the countries it most needs to cultivate.

In truth Sir Kim's cables, covering a period from 2017 to 2019, revealed little that had not been said frequently in the press. Still, they made juicy reading. The ambassador called Mr Trump's administration "dysfunctional" and "diplomatically clumsy and inept". Reports of "vicious infighting and chaos" inside the White House were judged to be "mostly true". Mr Trump "radiates insecurity". And Sir Kim warned that, although the president was dazzled on his state visit to Britain in June, America would continue to follow its own interest in post-Brexit trade talks: "This is still the land of America First."

Unsurprising as these views may be, their leaking is damaging, and has set off a hunt for the mole and the motive. In April a leak from Britain's National Security Council over policy towards Huawei, a Chinese telecoms giant, led to the firing of the defence secretary, Gavin Williamson. Now another episode has strengthened the impression that something is rotten in the heart of the government.

That the Darroch files emerged through a prominent Eurosceptic journalist, Isabel Oakeshott, has fed theories that this is all part of the battle over Brexit. Sir Kim was Britain's permanent representative to the European Union and national security adviser before he went to Washington in 2016, and is seen as a Europhile. Suspicions range from Russian mischief-making to the even more unsettling idea that a British leaker hoped to ensure a more Brexit-friendly person is appointed ambassador after Theresa May steps down as prime minister later this month.

If Mr Trump had his way, Britain would have long ago appointed Nigel Farage, the Brexit Party leader, as its man in Washington. After news of the leak broke on July 7th, the president made his views about Sir Kim plain. "The ambassador has not served the UK well, I can tell you that," he said. "We will no longer deal with him," he later tweeted. For good measure, the president rubbished Mrs May's handling of Brexit ("What a mess she and her representatives have created") and looked forward to her replacement. He described Sir Kim as "wacky" and "a pompous fool". In fact the ambassador had been seen in Washington as a capable figure who was well liked by members of the Trump administration.

Back home, Britain rallied behind its man, though the government distanced itself from his views. Mrs May insisted she had "full faith" in Sir Kim. In a televised debate on July 9th between the two rivals to succeed her, Jeremy Hunt, the foreign secretary, said that as prime minister he would keep Sir Kim in his job until he was due to retire at the end of the year. But Mr Johnson, supposedly the champion of taking back control, avoided any such commitment, instead saying meekly that the relationship with America was of "fantastic importance". This was enough to persuade Sir Kim he could not stay.

Mr Johnson "has basically thrown our top diplomat under the bus", said Sir Alan Duncan, a Foreign Office minister. Sir John Major, a former prime minister, warned Mr Johnson that loyalty to civil servants was a "two-way street". Meanwhile Sir Simon McDonald, the Foreign Office's top civil servant, told a committee of MPs that more leaks might follow. "The basis on which we have worked all our careers suddenly feels challenged," he said.

The strain on Britain's relationship with one superpower comes as its supposed "golden era" in relations with another, China, is looking tarnished. Tensions over pro-democracy demonstrations in Hong Kong are the latest in a series that includes policies towards Huawei and maritime rights in the South China Sea.

Britain is also at loggerheads with Iran. On July 4th it seized a tanker off Gibraltar that it suspected of smuggling Iranian oil to Syria, provoking threats of retaliation. Sure enough, a week later three Iranian vessels tried to impede a British tanker as it sailed out of the Gulf, before the Royal Navy's *HMS Montrose* drove them away.

The contrast with France is striking. As Britain waits by the EU's exit door and focuses on its leadership contest, President Emmanuel Macron has not been idle. He largely got his way in the recent share-out of top EU jobs. And on July 6th he agreed with Iran's president, Hassan Rouhani, on conditions for talks to save the nuclear deal of 2015, the Joint Comprehensive Plan of Action (JCPOA). Britain's Foreign Office merely says it is "co-ordinating with other JCPOA participants regarding the next steps under the terms of the deal".

The trade secretary, Liam Fox, is meant to be paving the way for a future deal with America, but in Washington this week he had a front-seat view of how fraught handling this administration might be. Rolling out the red carpet for Mr Trump in London last month did not change that (just as Sir Kim predicted). Nor would having a Brexiteer as the next ambassador. The EU, meanwhile, has been busy doing actual trade deals: its pact with Japan came into force in February and last month it reached agreements with Mercosur, a big Latin American trade club, and Vietnam. Global Britain has a lot of catching up to do.

Moving out of Benefits Street

British attitudes to welfare have undergone a quiet revolution

Fears about benefit fiddling are at their lowest level in three decades

Jul 13th 2019

"FAIRNESS", DECLARED George Osborne, the then chancellor, in 2012, is "about being fair to the person who leaves home every morning to go out to work and sees their neighbour still asleep, living a life on benefits." Newspapers printed story after story about welfare fraudsters pinching from the public purse, from the woman with two Samoyed dogs who collected thousands of pounds a month and claimed, "It's not worth my while working," to the man who collected disability benefit while competing in bodybuilding contests. In 2014 one in ten Britons tuned in to "Benefits Street", a documentary which featured welfare recipients drinking and fighting on rubbish-strewn streets.

Back then it felt impossible to be too mean to benefit claimants. They were a political piñata: whack them and votes fell out. When in 2013 the opposition Labour Party opposed a bill that would have resulted in three years of real-terms benefit cuts, the Conservatives responded with an advert that read: "Today Labour are voting to increase benefits by more than workers' wages." In the run-up to the general election in 2015, Mr Osborne promised £12bn ($18bn) of cuts to welfare. Voters rewarded his party with a majority.

But the political piñata is no longer paying out. These days 56% of people think that cutting benefits "would damage too many people's lives"—the highest figure since 2001 (see chart). Fears about benefit fiddling are at their lowest level in three decades. Concern over the extent of poverty, however, is rising, according to the latest edition of the British Social Attitudes Survey, published on July 11th. Voters no longer complain about "scroungers" during focus groups, say pollsters. TV programmes are more likely to focus on the botched roll-out of universal credit, a big welfare reform, than they are on the undeserving poor. Newspapers carry many fewer stories than they used to about skivers (see chart), instead running sympathetic profiles of people forced to use food banks.

The Economist

The shift has many causes. One is economic. The working-age employment rate has risen to an all-time high, so in Mr Osborne's terms there are fewer people still snoozing as their neighbours begin their morning commute. Wages are also growing at their fastest rate since the financial crisis of 2008-09. When people feel reasonably flush they may feel more generous towards others.

But a strong labour market does not always translate into support for welfare. The British economy boomed in 1997-2007, when Tony Blair's Labour government was in charge, yet scepticism about welfare rose during Mr Blair's second and third terms. What other factors are at play?

Policy is one. The Tories, who came to power in 2010 on a promise to balance the fiscal books, have long been tough on benefits. In a conference speech in 1992 Peter Lilley, then the welfare secretary, adapted the libretto of a Gilbert and Sullivan musical: "I've got a little list / Of benefit offenders who I'll soon be rooting out / And who never would be missed." Yet even by Conservative standards, cuts to working-age welfare under Mr Osborne were severe. In the 2010-15 parliament about £30bn (equivalent to over 1% of GDP) was stripped away; single parents in work lost benefits worth 6% of their after-tax income. Reforms announced shortly after the general election in 2015 fell even harder on the poor.

The highly visible effects of these policies, from a proliferation of food banks to a rise in rough sleeping, have convinced many people that Mr Osborne went too far. As on many subjects, public opinion on welfare tends to be "thermostatic", says Ben Baumberg Geiger of the University of Kent. Once policies become harsher or softer than the level preferred by the public, voters send a signal and the government adjusts the policy "temperature" accordingly. Philip Hammond, who replaced Mr Osborne in 2016, has slightly increased the working-age welfare budget.

Changes in other policy areas may help to explain why the public has gone softer on welfare. The growing concern in the 2000s with benefit fraud and abuse coincided with a big rise in immigration, especially after 2004, when residents of eight eastern European countries got the right to work in Britain. Voters feared the prospect of migrants coming to live off the taxpayer (many did indeed claim in-work benefits, though very few lived off the dole). A sense that Brexit will lead to lower immigration may have convinced people that there is no longer such a risk involved in having a generous welfare policy. Once the government is seen to be acting on a topic, public opinion moves on, says Andrew Cooper, a pollster at Populus.

The change in mood is matched in the political debate. Not long ago, opposition parties boasted that they would be tougher on welfare than the incumbent. As recently as 2015 Labour—then under the caretaker leadership of Harriet Harman, a veteran of Mr Blair's administrations—whipped its MPs to abstain on a vote on Mr Osborne's benefit cuts, rather than vote against them. Ed Miliband, who preceded her as leader, promised to crack down on migrants receiving benefits.

A bunch of left-wing backbenchers, including Jeremy Corbyn and John McDonnell, ignored Ms Harman's orders, with Mr McDonnell pledging to "swim through vomit" to oppose the cuts. Mr Corbyn has since become Labour's leader, and the party has moved in a different direction. It has mooted a universal basic income and hinted that it would scrap universal credit. Labour's emollient approach means that the Tories no longer need to be macho about welfare. "Politicians now in Parliament can't get up and speak the way they did a few years ago," says Mr McDonnell, now the shadow chancellor. "In those days, we were still at 'scrounger' and all the rest."

One person, at least, has not changed his mind on benefits. When asked last October whether he regretted his actions in government, Mr Osborne admitted to policy failures regarding the EU, immigration and the banking industry. But he mounted a staunch defence of his welfare cuts. "If you are going to have to deal with the fact the country was spending too much, it would be a bit odd to leave out the very large chunk the government was spending on welfare," said Mr Osborne. Voters, it seems, now disagree.

Cabs in court

Uber drivers claim London's congestion charge is racist

Cabbies, who are mainly white, don't have to pay it. Minicab drivers, who are mainly minorities, do

Jul 13th 2019

EARLIER THIS year minicab drivers turned up to protest outside the offices of Transport for London (TFL). "Sadiq Khan, shame on you!" they chanted. "Not the drivers, not the poor, tax the operators more!" The cause of their ire? The mayor's decision that minicab drivers, including those who use Uber, should join the general public in paying £11.50 ($14.30) a day to drive in the centre of the capital. "We hoped the public-pressure route would work," explains Jason Moyer-Lee of the IWGB union, which organised the protest. But Mr Khan stood firm—so the union has decided to try the legal route.

On July 10th the High Court began to hear its case that the introduction of the charge for minicab drivers is racially discriminatory and breaks the European Convention on Human Rights. As a public body, TFL must obey the Equality Act by avoiding indirect discrimination, which happens when a seemingly neutral rule has a disproportionate impact on a protected group. An example could be a rule making all employees work full-time, which would disproportionately affect women, who are more likely than men to be carers.

Since the rules changed in April, the congestion-charge exemption has been available only to black cabs and to the 0.6% of private-hire vehicles that are accessible to wheelchairs. This is where the IWGB says the indirect discrimination comes in. Although Uber drivers and cabbies perform similar roles, shuttling Londoners about the city, they are very different people. According to a recent survey, only 8% of minicab drivers are white-British, compared with 80% of black-cab drivers.

Black-cab drivers have little sympathy for their rivals. The number of private-hire drivers in the city has almost doubled since Uber arrived in 2012. "There's too many of them on the road. Something needs to be done," complains Miles, as he chomps on a sandwich outside a small green hut, known as a cabmen's shelter, on the

Embankment. The congestion charge was extended to cover minicabs to do just that. Research carried out on behalf of TFL predicts that it will cut private-hire traffic by 6%, but overall traffic by just 1%.

Indirect discrimination is permissible if it is a “proportionate means” to achieve a “legitimate aim”. It is, for example, fair to make trainee firefighters pass a fitness test before they jump into burning buildings, even though such a test discriminates against old people. But the IWGB argues that there are other ways to achieve the legitimate aim of reducing traffic—such as raising the congestion charge for all drivers—and that a fall in the supply of minicabs may harm people with disabilities who do not need a wheelchair.

TFL responds that the most price-sensitive traffic has already been priced out of the city, so a rise in the congestion charge for all would make little difference. Taxi drivers will hope it is a winning argument. In exchange for learning the Knowledge, a gruelling feat requiring them to remember 25,000 roads and 100,000 landmarks, they earn perks such as the right to pick people up off the street (whereas minicabs must be booked) and to drive in bus lanes. If minicab drivers have their way, the incentive to spend all those hours memorising road names will be a little less strong.

A crack in the wall

Britons are warming to immigration. Will their next prime minister?

Half the public think immigration has been good for the country, compared with 19% in 2011

Jul 13th 2019

IF BREXIT TAKES up the first volume of Theresa May’s political obituary, immigration ought to be the second. Throughout her six years as home secretary and her three as prime minister, which will end on July 24th, the issue obsessed her. She tightened visa requirements and insisted on counting students as long-term migrants. Her department sent vans to migration hotspots with hoardings that warned illegal migrants to “go home or face arrest”. “We are getting better at identifying and rejecting people we don’t want to come to Britain,” she boasted.

Yet, even on her own terms, her policy failed. She and David Cameron repeatedly promised to reduce net inflows to no more than 100,000 people a year. When Mrs May took over the Home Office in 2010, that figure was 256,000. It dropped a little over the next two years, before rising again, partly because of the additional inflows when Britain lifted migration restrictions on Bulgaria and Romania in 2014. Since the Brexit vote, migration from the EU has fallen sharply, but inflows from the rest of the world have grown. The net figure now stands at 258,000.

By the middle of his first term as prime minister, Mr Cameron would privately admit that his ministers no longer believed that the “tens of thousands” target was achievable, says James Kirkup of the Social Market Foundation, a think-tank. Mrs May was the exception.

A report published on July 8th by British Future, another think-tank, argues that her successor must seize the opportunity of a “reset moment” on immigration. Polling shows that only 13% of Britons (and the same share of Tory voters) think the government has managed the system competently and fairly. So far, the leadership contenders’ noises on the subject suggest they have learned from Mrs May’s errors. Jeremy Hunt says he would drop her target. Boris Johnson, the favourite, would also probably ditch it, though he has not said so.

As on other issues, Mr Johnson's stance is tricky to pin down. He pledges to get tough on migrants "who abuse our hospitality" and do not speak English. Yet as mayor of London, he claimed (implausibly) to be the only politician willing to call himself "pro-immigration". And he has mooted an amnesty for illegal migrants who have been living in Britain for years.

A more liberal approach might not prove the vote-loser it was once thought. Before the Brexit referendum, voters sometimes told pollsters immigration was their primary political concern; now, it is ninth on the list. About half of Britons reckon immigration has generally been good for the country, compared with 19% in 2011. And they are more positive on the subject than are voters in Germany, France and America. "The heat has gone out of the debate," says Robert McNeil of the Migration Observatory at Oxford University.

This is far from an endorsement of open borders. About half still want net migration to fall, compared with 13% who are keen for it to rise. And the shift can partly be explained by a fall in net migration from its peak of 332,000 in 2015 and the expectation that it will drop again after Brexit.

But the figures do suggest that Mrs May was wrong to assume public opinion on immigration was homogeneous or that it would retain its salience, says Sunder Katwala of British Future. He calls most people "balancers", who see both the benefits and drawbacks of immigration and have differing views depending on the circumstances of each migrant.

Polling for the report bears this out. Most voters are content with current—or, in a few cases, higher—inflows of highly skilled migrants, students and family members. But they are much less enthusiastic about low-skilled migrants, refugees and asylum-seekers.

Most of those who have warmed to immigration attribute their change of heart to increased awareness of the contributions that migrants make. Newspapers are running fewer—and more positive—stories about migrants. And the scandal over the shoddy treatment of the Windrush generation of migrants, who came to Britain legally but struggled to prove it, demonstrated that being perceived as too harsh can be as politically toxic as appearing too lenient. Whether or not her successor salvages any of Mrs May's Brexit policy, her tub-thumping speeches on immigration ought to be destined for the dustbin.

Polling in the deep

Britain’s four-party politics looks like a lottery

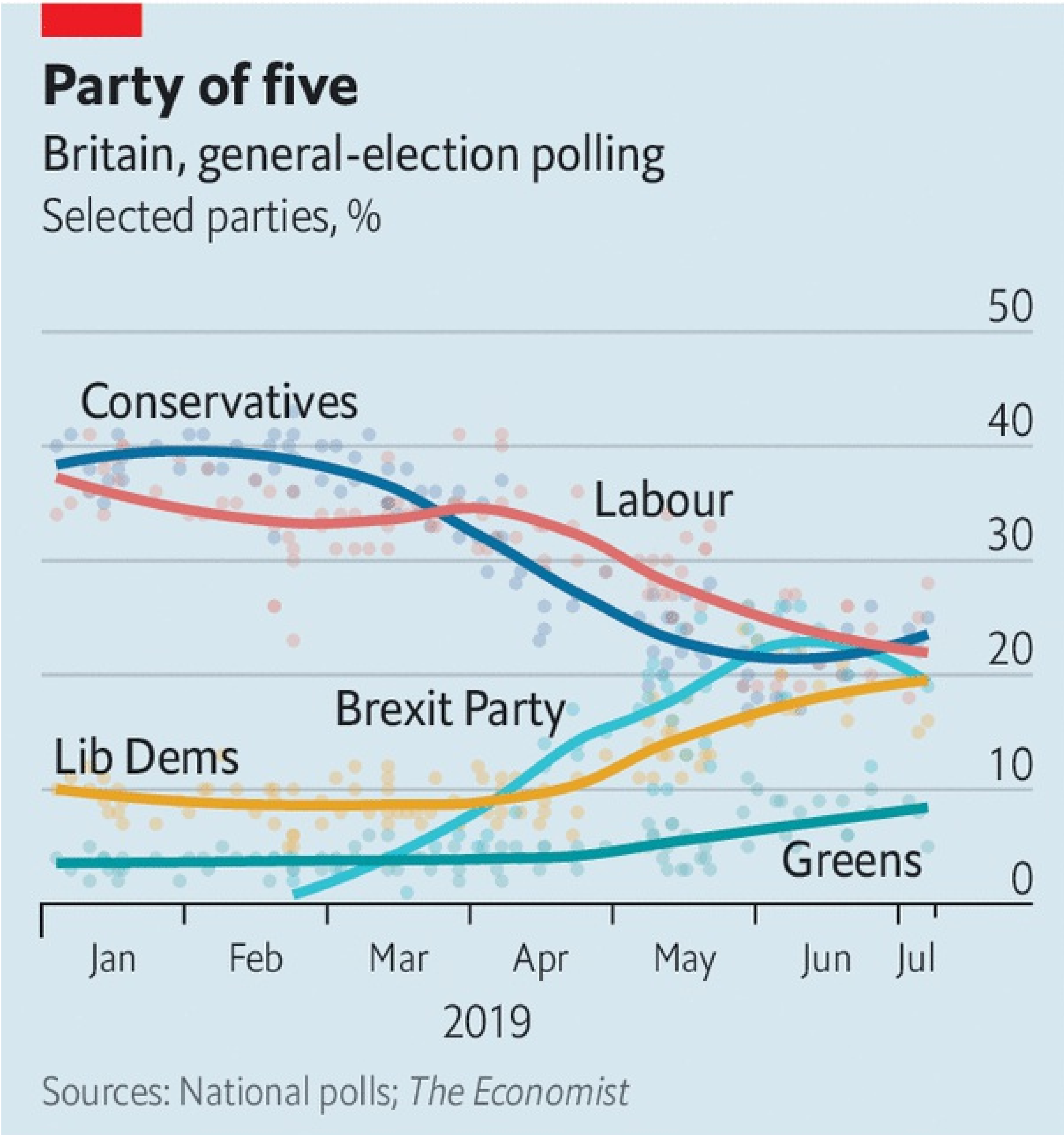
The first-past-the-post system could throw up a radically disproportionate election result

Jul 13th 2019

LABOUR AND the Conservatives have dominated British politics for a century. Combined, they have won over 60% of votes in every general election since 1922. But lately polls have suggested the duopoly is over. Four parties are polling at around 20%, as Labour and the Tories jostle with the Liberal Democrats and the new Brexit Party (see chart). A fifth lot, the Greens, are on nearly 10%.

What sort of Parliament might emerge if an election were held? The next one is not due until 2022, but an incoming prime minister stuck with a deadlocked Commons will face pressure to go to the country. Under a proportional system, seats would be split four ways. But Britain’s first-past-the-post system awards seats only to the winner in each constituency, punishing parties that come a consistent second or third, however narrow the margin. So the next election could resemble a lottery.

Forecasting the result means projecting national polls onto constituencies, adjusting for the profile of the people who live in them. This is tricky enough in a two-party race, in which votes lost by the Tories might be assumed to accrue mainly to Labour, and vice versa. In a four-way contest it is far harder.



The Economist

With four parties polling in the 20s, more constituencies will be won by tiny margins. In a two-way race, forecasters might get away with over- or underestimating a party's performance by a few percentage points. In a multi-party race, that small error is likelier to be the difference between victory and defeat. Martin Baxter of Electoral Calculus, a forecasting website, says any projections will be highly sensitive to errors and movements in the polls. He estimates that, at the moment, a percentage-point increase in support for the Tories would yield a change of 20-25 seats.

It is unclear whether the four-way split would survive an election campaign. Rob Ford of Manchester University points out that general elections have "feedback loops": if voters think a party won't win, they drop it. In the past, this has hit the Lib Dems. Yet with four parties neck and neck, any one of them is in danger of slipping out of contention in the minds of voters. Will Jennings of Southampton University doubts that anyone can confidently predict how an election would go at the moment: "People are just throwing out crazy numbers."

On the march

Orange Order parades cause growing tension in Scotland

Twenty-first-century arguments are re-opening a 17th-century divide

Jul 13th 2019 | GLASGOW

A TOY DRUM emblazoned with a Union Jack hangs around the neck of a young boy, who taps it excitedly while he waits. Pounding down the street, in a din of flutes and booming drums, are hundreds of marchers: some dressed in quasi-military uniforms, others in orange sashes, bowler hats and white gloves. Fluttering banners glorify the queen. Shopkeepers stand outside their premises to watch; there is no use working, though the more opportunistic sell union flags to spectators.

Such marches are organised by the Orange Order, a fraternity formed in 1795 to promote Protestantism and loyalty to the Crown. Their noisy annual celebrations reach a crescendo in the weeks leading up to July 12th, the anniversary of the Battle of the Boyne of 1690, when William of Orange, a Dutch Protestant, defeated his rival for the English throne, the Catholic King James, in Ireland. Parading Orangemen are a familiar sight in Northern Ireland, where marches have long been a source of sectarian tension. But they are also active far from the Boyne, in Glasgow, where marching season is an increasingly tense affair.

Scotland adopted Presbyterianism as its national creed after the Reformation, but many Irish Catholics later emigrated to Glasgow’s East End. The city’s footballing rivalry between Rangers (historically Protestant) and Celtic (mainly Catholic) contributes to the “inherited and institutionalised” division in Glasgow, says Duncan Morrow of Ulster University. Parades have long been a fixture. Orange Order marches, which attract up to 4,000 participants, made up 46% of those submitted to Glasgow council for permission last year, with 143 in all. Republicans held 16.

In the past year these processions have become more politically charged. Four Orange marches in Glasgow were rerouted this summer after the police raised “significant concerns”. Ten times as many officers have been dispatched to police some parades as were sent last year. The police warned a council committee in June that “positions are becoming more polarised”. In the East End, “anxiety, anger, fear and a sense of injustice is high,” says Michael Rosie of the University of Edinburgh.

The immediate cause of this tension was an attack on a Catholic priest during an Orange Order march last July. Canon Tom White was spat on and abused while standing on the steps of his church, St Alphonsus, as a parade thundered by. A man following the march (but who was not a member of the Orange Order) was jailed over the incident.

The attack led to the founding of Call it Out, a group that has since then protested against Orange marches. Jeanette Findlay, one of its founders, accuses the Orange Order of anti-Catholic “racism” and argues that the authorities should stop its parades going past Catholic churches. Jim McHarg, Grand Master of Scotland’s Grand Orange Lodge, counters that the recent volatility has been caused by Call it Out travelling to Orange processions “to be offended”.

Even before the attack at St Alphonsus, deeper political shifts had set the two sides at odds. In the independence referendum of 2014, the Orange Order campaigned to stay in the union. Sectarianism had been widely seen as a “non-issue”, but “raised its head” again after the vote, says Mr Morrow. Six out of ten Catholics backed independence; the same share of Protestants opposed it. Mr McHarg says the Order’s membership grew “astonishingly” afterwards (“We should have a referendum every year,” he quips). The capture of Glasgow’s council by the pro-independence Scottish National Party has added to the Order’s sense of victimisation. There is “fear and anxiety” among Catholics and “a sense of injustice on the Orange side”, says Mr Rosie.

Leaders of both groups have made some efforts to dampen down tensions. The Catholic Archbishop of Edinburgh indicated that he had no problem with marches passing by Catholic churches. The Orange Order voluntarily rerouted this year’s Boyne parade in Glasgow away from St Alphonsus. It has also tried to improve its poor public image, with some difficulty. When in 2015 it held “Orangefest”, an event in Glasgow, a petition opposing it and decrying the Order’s “hate-filled” marches gathered 27,000 signatures.

“Nobody knows about us,” complains Mr McHarg. In one sense he is right. At a recent march on Glasgow’s outskirts, Raza, a waiter watching from outside the Curry Lounge restaurant, reckons the procession is for “supporting national heroes”. Up the street, a barber presumes it is in honour of military veterans. Many young or recently arrived Scots do not feel fear so much as bemusement at the chaps in bowler hats.

International

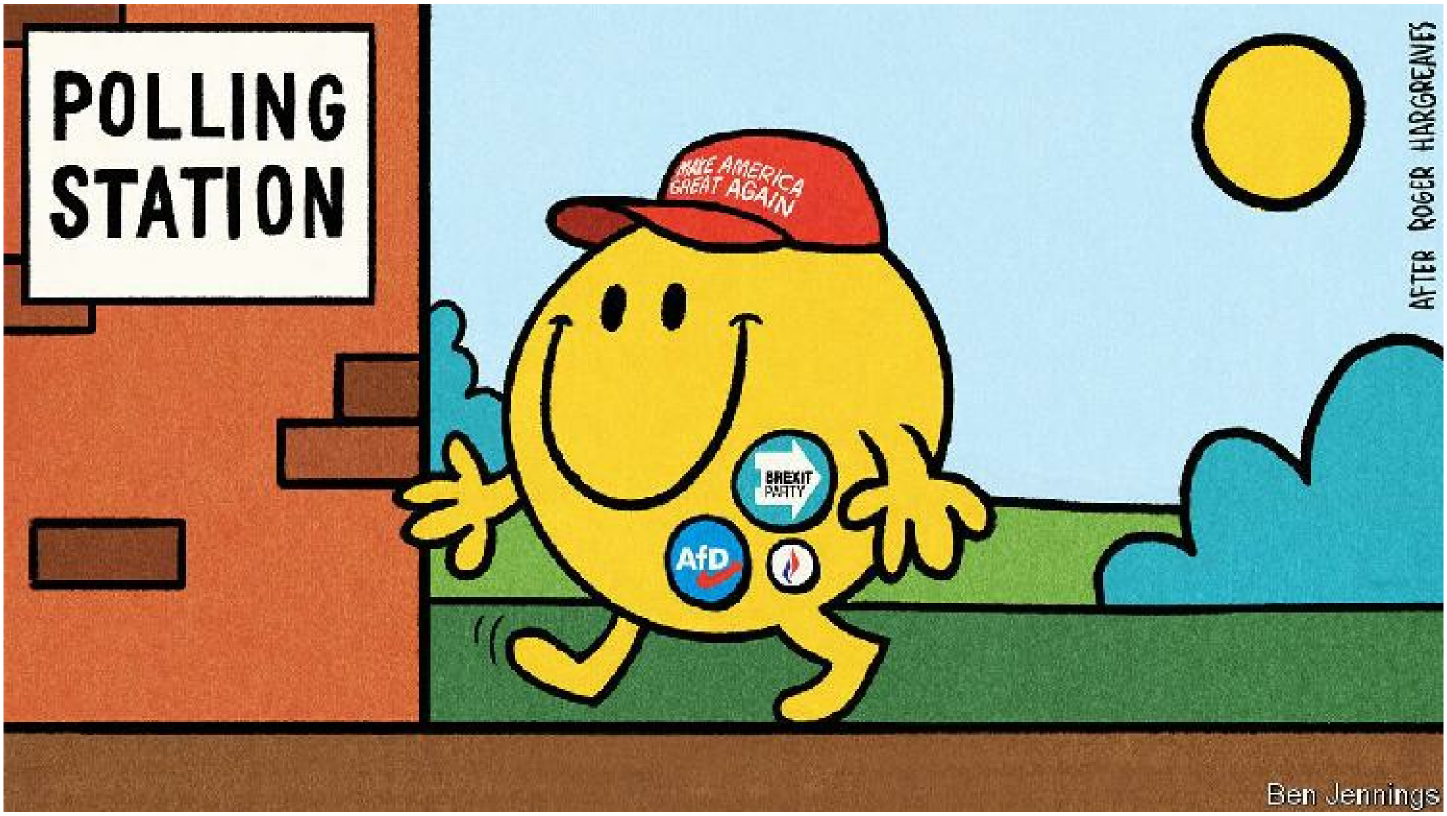
Happiness and elections: The satisfaction paradox

Why are happy people voting for angry parties?.

The satisfaction paradox

Why are happy people voting for angry parties?

The rise of populism comes at a time when people say they are feeling fine



Jul 13th 2019

“HAPPY?” SPLUTTERS a middle-aged man at a polling station in central London, when asked about his feelings on voting in a recent European election. “I’d be happy if I could kick all the bastards out.”

He is not with the programme. In 1972 the king of Bhutan decided his country would adopt gross national happiness as a goal. At the time it seemed eccentric. But over the past decade, politicians in democracies have started to pay more attention to the idea that they should give priority to the well-being of their citizens. Thomas Jefferson argued that “the happiness of every individual [is] now acknowledged to be...the only legitimate object of government”. That view is now mainstream.

In 2008 the French government set up the Stiglitz-Sen-Fitoussi commission to create new national accounts which go beyond GDP and reflect things like the quality of life and the state of the environment. Two years later Britain’s prime minister, David Cameron, set up a “well-being index” to measure Britain’s happiness and social progress. And this year New Zealand produced the world’s first “well-being budget” in which health and life satisfaction—not wealth or economic growth—would guide some public-spending choices. In practice, this has meant more money to combat child poverty, domestic abuse and mental health problems.

Happiness matters not only in its own right but also because it influences whether politicians get elected. In 2017 a study by Federica Liberini of ETH Zurich, a university, showed that voters in Britain who said they were highly satisfied with their lives were 1.6% more likely to support the party in power. That may not sound like much, but she found that a 10% rise in family income was associated with a mere 0.18% increase in support for incumbents. In other words, well-being (or happiness) seems more important to the outcome of elections than money.

A recent study by George Ward of the Massachusetts Institute of Technology confirmed the political significance of happiness. He looked at what best explains the variation in the incumbents' share of the vote in 15 European elections between 1973 and 2014. Life satisfaction, he found, was twice as important in explaining how incumbents did as the unemployment rate and about 30% more important than GDP growth. Mr Ward also found that, in these 15 elections, almost half of those who were very satisfied with their lives said they would vote for the incumbent while less than a third of those who were not at all satisfied would. Research from America suggests that happiness has as big an effect on voting patterns there as education.

Clap along if you feel

All this suggests that happiness is the main determinant of whether a government gets re-elected, more important than jobs or wages. Make voters happier and you will get back in. Fail to do so and you will be booted out. But a question arises: how do you explain what is happening in Europe?

In almost every European country, parties angry with the status quo have increased their share of the vote over the past decade or so. The populist right has got into power (usually in coalitions) in Italy, Poland, Hungary, Austria, Slovenia, Finland and Estonia. Britain voted to leave the European Union and, at recent elections to the European Parliament, the populist Brexit Party came from nowhere to top the polls. In France Marine Le Pen's National Rally was the largest party and in Italy the Northern League doubled its share of the vote compared with the general election of 2018. It is true that some incumbents and centrists also did reasonably well. A centre-right party has just won in Greece and the centre-left topped the polls in Spain in April. But by and large the parties that long dominated European politics have been the biggest losers in elections. Voters seem miserable and want change.

But when you look at indicators of happiness you find exactly the opposite message. Voters are satisfied. According to Eurobarometer, the European Union's polling organisation, the proportion of Germans who consider themselves very or fairly satisfied with life has risen from 73% in 2003 to 93% in 2017, a substantial increase in a measure that in most of the world, most of the time, is fairly stable. In Britain the share went from 88% to 93%, and the share of those pronouncing themselves very satisfied soared from 31% to 45% in 2003-17, a remarkable change. In the EU as a whole, the share of those who say they are very or fairly satisfied rose from 77% in 1997 to 82% two decades later.

Happiness is the truth

These "life satisfaction" measures are backed by other indicators, which suggest the findings are of something real. The majority of Europeans, Eurobarometer finds, think their household finances are "rather good". Most say they trust the army, the police, the courts, even television. Yet they are not voting as if they are satisfied. They are choosing populist, new or special-interest parties, not incumbents. Moreover, these parties are often getting a third of the vote—a higher share than the bit of the population which says it is dissatisfied (which is below 20% in most countries). Happy voters must be backing insurgents and populists. Why is the link between happiness and incumbency breaking?

One possible answer is to say that support for both populism and happiness is going up because people are getting older. Old people might vote for more reactionary parties; they also tend to be happier. In Britain, according to YouGov, a polling organisation, 64% of voters over 65 voted to leave the EU, compared with only 29% of 18- to 24-year-olds. Measures of well-being leap up everywhere once you reach about 60. But even if Brexit reflects Britain's carefree pensioners—and some evidence suggests that despite being older, Brexit voters were stroppier than average—there is little sign of such an age effect elsewhere. Support for other European populists—the National Rally, the League, AfD and so on—mostly decreases with age. These are parties of young and middle-aged workers, not cheery pensioners.

A second possibility is that happiness is influencing politics but not the kind that is usually studied. Psychologists distinguish between two sorts: "evaluative" and "hedonic". Evaluative measures answer the question: how do you evaluate your life at the moment? Hedonic ones answer the question: were you angry, or happy, or worried yesterday? Politicians tend to assume that evaluative happiness matters more in determining how people vote. But that might be wrong.

The World Happiness Report finds that indicators of the average frequency of worry, sadness and anger on the previous day rose slightly in western Europe in 2010-18, even though general life satisfaction was increasing. Perhaps a decline in hedonic happiness lies behind the upsurge in support for populists, swamping the rise in evaluative happiness.

Scraps of evidence support the idea that voters are indeed slaves to emotional whim, not people making rational judgments about which political party is most likely to contribute to their future happiness. Dr Liberini’s study discovered not only that happy people backed incumbents but that unhappy ones blamed governments for things that could not possibly be their fault. The death of a spouse, for example, reduced the likelihood of voting for an incumbent by 10%, compared with a control group.

An American study from 2010 titled “Irrelevant events affect voters’ evaluation of government performance” came to a similar conclusion. College football and basketball games had a discernible effect on senate and governors’ races, pushing up votes for incumbents when local favourites won. Similarly, a study of 400 ballot propositions in Switzerland between 1958 and 2014 found that rain increases people’s risk aversion and rain on voting day reduced support for changing the status quo. Switzerland’s “deliberative democracy” seems not to feature much deliberation.

Finally, it is possible that populists do well in countries with lots of happy people, even if happy people are less likely to vote for populists. This might be, suggests Cas Mudde of the University of Georgia, because such countries tend to be richer, and so economic concerns can take second place to social and cultural matters such as immigration, race and religion.

Because I'm happy

If so, that would explain why support for extremists seemed to have increased (rather than fallen) as economies recovered from the 2008-09 financial crisis. A growing economy gives voters confidence to take a punt on parties which might seem irresponsible when unemployment is high or GDP is falling. Long ago, Seymour Martin Lipset, an American social scientist, pointed out that the high point of membership of the Ku Klux Klan was the gilded 1920s and McCarthyism blossomed in the prosperous 1950s.

Matthijs Rooduijn of Utrecht University and Brian Burgoon of the University of Amsterdam looked at support for radical parties in 21 European countries from 2002 to 2014. They found that people who thought they were being left behind were less willing to vote for the radical right when the economy was weak (though support for the radical left was stronger). But when the economy recovered, support for the far right rose. Perhaps the most dangerous moment for an unpopular regime really is when things start to improve.

One last factor to consider is less to do with voters than with politicians. This is that populists are using social media more adeptly than mainstream parties are. In the first three months of this year France's National Rally and Germany's AfD generated about 40% of all posts related to the European election campaign from political groups on Facebook in France and Germany. In Britain posts linking to the Brexit Party generated more shares than the posts for all other parties combined. In Italy's general election in 2018, the League and the Five Star Movement dominated Facebook. Maybe the number of unhappy voters is not rising. Maybe it is just that thanks to the internet, populists are getting better at finding (or creating) them.

None of this means that happiness has suddenly become irrelevant to the craft of politics. What it suggests is that the simple formula—politicians make voters happier, voters return them to power—needs refinement. The pursuit of happiness may be an inalienable right but the political rewards for increasing it are uncertain.

Special report

Special report: Global supply chains

Global supply chains

Supply chains are undergoing a dramatic transformation

This will be wrenching for many firms, argues Vijay Vaitheeswaran

Jul 13th 2019

TOM LINTON, chief procurement and supply-chain officer at Flex, an American contract-manufacturing giant, has his finger on The Pulse. That is the name of his firm's whizzy command centre in California, which is evocative of a Pentagon war room. The kit allows him to monitor Flex's 16,000 suppliers and 100-plus factories, producing everything from automotive systems to cloud-computing kit for over 1,000 customers worldwide. Mr Linton is one of the acknowledged kings of the supply chain—the mechanism at the heart of globalisation of the past few decades by which raw materials, parts and components are exchanged across multiple national boundaries before being incorporated into finished goods. Ask him about the future, however, and he answers ominously: "We're heading into a post-global world."

A few years ago that would have been a heretical thought. The combination of the information-technology revolution, which made communications affordable and reliable, and the entry of China into the world economy, which provided bountiful cheap labour, had transformed manufacturing into a global enterprise. In his book "The Great Convergence", Richard Baldwin argues that the resulting blend of Western industrial know-how and Asian manufacturing muscle fuelled the hyper-globalisation of supply chains. From 1990 to 2010, trade boomed thanks to tariff cuts, cheaper communications and lower-cost transport.

The OECD, a think-tank for advanced economies, reckons that 70% of global trade now involves global value chains (GVCs). The increase in their complexity is illustrated by the growth in the share of foreign value added to a country's exports. This shot up from below 20% in 1990 to nearly 30% in 2011.

Western retailers developed networks of inexpensive suppliers, especially in China, so that they in turn could deliver “everyday low prices” to consumers back home. Multinational corporations (MNCs) that once kept manufacturing close to home stretched supply chains thin as they chased cheap labour and economies of scale on the other side of the world. Assuming globalisation to be irreversible, firms embraced such practices as lean inventory management and just-in-time delivery that pursued efficiency and cost control while making little provision for risk.

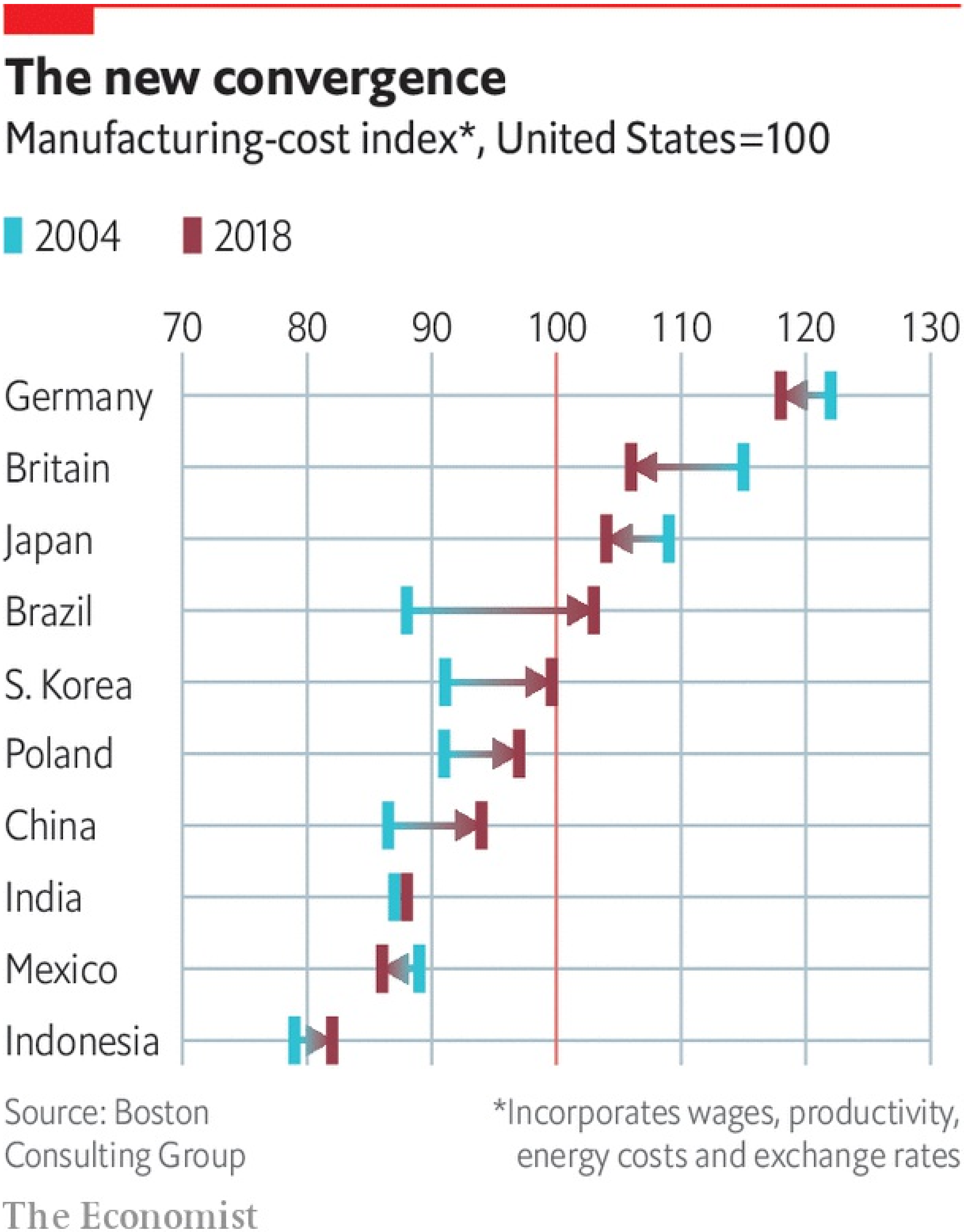
But now there are signs that the golden age of globalisation may be over, and the great convergence is giving way to a slow unravelling of those supply chains. Global trade growth has fallen from 5.5% in 2017 to 2.1% this year, by the OECD’s reckoning. Global regulatory harmonisation has given way to local approaches, such as Europe’s data-privacy laws. Cross-border investment dropped by a fifth last year. Soaring wages and environmental costs are leading to a decline in the “cheap China” sourcing model.

The immediate threat comes from President Donald Trump’s imposition of tariffs on America’s trading partners and renegotiation of free-trade agreements, which have disrupted long-standing supply chains in North America and Asia. On June 29th, Mr Trump agreed a truce with Xi Jinping, China’s president, that temporarily suspends his threatened imposition of duties of up to 25% on $325bn-worth of Chinese imports, but leaves in place all previous tariffs imposed during the trade war. He threatened in May to impose tariffs on all imports from Mexico if it did not crack down on immigration, but reversed himself in June. He has delayed till November a decision on whether to impose tariffs on automobile imports, which would hit European manufacturers hard.

Look beyond politics, though, and you will find that supply chains were already undergoing the most rapid change in decades in response to deeper trends in business, technology and society. The rise of Amazon, Alibaba and other e-commerce giants has persuaded consumers that they can have an endless variety of products delivered instantly. This is putting enormous pressure on MNCs to modify and modernise their supply chains to keep pace with advancing innovations and evolving consumer preferences.

Arms race

The biggest force for change is technology. Artificial intelligence (AI), predictive data analytics and robotics are already changing how factories, warehouses, distribution centres and delivery systems work. 3D printing, blockchain technologies and autonomous vehicles could have a big impact in future. Some even dream of autonomous supply chains requiring no human intervention.



However, technological advances also raise the spectre of an arms race in supply-chain security. Aggressive private hackers and state-sponsored cyber-warriors appear to have the upper hand over beleaguered corporations and governments. Recent headlines have focused on America’s crackdown on Huawei, a Chinese telecoms giant. But the issues involved go far beyond one firm, given that much of the world’s electronics-manufacturing and hardware innovation takes place in China.

If a technology cold war breaks out, it would smash today’s highly integrated technology supply chains and force an expensive realignment. It may even lead to a bifurcation in the rollout of 5G, a new telecoms-network technology that is the essential enabler of coming marvels such as the internet of things (IOT). With the proliferation of inexpensive sensors, the IOT will allow homes, factories and cities to be digitally monitored and managed. A "splinternet of things" (in which America followed one standard and China another) would not only be costly and inefficient, it would also fail to address legitimate security concerns about future cyber-threats in the age of 5G.

Even if Huawei is eventually spared, and the truce in America's trade war with China turns into a frosty peace, the era of frictionless supply lines flowing from Shenzhen to San Francisco and Stuttgart has ended. As globalisation is transformed into something messier, the consequences for MNCs and the world economy could be momentous.

This report will show that supply chains were already becoming shorter, smarter and faster before politicians started taking a hammer to the trading system. Given today's riskier world, supply chains will need to become safer too. This transformation threatens firms that have entrenched supply networks, but it also presents opportunities for those that adapt nimbly.

→ Slowbalisation: Multinational companies are adjusting to shorter supply chains

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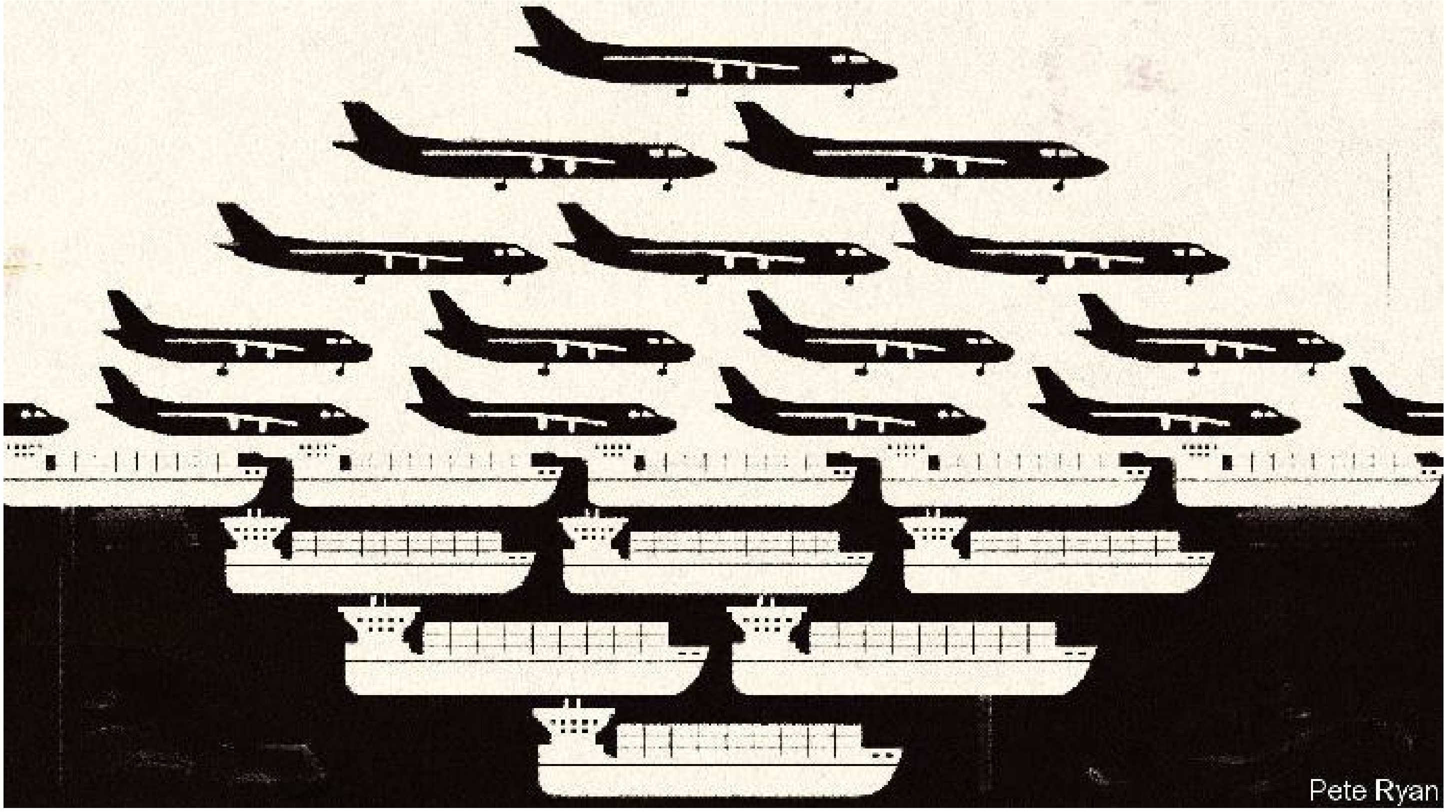
Special report: Global supply chains

Slowbalisation

Multinational companies are adjusting to shorter supply chains

The risks of not knowing who supplies your supplier



Jul 11th 2019

IN THE BOOM years of globalisation from 1990, one of the ideas that became gospel, spread by authors such as Thomas Friedman, was that the world had become flat. National boundaries mattered very little in terms of sourcing and manufacturing, went the argument.

The idea was so pervasive, says Hau Lee of Stanford University, that "companies just built anywhere". Now, as the outlook for globalisation grows cloudy, companies are starting to question the wisdom of the hyper-globalised supply chains thus created. Mr Lee reckons that managers at MNCs must now build new skills as they reconfigure supply chains for a "bumpy" new world.

A survey conducted in April of 600 MNCs around Asia by Baker McKenzie, an American law firm, found that nearly half of them are considering "major" changes to their supply chains, and over a tenth a complete overhaul. In many sectors this will mean a rethink of the role that China plays in sourcing. There are two main reasons to expect that, after several decades of hyperextension, some supply chains will get shorter. First, it is now clear that stretching supply chains thin to make goods ever cheaper carries risks. And second, global trade now includes not just things you can drop on your foot, but a large amount of services.

In terms of the risks, most MNCs do not know who supplies the supplier to their supplier, but they might be held hostage if that distant vendor cannot fulfil its obligations. The dangers are occasionally brought to light by external shocks. Sometimes these are delivered by natural disasters. In the wake of the Japanese tsunami in 2011 a global semiconductor giant tried to map its vulnerabilities to third- and fourth-tier vendors; it took a team of 100 executives more than a year to work out which firms were in its extended supplier networks.

More recently, shocks have been political. Brexit, Britain's messy departure from the European Union now scheduled to take place at the end of October, could disrupt supply lines linking Britain and the continent. MNCs have warned that they may reduce operations in Britain if it does. A survey by the country's Chartered Institute of Procurement & Supply indicated that a fifth of continental businesses would demand a hefty discount from British suppliers for even a one-day delay at the border, while more than a tenth of British exporters expect contracts to be cancelled outright.

Americans will not have to wait till October to see the impact of their political shocks, as Mr Trump's tariffs on steel, aluminium and Chinese imports are already biting. A working paper by Mary Amiti and colleagues published in March by the National Bureau of Economic Research calculated that by the end of 2018 they had cost American consumers $1.4bn a month. Retailers are being squeezed, with Walmart and Target warning of price rises to come. Caterpillar, a manufacturer of farm equipment, expects tariffs to cost it $250m-350m this year. Cummins, an engine maker, expects a hit of $150m.

Despite the truce agreed with Mr Xi, Mr Trump's tariffs on mainland imports remain in place and Huawei's future is still uncertain. China has imposed retaliatory tariffs, is threatening to punish "unreliable" foreign firms and to withhold exports of rare earths used to make electronics.

In short, a full-blown trade war may yet break out. How much would it hurt? Moody's, a ratings agency, estimates such a "conflagration" would cut growth in real GDP in America by 1.8% one year into the trade war, and reduce growth rates across Asia by 1% or more. The OECD predicts that a trade war between America and China could take 0.7%, or about $600bn, off global growth by 2021. The IMF warns that many countries, including those that benefit from trade diversion, will be net losers.

Even if such an outcome is avoided, Mr Trump's actions may already have made an impact on MNCs. A recent survey of European firms by Credit Suisse, an investment bank, shows an increased tendency to locate new investments in Europe, not outside it. The firm thinks that permanent damage has been done by the recent trade disputes. MNCs will "no longer plan and source their supply chains predominantly on the basis of cost", it argues.

The trade war has also led to a rethink at Apple, which has reportedly asked its biggest suppliers to see how much it would cost to shift 15- 30% of its supply base out of China to South-East Asia or India. Liu Young-way, the new chairman of Foxconn, a Taiwanese contract manufacturer that assembles most of Apple's devices, recently declared that his firm could supply all iPhones for the American market from plants outside China if necessary.

As for the rise in services, these are often intermediate inputs into manufacturing. In 2017 global trade in goods amounted to $17.3trn and trade in services, such as transport and communications, had risen to $5.1trn. The IMF believes that, when measured in value-added terms, the share of services exports in global exports is nearly twice as large as what official numbers suggest.

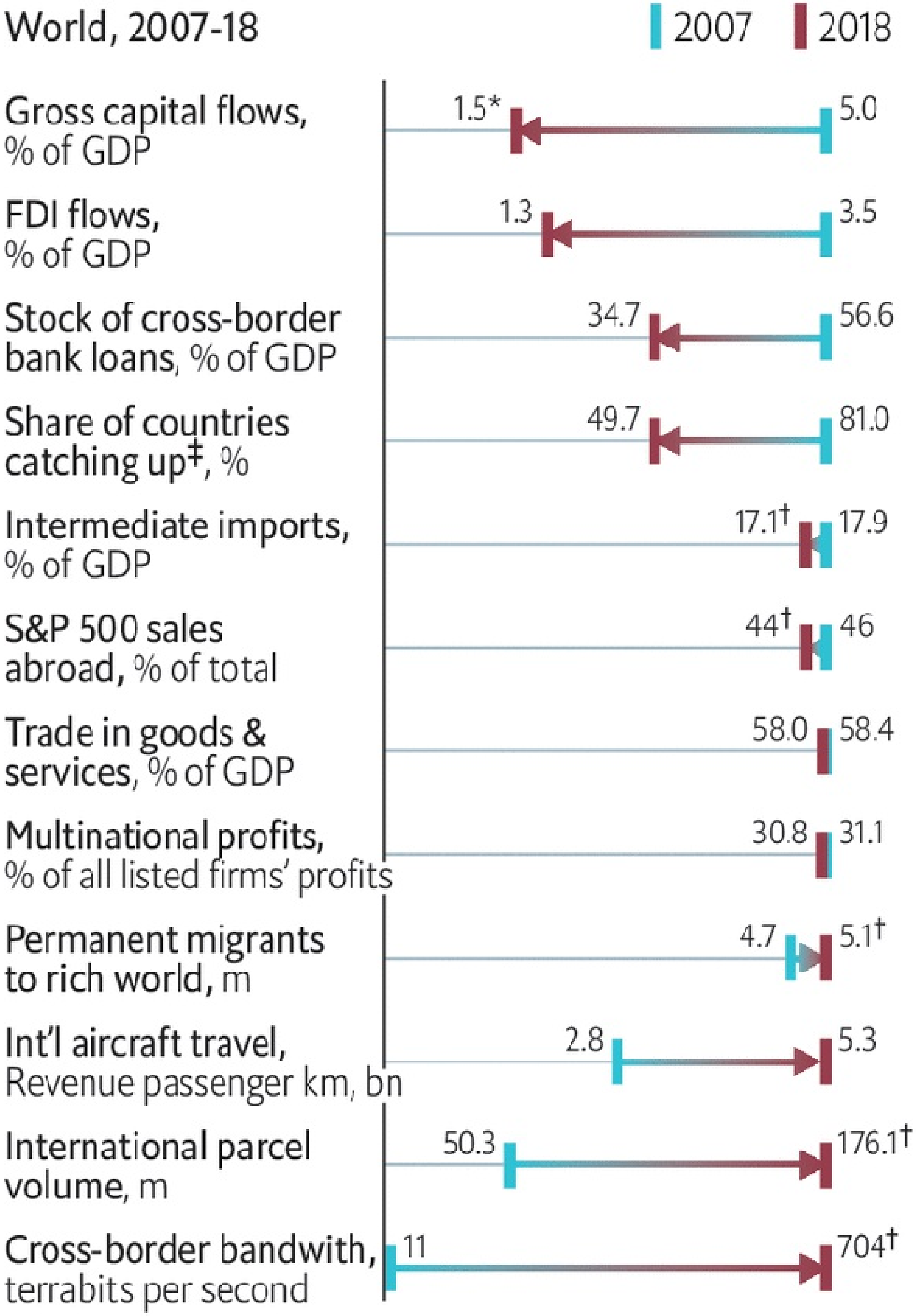
By the reckoning of the McKinsey Global Institute (MGI), a think-tank attached to a consultancy, services already create about a third of the value going into traded manufacturing goods. Trade in services grew more than 60% faster than trade in goods over the past decade, and two to three times faster in such fields as telecoms and information technology. As firms look to boost the value of services and innovation, things that are often best done close to consumers, MGI's Susan Lund thinks they are less likely to chase the cheapest labour globally.

Plan, source, make, deliver

"The supply chain has been viewed as a necessary evil for a long time, trapping companies into incremental thinking," argues Pete Guarraia of Bain, a consultancy. MNC bosses typically left it to mid-level managers to squeeze out 1-2% a year in cost savings through sourcing. Such customer-centric dynamos as China's Alibaba and America's Amazon regularly push for 30% improvements in efficiency. By "weaponising logistics", argues Bain, they have shown how supply chains can serve as a basis for competitive advantage. Inspired and terrified in equal measure, bosses of leading MNCs are now re-examining how exactly their firms “plan, source, make and deliver”—the mantra of supply-chain managers across the world.

Less connected

World, 2007-18



*2016 †2017 ‡Compared with US GDP per person, growth rate at PPP

Sources: IMF; UNCTAD; BIS; OECD; Bloomberg; IATA; UPU; McKinsey

The Economist

As they do so, they will discover that “slowbalisation” brings challenges of its own. Mark Millar, author of “Global Supply Chain Ecosystems”, argues that just because supply chains shrink does not mean that they simplify. Quite the opposite. The point of getting closer to the consumer is to help companies expand customisation, accelerate innovation and speed up delivery.

Not everyone agrees that globalisation is slowing. Frank Appel, chief executive of Deutsche Post DHL Group, a German express-shipping and logistics giant, insists that longer-term fundamental forces, such as the rise of middle classes globally and productivity gains from digitisation, still favour global integration. A study published in February by his firm found that international flows of trade, information, capital and workers increased in 2017. However, that was before the full impact of Mr Trump’s tariffs and immigration crackdowns hit the global economy.

A more recent analysis by *The Economist* of a dozen factors related to globalisation found that eight pointed to a decline in connectedness (see chart). Pankaj Ghemawat of NYU Stern School of Business, one of the authors of the DHL report, sees a “semi-globalised” world in which international threats and opportunities matter but most business activities take place domestically. For most firms, this will mean supply chains will need to become not just shorter, but also faster and smarter.

→ Three industries: Supply chains for different industries are fragmenting in different ways

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Special report: Global supply chains

Three industries

Supply chains for different industries are fragmenting in different ways

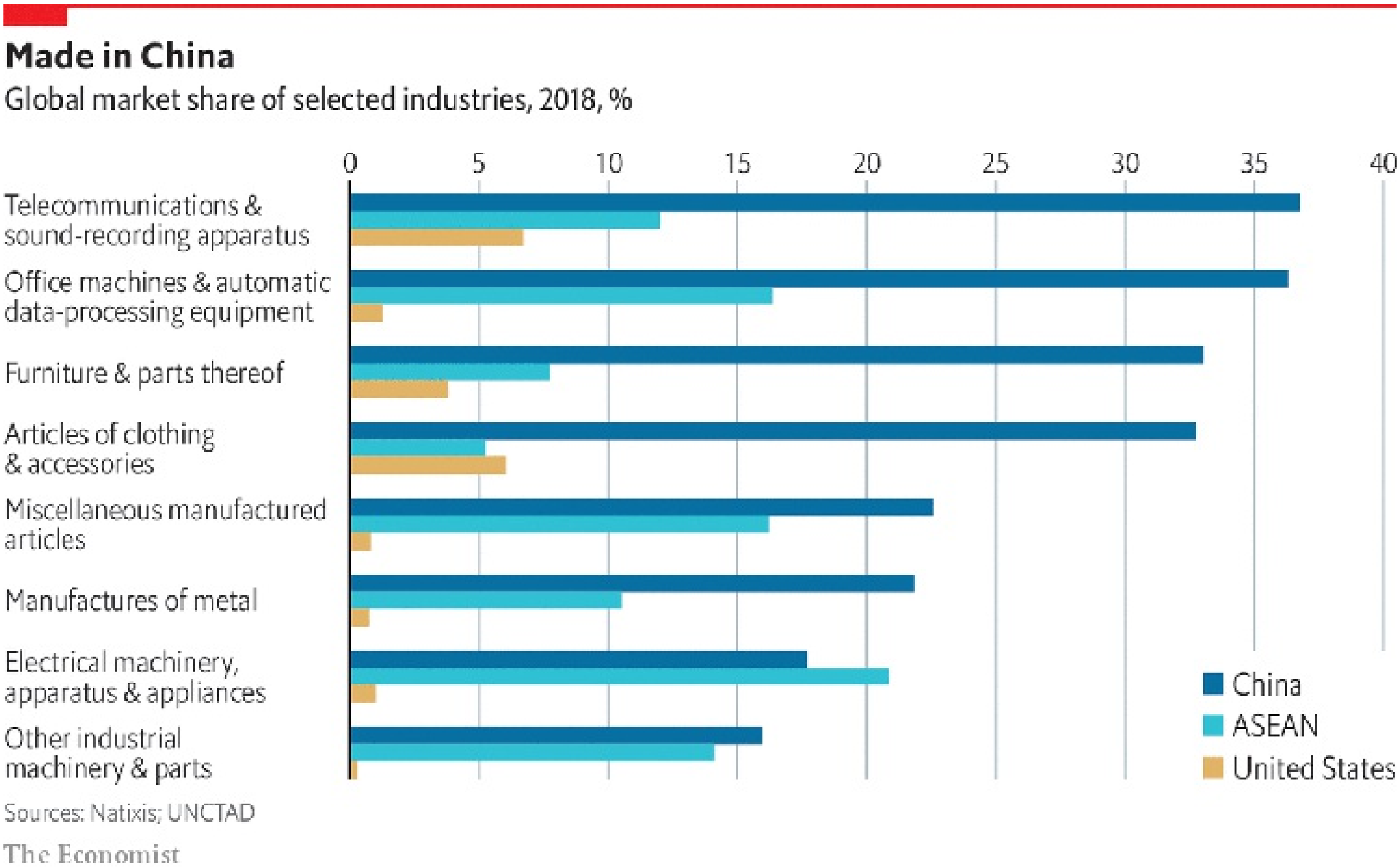
Clothes, cars and computers are all being affected

Jul 11th 2019

GLOBALISATION IS BECOMING regionalisation. Analysis by MGI finds that the global value chains (GVCS) in 16 of 17 big industries it studied have been contracting since the global financial crisis. Trade continued to grow in absolute terms from 2007 to 2017, but during that period exports in those same value chains declined from 28.1% to 22.5% of gross output. The biggest declines in trade intensity were observed in the most heavily traded and complex GVCS, such as those in clothing, cars and electronics. As MGI's Susan Lund explains, "more production is happening in proximity to major consumer markets".

China's role as the world's workshop is starting to fade, but surprisingly this may not sound the death knell for mainland manufacturing. Thanks to its skilled labour force and excellent infrastructure, China remains an outstanding place to make things, hence its continued strength in numerous sectors (see chart). Also, the rise of the Chinese middle class has led many firms to redirect production to serve the local market. So MNCS are clearly rethinking the old linear sourcing model for Western markets, but the path forward is unclear. Different industries will make different choices.

Corporate supply-chain data are often opaque and official trade statistics typically lag by years. Yet talking to many firms in three industries reveals different patterns of fragmentation. The clothing sector is globally footloose; the car industry is coalescing around regional hubs; and the electronics business remains rooted in China (though Mr Trump's attack on Huawei, its technology champion, will affect this).



Big parts of the clothing and footwear business involve labour-intensive tasks such as stitching, so cost-conscious bosses are always chasing low-cost markets. Many long ago left the mainland, where wages have soared, for South-East Asia and Bangladesh. Nike and Adidas make more training shoes in Vietnam than China.

Today's hot spot is Ethiopia, which has attracted investment by Calvin Klein and H&M. With labour costs of just $26 a month, it might seem a dream destination for the frugal clothier. But a report released in May by the NYU Stern Centre for Business and Human Rights argues that these wages are too low to meet workers' basic needs, which is fuelling unrest. Productivity levels are low and attrition high. Paul Walsh of Newtimes Group, a clothing supply-chain firm, observes: "We've run out of magic countries."

Clothing bosses are increasingly preoccupied with speed more than cost, says Suresh Dalai, a supply-chain expert based in Asia. "In speed, China still has the edge," he says, pointing to its world-beating online retailers, "social-commerce" innovators and nimble manufacturers. He thinks that demanding local consumers force Chinese clothing factories to remain enterprising and flexible. In contrast, factory bosses elsewhere complain of unreliability and low productivity.

Unlike those cut-rate competitors, say experts, Chinese factories have the specialised machinery and experienced operators that are needed to make seamless fabrics and other higher-value textiles. Pravin Rangachari of Haggar, a leading manufacturer of men's trousers, has no plans to abandon China's highly automated fabric mills, which he finds "very competitive". He adds that compliance with child-labour laws is strong in China, which cannot always be said about other markets.

China's share in big clothes-importing markets such as Japan and Europe has declined since 2010 as they have been buying cheaper clothes made in South-East Asia instead. However, China's share in every big textile-import market in Asia has soared because many of those workshops still bought fabrics from the mainland. Its export share into Vietnam, for example, more than doubled to 50% from 2005 to 2017. The upshot is that although China's once-dominant role in this industry has diminished, it remains strong in important niches.

As for the automobile industry, its supply chains have both local and global dimensions. "Except for the jack in the trunk, which everybody gets from China, we've had a distributed global supply chain for a long time," says Hau Thai-Tang, Ford's top supply-chain executive. He sees a trend towards greater regionalisation coming with three hub-and-spoke networks: Mexico as the low-cost spoke for America; eastern Europe and Morocco for western Europe; and South-East Asia and China for Asia.

One reason for regionalisation is that the American market is diverging from global trends, argues Kristin Dziczek of America's Centre for Automotive Research, an industry-research outfit. The Trump administration has rejected carbon regulation and rolled back Obama-era rules promoting more fuel-efficient vehicles. Americans are increasingly favouring pickup trucks and sports-utility vehicles, gas guzzlers eschewed by much of the rest of the world. This has big implications. Ford has decided to phase out saloons altogether in its home market, for example, while GM has left Europe and is consolidating its North American operations.

Good night, Shanghai

Car firms have invested heavily to turn Mexico into an export base. The value of its automobile exports has more than doubled since 2010, approaching $50bn last year. The main reasons are not the nearly-defunct North American Free Trade Agreement or lower labour costs, but rather Mexico's four dozen free-trade agreements with other countries which allow it to export to almost half the world's market for new cars tariff-free. Carmakers have rejigged supply lines to take advantage. Mexico's car exports to Germany have nearly 40% German components by value, while those crossing its northern border have over 70% American content.

Mr Trump's tariffs on China have pushed Big Auto's supply chains to become even more regional. "We're finally ready to leave China," says a senior supply-chain executive at a global car maker. His firm is looking seriously at shifting its sourcing for the global market from China to India, but finds Indian vendors "unreliable". It thought about dividing between India and Mexico, but saw that its supply base would lose economies of scale. The winner will be Mexico, he says.

A longer-term force that could turn automotive supply chains upside down is electrification. The Edison Electric Institute, a think-tank, estimates that the share of electric vehicles (EVs) in new car sales in America will rise from 2% in 2018 to over 20% in 2030. That could reduce trade in parts dramatically, since EVs have many fewer moving parts than conventional cars. Ford calculates that a shift to electric would reduce the value added by branded car manufacturers from 30% to 10%.

Dyson, a British engineering firm, is now designing and manufacturing its new EVs in Singapore to be close to China. This is not just because the mainland is the biggest market for such vehicles. It is also the beating heart of global electronics production.

Innovation nation

Half the world's electronics-manufacturing capacity is based on the mainland. Its strengths go beyond sheer scale to diversity and sophistication of products. The pace of hardware innovation in China's Pearl river delta is unmatched even in Silicon Valley. So, too, is its unique blend of scale and agility. This is why most of the world's technology giants make their kit in China.

Many firms are discovering that leaving China is not so easy

Rising costs led some electronics firms to consider moving out a few years ago. Most notably, Samsung has built a huge smartphone-manufacturing complex in Vietnam. Now the political risks associated with sourcing from China, especially the Huawei crackdown, are causing others to consider leaving. GoPro, which makes rugged digital cameras, is shifting much of its production to Mexico. Stanley Black & Decker, a big toolmaker, is moving production of its Craftsman brand of tools back to America. Sweden's Ericsson is scaling up American manufacturing in anticipation of a boom in 5G telecoms-equipment sales.

Many firms are discovering that leaving China is not so easy. John Kern is the head of supply chains at

America's Cisco, a telecoms-equipment company. Because of the concerns of customers in America and India who want non-China sourcing, it has upgraded its Mexican operations. But it still has many global customers without such concerns. He says China is a big manufacturing base for Cisco and "will remain so for many years to come".

George Yeo of Kerry Logistics, which has lorries and men all over Asia, has noticed an uptick in clients investing in South-East Asia. Vietnam and Cambodia are the biggest beneficiaries, he reports. But labour productivity is a big problem across the region and infrastructure can be ropey. Much of the investment he sees is going into labour-intensive industries like textiles. In electronics, Mr Yeo thinks the exodus is limited to low-end kit. "Thanks to automation and high value-add, Shenzhen is still king."

Scrutiny of these three sectors suggests a messy path forward from globalisation. Making this challenge more acute, MNC bosses are now faced with a double threat. Not only must they make supply chains shorter, they must make them faster.

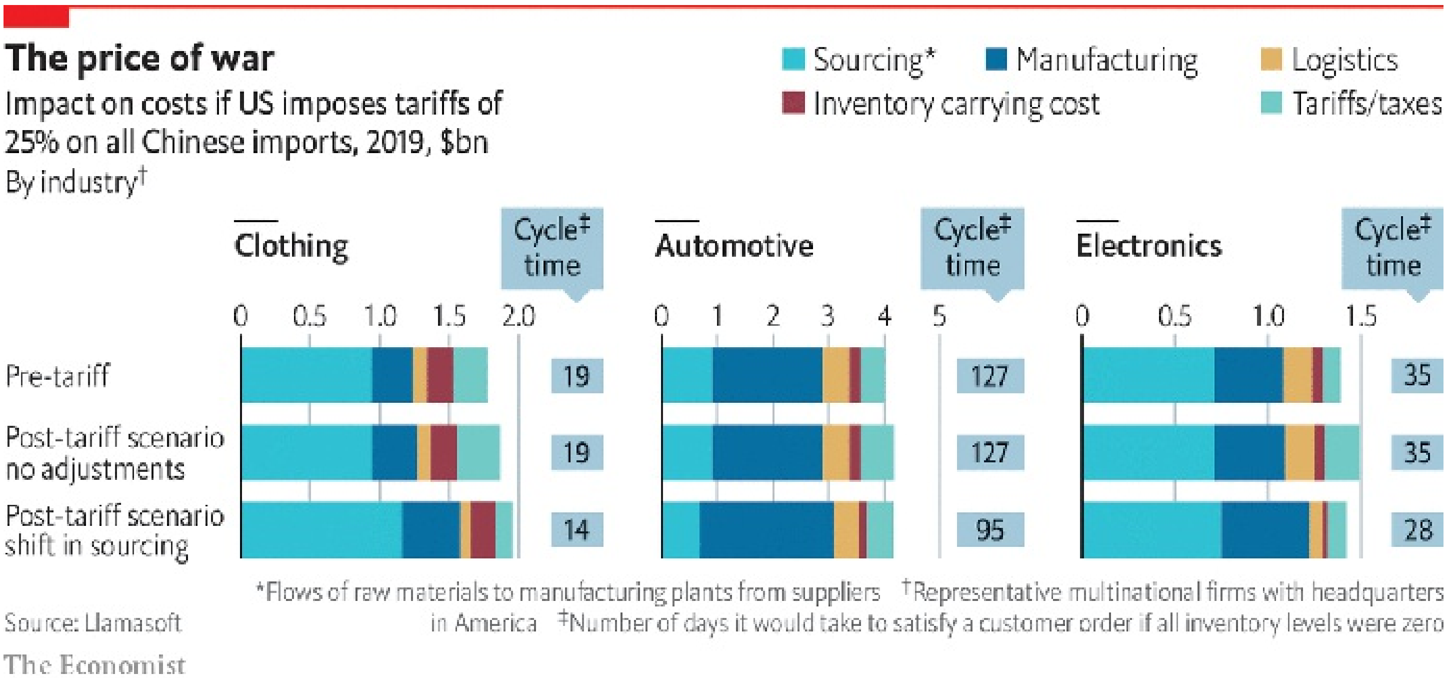
→ Trade war: Which way out?

Special report: Global supply chains

Trade war

Which way out?

How firms making clothes, cars and computers would respond to an all-out trade war



Jul 11th 2019

LLAMASOFT, A SUPPLY-CHAIN analytics firm, looked at representative American MNCS in clothing, cars and electronics to assess the impact of America's threatened imposition of a 25% tariff on all Chinese imports. It assumed firms would move sourcing and manufacturing out of China only as much as economic logic dictates. The analysis recognised the costs of moving production and the benefits of reduced inventories, cheaper logistics and shorter cycle times for inventory from positioning supplies closer to consumers.

The clothing industry would see total costs jump by 11% after such tariffs. Sourcing costs would rise by 23% and manufacturing costs by 43%, but nearshoring would improve average cycle times from 19 to 14 days. Overall costs in the car industry would increase by less than 4%, but that would mask powerful counter-currents from the shift to regional hubs. Manufacturing costs would shoot up by 21%, but sourcing costs would drop by 25%. With cycle times falling from 127 days to 95, inventory and logistics costs would be cut.

The electronics sector, which has strong roots in China, would see an increase in total costs of only 2%. Because making such kit outside the mainland is much pricier, even the modest amount of nearshoring assumed sends manufacturing costs shooting up by 28%. However, the reduction in cycle times from 35 days to 28 days would cut logistics costs and inventory costs dramatically.

→ Distribution: Amazon and Alibaba are pacesetters of the next supply-chain revolution

Special report: Global supply chains

Distribution

Amazon and Alibaba are pacesetters of the next supply-chain revolution

The online giants are pushing others to innovate

Jul 13th 2019

GREG SMITH is obsessed with the freshness of strawberries. Walmart's top supply-chain executive in America is overhauling the retail giant's distribution system, and in his mind speed is paramount. Strawberries have only 12.2 days of life after picking, he reckons, and the firm did not always get them to stores fast enough. The radical changes he is introducing can sometimes cut three to four days out of their journey to the store.

In the past, Walmart had a one-size-fits-all approach to its supply chain, he says, but now it is fast-tracking certain perishable and quick-selling goods. It used to keep inventories stored at warehouses, but now it is "flowing" priority goods directly to retailers. When his lorries get to stores, fresh items are sent directly to shelves for purchase rather than sitting in back rooms.

To gauge progress, visit a Walmart outlet down the road from the company's headquarters in Bentonville, Arkansas. A robot made by Bossa Nova, a Californian startup, roams the isles scanning every shelf for out-of-stock items. The back of the store houses a semi-automated system for unloading lorries. The stockroom is surprisingly bare. An inspection of the produce aisles confirms that the strawberries are, indeed, delectably fresh.

The story of the speedy strawberry illustrates a broader transformation. "Retail before Walmart was slow, lumbering and inefficient," recalls an industry veteran. The firm already revolutionised supply chains once, before the arrival of the internet, by stripping out inefficiencies in logistics and telling the world's biggest brands that it would manage their product flow through its superior supply chain. Now it wants to repeat the trick for a more digitised age. Mr Smith says Walmart is replacing all its supply-chain systems, both physical and digital, to shift from batch processing to continuous replenishment.

Upstream, the firm is investing in technologies that he hopes will allow it to track individual stock-keeping units (SKUs) through the supply chain. Its warehouses are introducing automatic storage and retrieval systems and autonomous vehicles (AVs). In July the firm will open an automated facility in California that will handle three times the volume of ordinary ones.

The firm is moving faster downstream, too. It is working with Alert Innovation, an automation startup, to develop a robot that can fill online grocery orders more quickly for dispatch from its retail outlets. It is crowdsourcing the last-mile delivery of orders through a service called Spark Delivery.

All this is producing results. Productivity at Walmart's distribution centres, measured in cases per hour, went up 13% in the past 18 months. Billions of dollars have been stripped out of inventory. In the most recent quarter, same-store sales in America were up 3.4% on the previous year and e-commerce sales up 37%.

On May 1st Walmart implemented a new policy under which suppliers must meet tougher "On Time, In Full" (OTIF) targets for deliveries of stock or else suffer hefty fines. On June 7th it unveiled a new service that allows customers who order groceries online to have them delivered directly into their fridge.

Why does the firm ranked number one by revenue on the most recent *Fortune* 500 list feel such need for speed? A Walmart executive explains: "A competitor who will remain nameless…is forcing all of us to think differently, and we should."

Amazon's introduction of the idea of "low cost, always in stock" is turbocharging innovation. The new front-line is next-day delivery. Over half of Amazon's customers in America—some 100m people—are Prime members who pay an annual fee to get free two-day shipping. They spend about $1,400 a year each with the firm, more than double the amount spent by non-Prime shoppers.

The firm operates dozens of fulfilment centres in America and has splashed out on automation. With the aid of machine-learning algorithms, robots work in tandem with humans to pick and pack items speedily. By one estimate, Amazon can usually ship a parcel just hours after an online purchase despite operating with a third less inventory than typical retailers.

Amazon's introduction of the idea of "low cost, always in stock" is turbocharging innovation

By employing predictive models, the firm works out where orders are likely to come from. It then uses its intimate knowledge of consumers to manage capacity, place products closer to them and determine delivery routes. Its integrated business model gives it a massive data advantage over rivals that allows it "to have visibility through the entire supply chain…and make better decisions," says Udit Madan, its last-mile-delivery guru.

Now the race is hotting up. In April Amazon announced plans to spend $800m upgrading its supply-chain infrastructure in the second quarter to speed up free delivery worldwide, from two days to one. In May Walmart fired back. It unveiled free one-day delivery on over 200,000 items in its online store for orders over $35. It expects the service, which requires no membership, to be available in most of the United States by the end of this year. It will spend over $200m on infrastructure.

"We like larger cities," says Mr Madan, "as density increases the number of deliveries we can make in a given time and speed is usually faster." Complexity and variability in the messy megalopolises of emerging markets (because of the lack of formal addresses, say, and standstill traffic) spur innovation. In such markets, his drivers carry sophisticated handheld devices that allow the cancellation of orders up to a minute before delivery.

The rich-world giants are right to look to the developing world for inspiration. China is leapfrogging from ropey logistics to supercharged supply chains, just as it did with e-commerce and mobile payments, in which it went from laggard to world-beater.

Creatures of the night

The robots come out after dark in Hangzhou. Seven hundred of them are moving purposefully around the upper floor of a large distribution centre run by China Post, the state-run postal carrier. These flat yellow workhorses made by Libiao, a local startup, work through the night sorting packages for delivery across China. Workers scan packages and place them on the devices. The robots make their way to the chute for the destination city among scores of openings and drop the packages in. On the floor below the packages are whisked from the chutes to waiting lorries.

Amazon leads in the use of AI-powered robots in logistics, but China's entrepreneurs have the edge in speed. Mainland innovators are capable of cutting-edge inventions, for example in facial-recognition software. However, they are also good at frugal engineering, throwing together cheap solutions that can get to market faster than the gold-plated ones favoured by Western innovators.

Xia Huiling, who co-founded Libiao with her husband, eschewed complex AI and navigation systems that would have made each robot autonomous, in order to keep the system affordable. Her dumb robots merely follow trajectories calculated centrally. Through Tompkins, an American supply-chain firm it acquired, Libiao is trying an inventive business model too. Retailers facing seasonal demand spikes can lease a handful of robots for as long as needed. "They are plug and play," says Ms Xia.

Libiao is one of the promising startups in which GLP, a privately held Chinese logistics firm, has a stake. Victor Mok, GLP's China co-president, is introducing logistics parks with smart gates and loading docks for expedited clearing of lorries as well as automation inside warehouses. Through its investment in Inceptio, a local startup, it is developing autonomous lorries, too.

Not far from the China Post warehouse is the headquarters of Alibaba, the world's biggest e-commerce firm by transaction volume. On its leafy campus is an outlet of Hema Xiansheng, a chain in which it has a stake. It looks like a conventional supermarket, albeit with an unusually large selection of Maine lobsters. On closer inspection, many shoppers appear to be leaving without proffering cash, card or mobile payment. Bags of groceries whizz by on an overhead conveyor system.

Hema has invested in the technologies needed to combine online and offline shopping. In-store shoppers can pay using facial-recognition (young people favour this, whereas oldies tend to pay by traditional means). The flying groceries go to an army of waiting couriers, who deliver online orders free within a 3km radius within 30 minutes.

Cainiao, Alibaba's logistics platform, is investing 100bn yuan ($14.5bn) upgrading logistics to ensure next-day delivery in China and three-day delivery worldwide. "Our warehouse system is the most heavily used in the world," says Ben Wang of Cainiao. Last year, on November 11th, a shopping extravaganza known as Singles Day, the firm sold $30bn-worth of goods. Shoppers wearing virtual-reality goggles could buy stuff with a flick of the head. Cainiao delivered the first 100m parcels (of 1bn orders) within 2.6 days, better than 2.8 days a year earlier.

Amazon is looking seriously at drones and autonomous robots for the last mile, which it considers the choke point for fast delivery. In June it unveiled its Prime Air drone, a hybrid aircraft which is to start making deliveries in "the coming months". Ask Mr Madan to look five years ahead and he predicts that product selection will grow and delivery will get even faster. How fast? "Thirty minutes," he says confidently. Then, after reflection, he adds with a mischievous smile, "Maybe 15." How can the rest of the industry keep pace with supercharged superstars like Amazon and Alibaba? The only hope is for them to make their supply chains smarter.

→ Digitisation: Digitisation is helping to deliver goods faster

Special report: Global supply chains

Digitisation

Digitisation is helping to deliver goods faster

Machines are replacing humans in prediction and planning

Jul 13th 2019

"DIGITISATION WILL have the impact on supply chains that steam and electricity had on manufacturing," declares Joe Terino of Bain. His claim seems hyperbolic, but it may yet prove prescient. Nearly 30 years after the internet first emerged as a tool for business, the management of supply chains at most MNCs, which do not operate in the rarefied air of Amazon and Alibaba, remains a surprisingly backward-looking, sluggish affair.

The good news is that companies in many industries are experimenting with a variety of new technologies and methods that promise to improve how they plan, source, make and deliver. These innovations are making supply chains smarter by increasing their predictability, transparency and speed of delivery.

First, to predictability. Firms have long used historical sales data to come up with demand forecasts, then manufactured and distributed according to the plan. This antiquated approach cannot keep pace with today's on-demand economy. So firms are experimenting with AI to assess everything from social-media trends and shifts in demand to inventory turnover and vendor behaviour. Their goal is to fine-tune supply chains in real time.

An annual survey by KPMG, a consultancy, and JDA, a supply-chain software firm, released in May, asked executives which technologies had the highest potential impact on supply chains and were most likely to be adopted. Cognitive analytics and AI came out on top, shooting up from their rankings the previous year. Blockchain and drones were down year-on-year.

JDA uses deep-learning algorithms developed by Blue Yonder, a German startup it acquired that originally created the software for particle-physics experiments at the CERN laboratory in Geneva. Morrisons, a British grocery chain, reduced the incidence of out-of-stock items on its shelves by 30% and cut its inventory needs by several days by replacing manual stock planning with JDA's AI system for demand forecasting and replenishment.

ORSAY, a German fashion retailer, last year used JDA's self-learning algorithm to make 112,000 autonomous pricing decisions. This enabled the firm to reduce the volume of stock that needed discounts of over 30% to sell.

Intel, a big manufacturer of computer chips, estimates that it has already saved $58m through better forecast modelling. The firm uses so many bots (software that runs automated tasks) that it has created new bots to manage the worker-bots. One executive says that lawyers have been called in to decide whether management is liable for bad decisions made by boss-bots.

McKinsey estimates that 40% of all procurement tasks (vendor management, order placement and invoice processing) can be automated today, and 80% soon; this could produce annual cost savings of 3-10%. All told, it reckons application of AI to supply-chain management and manufacturing could create $2trn of value.

Out for delivery

As for transparency, Adam Mussomeli of Deloitte, a consultancy, says that an age-old question still bedevils supply-chain managers: "Where's my stuff?" This may seem surprising in an age of personal connectivity, smartphones and GPS, but it is still true.

Pawan Joshi of E2Open, a supply-chain-software firm, explains why. Because of widespread outsourcing, typical MNCs do not make products (contract manufacturers do); they do not ship them (third-party logistics providers do); they do not store them (warehousing firms do) and they do not sell them (resellers and retailers do). So, he says, "the data needed to make real-time decisions are not inside the ecosystem of the manufacturer." Data inside firms are also compartmentalised into specialised software used by different divisions. E2Open connects and makes sense of all these data.

In November 2017 a strike by German cargo-handlers stranded a shipment of IBM mainframe computers at Frankfurt airport. Unable to track its precise location, the firm assumed the pricey cargo was safe inside an airport warehouse. In fact, it sat on an icy tarmac for nearly a month, exposed to blizzards. When it was eventually located, the kit—reportedly sitting in four inches of water—was a total write-off.

The rise of the internet of things (IOT) will help. Sensors are coming onto the market that track not only the location of goods, but also the orientation of crates and factors such as temperature and humidity. In February IBM launched a "track and trace" service in partnership with Sigfox, an IOT service provider. Initially it will track only containers travelling from suppliers to factories run by Groupe PSA, a big French car manufacturer, but the service is to expand across Europe this year.

Digital innovations from the top down and bottom up are making shipping smarter too. Singapore is building a massive new port that will expand its use of automated cranes and driverless vehicles. It has also launched an international effort to digitise trade. Tan Chong Meng, head of Singapore's PSA, a giant port operator, explains that "like the SWIFT codes used in banking, we need common digital standards."

IBM and Maersk are using blockchain to try to make shipping paperless and transparent. Their TradeLens initiative got a big boost in May when CMA CGM and MSC, two big European shipping firms, joined. The consortium accounts for almost half the world's cargo-container shipments. Every participant in the process, from shipper to customs agent to auditor, will be able to track shipments from start to finish by inspecting the relevant parts of the blockchain rather than ploughing through lots of paperwork.

Standing at Flex's Pulse command centre near Silicon Valley, Tom Linton looks every inch a commander-in-chief. The system gives him access to 92 variables from his supply chain in real time. Rather than hoard this intelligence, he shares it with employees, suppliers and clients on computers and mobile phones.

His “data democracy” has decentralised a lot of decision-making and speeded up the flow of parts. In the first two years of using Pulse, Flex reduced inventory by 11 days and released $580m of cash. “The theory of everything is speed, and you need visibility to get velocity,” says Mr Linton.

To deliver that speed, product design is undergoing a transformation. Spencer Fung is chief executive of Li & Fung, an Asian supply-chain firm that has helped Western MNCs with sourcing for over a century. Getting a new fashion item from paper sketch to the high street used to take 40 weeks, he recalls. Now it can take half that.

Ford’s Hau Thai-Tang says the use of 3D prototyping and digital design shortened the development of the new Mustang GT500, a sports car, by 18 months. Carbon, a Californian 3D-printing unicorn rumoured to be considering a public flotation, is now printing parts used on production lines that produce hundreds of thousands of Ford vehicles and Adidas running shoes a year.

Logistics innovators are harnessing platform technologies like those pioneered by Uber and Airbnb. Warehouse Exchange, a startup, matches owners offering slivers of warehouses on short-term contracts to firms with uncertain or highly fluctuating storage needs. UPS, a big American courier, last year launched Ware2Go, a platform that connects firms with warehouse space, inventory management and other logistics services.

Fast Radius, a Chicago-based unicorn, has an advanced manufacturing facility located at a big shipping hub in Kentucky run by UPS, one of its investors. Its secret weapon is a collection of 3D printers from top manufacturers. An aerospace firm urgently needed a tool to restart production. Making and shipping it using normal manufacturing methods would have taken 45 days. Lou Rassey, Fast Radius’s boss, says his firm got the digital file, printed the tool and delivered it via UPS, all within two days.

“Digitisation will have the impact on supply chains that steam and electricity had on manufacturing”

At a busy warehouse in Yantian, a port district in the southern Chinese city of Shenzhen, Flexport, a Californian firm, is digitising the freight-forwarding business. As lorries arrive at the loading bay, cargoes are measured digitally, with no manual entries or paper forms, to capture dimensions straight to handheld devices and the cloud. Every pallet is barcoded and weighed on a digital scale. Computer vision turns analogue forms into digitally searchable ones, and machine learning (ML) optimises loading. Flexport reached a valuation of $3.2bn after a $1bn investment by Japan’s SoftBank in February. Ryan Petersen, its boss, argues that the old model of shipping 40ft-containerloads of a single product from China to a handful of big distribution centres in America or Europe cannot meet today’s demands for endless variety and speedy delivery.

Rivals send containers across the Pacific to America that are only 65% full. Because his firm digitises packing lists using ML and can run real-time analytics, it is often able to fill the empty third of the container quickly with smaller loads also waiting to ship. To match supply and demand in smaller and varied shipments, says Mr Petersen, “brains, spreadsheets and phone calls aren’t enough. You need technology and data to make decisions right.”

Dave Clark, a senior operations executive at Amazon, agrees. Supply-chain management has gone from a negotiation and procurement job to a technology and science function, he says. Two decades at the trailblazing firm have convinced him that managers introduce huge variability by relying on gut instincts. Rather than machines eliminating human labour downstream in the warehouse, as techno-pessimists fear, he sees a future in which ML replaces human judgment upstream in prediction and planning. He sums up Amazon’s thinking neatly: “We are a supply-chain technology company.”

→ Security: Companies must get ready for a riskier world

Special report: Global supply chains

Security

Companies must get ready for a riskier world

Rethinking supply chains in an era of cyber-attacks and protectionism

Jul 13th 2019

MULTINATIONAL FIRMS have come a long way in the decades since the emergence of supply-chain management. A sclerotic and retrospective set of disjointed processes has formalised into a proper discipline. Decisions based on gut instincts and relationships are increasingly made using data. As a result, supply chains are getting shorter, faster and smarter.

Unfortunately, they are not yet getting much safer. This matters because the world economy is becoming more dangerous for MNCs. Global supply chains are facing three immediate threats today: the Huawei problem, cyber-security attacks and tariff wars. Tomorrow's threats, which include climate change, could be worse.

What should firms do in response to American hostility towards Huawei? MNC bosses must balance security concerns and the need to follow American law against cost pressures and a desire to retain access to Chinese innovations and consumer markets. Though President Donald Trump indicated on June 29th that he would loosen restrictions on sales of American technology to Huawei, the Chinese firm remains a legal pariah. Its activities in America have been curtailed by executive order, and Congress has curbed its sales to defence contractors. The Eurasia Group, a risk consultancy, reckons that the truce agreed by Mr Trump and his Chinese counterpart, Xi Jinping, at the end of June does not provide "a sustainable solution for Huawei".

The Huawei blacklisting could be dropped completely as part of a final trade bargain. Last year Mr Trump decided to grant a lastminute reprieve to ZTE, another Chinese telecoms-equipment firm. But even if that happens in this case, Huawei is likely to have an enduring effect on global supply chains.

For one thing, it has served as China's Sputnik moment. The current generation of Communist Party leaders came to power in the age of China's economic symbiosis with America. To their shock, Mr Trump's economic nationalism and attacks on China have won over America's corporate elite.

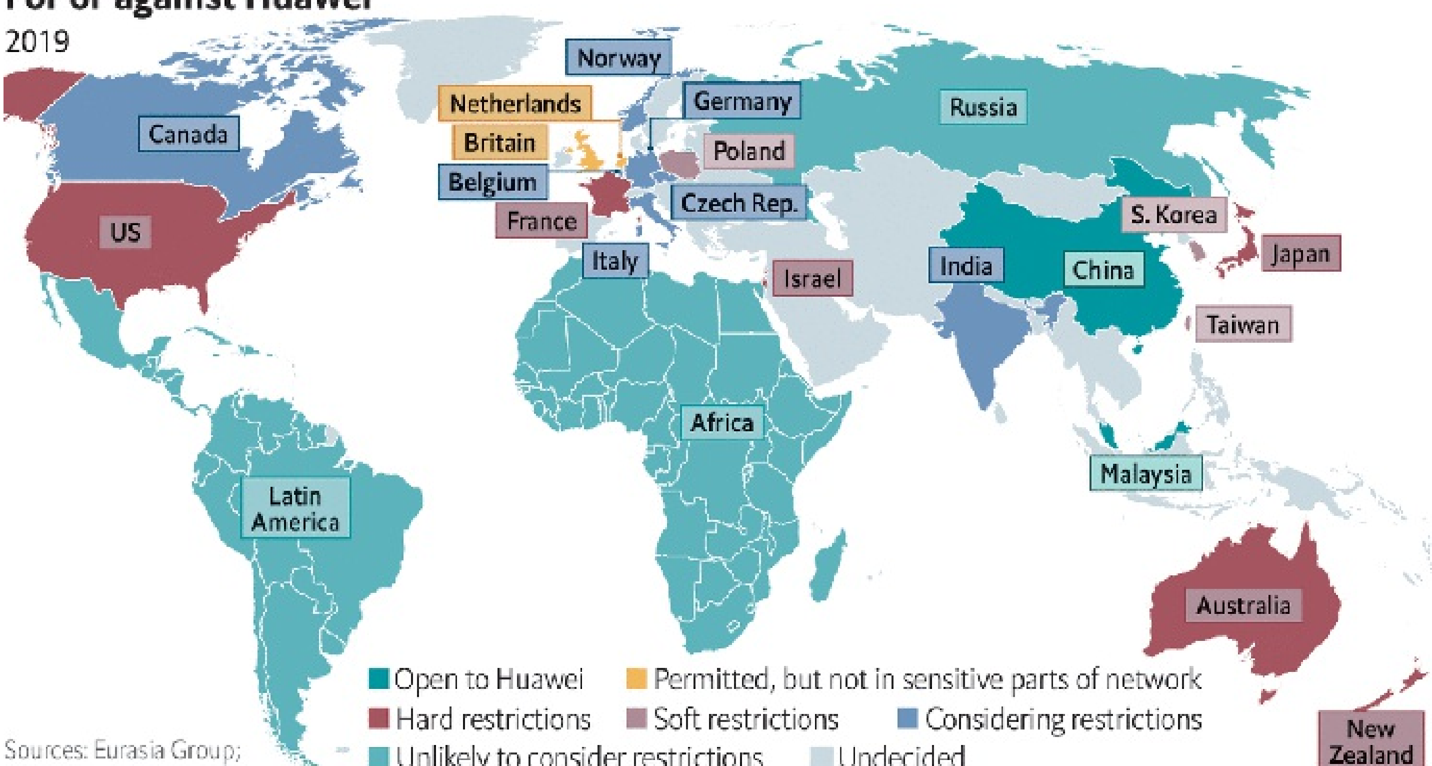
Now that faith in interdependence is shattered, Chinese leaders will invest heavily to accelerate "indigenous innovation", just as American leaders did following Russia's launch of the Sputnik rocket in 1957. They will push home-grown operating systems and technical standards, and direct vast resources and the country's sharpest minds to developing advanced technologies. Many bets will flop but others will pay off, even if they take decades (as is likely in the case of advanced semiconductors).

That points to another likely effect of the Huawei troubles. There is bound to be an acceleration in the slow unravelling that is already under way of the complex supply chains that linked China to America. For example, Mr Trump issued an executive order in May that restricted sales of some foreign telecoms-networking kit. This is part of a broader policy review that may ultimately require future communications technologies sold in America to be manufactured domestically.

The cost of ripping apart efficient supply chains (especially in electronics) and replacing them with more expensive substitutes would inevitably be paid by consumers, through higher prices and lost innovation, but also by firms and shareholders, through lower profits and reduced capacity to invest in future. There may also be macroeconomic costs. By the OECD's reckoning, the rise of hyper-efficient global value chains kept producer-price inflation and real-wage growth in check, and boosted productivity levels across advanced economies by nearly 0.6% per year.

Yet another effect concerns the rollout of 5G networks. This technology is the essential enabler of the internet of things, smart factories and digital supply chains. The Huawei fallout could lead to the bifurcation of global markets into two incompatible 5G camps (see map). Paul Triolo of Eurasia Group thinks it will "force countries and companies to choose sides between America and China in the tech cold war".

For or against Huawei
2019



Sources: Eurasia Group; *The Economist*

The Economist

In this scenario, Sweden’s Ericsson, Finland’s Nokia and South Korea’s Samsung would supply a pricier network comprised of kit made outside China to serve customers allied with the United States. For example, Australia’s government, which is close to American intelligence agencies, banned Chinese 5G kit last year. Huawei would build a cheaper network for those countries less worried about China. Mahathir Mohamad, Malaysia’s prime minister, declared in May that his country plans to use Huawei “as much as possible” even if there “may be some spying”.

As for cyber-security threats, they have gone from a distant danger to the enemy within. A single bit of Russian malware, known as NotPetya, in a Ukrainian office led to the shutdown of Maersk’s shipping operations at many ports in 2017, costing as much as $300m. Research by Zac Rogers of Colorado State University and Thomas Choi of Arizona State University suggests that over 60% of the reported cyber-attacks on publicly traded American firms in 2017 were launched through the computer systems of suppliers or contractors, up from less than a quarter in 2010.

Stuart Madnick of MIT’s Sloan Business School believes that the rollout of 5G networks and the arrival of the internet of things could produce the next great cyber-crisis because firms are rushing suppliers to get whizzy devices onto the market without first incorporating proper cyber-security into the design. “The worst is yet to come,” he warns.

The biggest question for company bosses today is how firms should rethink supply chains in an era of protectionism. The conventional wisdom is to invest in “resilience” by diversifying suppliers, building additional manufacturing plants, keeping bigger stocks and so on. In practice, though, bosses need to weigh carefully the costs involved in complex hedging strategies against promised benefits. Flex’s Tom Linton rejects the notion of resilience, which he considers a euphemism for expensive redundancy, in favour of speed: “I could drive to work in a tank if I wanted to be resilient, but it would take me for ever.”

That is an extreme position. Others point to nuanced strategies that will require bosses to roll up their sleeves and learn by doing. Laurent Chevreux and colleagues at A.T. Kearney, a consultancy, argue that firms must be ready to pivot quickly, ensuring that modernisation of supply chains does not simply digitise old ways of thinking and hinder adaptability. Justin Rose and Martin Reeves of the Boston Consulting Group encourage firms to look at advanced manufacturing technologies, especially flexible robotics and automation, which might make supply chains safer by allowing firms to bring them closer to home.

For urgent action

In conclusion, the great convergence that produced a golden age for MNCs is now unravelling. This will force companies to ask hard questions about investment decisions taken in the past, and may undo some of the global supply chains developed over the past few decades. This reconsideration must be taken on as an urgent strategic task by the people occupying executive suites, rather than delegated to bean-counters in cubicles.

The traditional approach to building supply-chain resilience assumed that the threat would be a natural disaster that forced some capacity offline. So companies have mapped potential supply risks, run disaster scenarios and invested in “business continuity” solutions that generally involve duplicating capacity.

However, this mindset is inadequate for dealing with trade wars. Tariffs imposed today can be removed next month, but factories cannot be moved around so fast. The task now is to redesign supply chains so that they can respond to geopolitics more quickly. This will require many firms to speed up cycle times for inventory. They must also shift from a default bias for efficient global suppliers on the assumption of a low-tariff world towards more local (and possibly pricier) sourcing, which may provide a buffer during tariff battles. However, excessive concentration also brings risks, so managers must invest wisely.

Firms must also take steps to guard against cyber-risks, which are growing. Ryan Kalember of Proofpoint, an American cybersecurity firm, notes that this will be exacerbated by 5G, where many of the vendors involved have a history of shipping code with bugs in it. Mr Madnick recommends big firms conduct security audits of supply-chain partners, vendors and takeover targets to sniff out cyber-vulnerabilities.

Many companies will struggle with the question of what to do with legacy manufacturing assets and opaque supplier networks developed in a bygone era. Others may adopt a wait-and-see attitude, hoping that the current storms will pass and that the heady globalisation of yesteryear will return. The most dynamic firms will find creative ways to chart a path through today’s challenging terrain and seize competitive advantage.

After all, as this special report has made clear, supply chains are no longer merely cost centres. The best firms are already wielding shorter, faster and smarter supply chains as potent weapons. The next challenge will be to make them safer as well. It would be foolish to venture onto this battlefield unarmed.

Business

Bartleby: Superheroes need not apply
The absurd language used by job adverts.

BMW: Tune-up time
BMW tries to turn a corner—and loses its boss.

Oil in Latin America: States of disarray
Latin America's state-run oil giants are struggling.

Big Tech and big government: JEDI orders
Amazon is eyeing billions in federal contracts.

Women's football: Net gains
Women's football is becoming big business.

Electronic mail: Faster than a speeding bullet
Superhuman tries to reinvent email.

Schumpeter: The business of the body
The business of the body.

Bartleby

The absurd language used by job adverts

Superheroes need not apply

Jul 11th 2019

THERE IS AN old Army joke about a sergeant-major who asks his platoon whether any of them are interested in music. When four hands go up, the sergeant says “Right, lads. You can carry this grand piano down to the officers’ mess.”

Job recruitment has become more sophisticated since that story first did the rounds. Today’s careers require a lot more than just raw muscle but that sometimes makes jobs hard to define. The unfortunate result is a form of “adjective inflation” in recruitment ads as employers attempt to make routine tasks sound exciting.

Candidates must sometimes wonder whether they are applying for a 9-to-5 role or to become part of the Marvel “Avengers” franchise. On Indeed, a recruitment website, a cocktail bar was recently looking for “bartenders who are people-focused, quality-driven, (and) have superhero hospitality powers”. The ability to give customers the correct change was not mentioned.

Another British company advertised for “a call-centre Ninja, a superhero in people”, a job description which sounds a little over-the-top for what was in fact a role at an insurance broker in Isleworth. In case you think that advertisement was an aberration, Indeed also featured jobs for “a black-belt prioritisation ninja”, and another demanding a “ninja-like attention to detail”. Short of turning up for the interview dressed head-to-toe in black, and then sneaking up behind the managing director at his desk, it is hard to see how candidates could demonstrate their ninja-ness.

Not all companies require candidates to possess the qualities of a Japanese warrior, of course. Some, in an echo of the 1960s slogan, “make love, not war”, require applicants to be passionate. The Bluewater shopping mall in south-east England was looking for “passionate sales-driven brand ambassadors” while “passionate crew members” were needed at a pretzel-bakery in west London for a wage of just £8.23 ($10.32) an hour.

Bartleby feels passionate about his wife, the fortunes of England’s sports teams and the alarming notion that Boris Johnson might become his country’s prime minister. But when it comes to work, passion may not always be the most appropriate emotion. Would patients prefer a “passionate” surgeon or one renowned for keeping a cool head? As emotions go, pride in one’s performance seems important, as does a degree of empathy for colleagues and other people (customers, patients, readers) affected by what you do. In any case, passion is pretty hard to maintain consistently for 40 hours a week, month after month.

In certain jobs, particularly in the caring professions, people’s devout belief in the social usefulness of their role persuades them to put up with long hours and low pay. But selling pretzels or shoes is not one of them. Instead of talking about passion, employers should rather be asking for enthusiasm. Workers may not learn to love their jobs, but with the right attitude, they can get enjoyment from the simple act of performing their task well. As well as keeping employees content, this ought to be enough for most bosses.

Alas, another newish management mantra is “bring your whole self to work”. This slogan, dreamed up by Mike Robbins, a motivational speaker, seems well intentioned. Workers should not have to suppress their personalities. They should not hide the fact that they are gay, for example, or caring for children or elderly relatives at home.

But it is easy to see how the slogan can be turned into the idea that workers should give 100% commitment all the time. That is asking too much. It is great when people enjoy their work but the fact is a lot of people are doing their jobs to pay the bills, and dreaming of the few weeks in the year when they can take a holiday. They may have hobbies and interests outside work, but the word “outside” is key. Those are the moments when the company has no claim on its employees. Workers should be allowed to leave parts of themselves at home.

Job applicants should take their cue from the kind of advertisements that companies place. Think of it as a first date. If the other person started talking of marriage and how many children you will have together, you might avoid seeing them a second time. So if a job advert talks about passion or superheroes, run away faster than a speeding Batmobile. Being a ninja should be reserved for teenage mutant turtles.

Tune-up time

BMW tries to turn a corner—and loses its boss

Re-engineering the German carmaker for the age of electric vehicles, self-driving cars and ride-sharing will take some doing

Jul 11th 2019 | MUNICH

IN THE GRAND finale of #NEXTgen, an event held last month at BMW's headquarters in Munich to show off the German carmaker's vision for the future of mobility, Harald Krüger, its boss, unveiled the Vision DC Roadster. The staid 53-year-old mounted the futuristic, angular motorbike as if he were ready to ride off into the sunset. Shortly afterwards he was on his way. On July 5th Mr Krüger said that he would stand down with less than a year of his five-year term remaining.

Rumours had been rife that BMW's supervisory board was about to announce that, unlike his predecessor, Norbert Reithofer, Mr Krüger would not get a second term. On his watch the company's financial performance has sputtered. More troubling, it has lost the technological edge on which the pulling power of premium brands relies. His successor—widely tipped to be Oliver Zipse, BMW's head of production—will need to soup up both.

For years BMW's excellent cars and outstanding profits were the envy of carmakers. Its luxury saloons remain desirable and returns have been decent. But despite record sales of around 2.5m vehicles last year, operating profits fell by 8% to €9.1bn ($10.7bn). Operating margins have halved since 2011, to under 6% (see chart). A profit warning in March has weighed on BMW's share price, which is down by 45% since a peak in 2015, the year Mr Krüger took over.

It would be unfair to pin all the blame on the outgoing boss. All carmakers must contend with slowing sales in China, trade tiffs and costly investments required to cope with tighter emissions rules and upheavals such as electric vehicles (EVs), self-driving cars, carsharing and other mobility services. Daimler, the maker of Mercedes and BMW's arch-rival, has also seen its margins shrink and last month issued its third profit warning in a year. But Mr Krüger has been slow to adapt BMW to changing trends in technology and consumer taste. Blingier Mercedes have outshone conservative Beemers, and Daimler overtook BMW as the world's biggest premium carmaker in 2017. Early to the spot the craze for SUVs, BMW has failed to exploit it; for every ten cars it makes, six are saloons, the market for which is shrinking fast. For all Mr Krüger's talk of BMW as a "tech company" it has not produced a cutting-edge EV since the i3 and i8, two innovative vehicles introduced under Mr Reithofer. Daimler, Audi and Jaguar all have.

At least BMW no longer appears to be asleep at the wheel. It wants to launch 25 new electric and hybrid vehicles by 2023, two years earlier than previously planned. On July 9th it presented a battery-powered version of its popular Mini hatchback. A tie-up with Daimler to pool investments in mobility services, and with Jaguar Land Rover to develop EVs, has met with the approval of analysts. Such manoeuvres, combined with a focus on more lucrative models, could help BMW to cut a cumulative €12bn in costs over the next four years and restore margins to a healthy 8-10%, insists Nicolas Peter, its chief financial officer.

But rivals are not standing still. Many have more ambitious targets for EVs. BMW's plans for a world of ride-sharing and self-driving cars—where the appeal of luxury motors is less obvious—do not differ radically from those of competitors. Re-engineering the "ultimate driving machine", as BMW styles itself, for the new age will not be easy for whoever replaces Mr Krüger.

States of disarray

Latin America’s state-run oil giants are struggling

The companies are unprepared for the looming energy transition

Jul 13th 2019 | BOGOTÁ, CARACAS, MEXICO CITY, QUITO AND SÃO PAULO

OIL, IT IS often noted, can bring a country both wealth and woe. In Venezuela, by some measures home to the world’s largest proven oil reserves, it has mostly been the latter of late. Petróleos de Venezuela (PDVSA) saw production peak in 1998, when Hugo Chávez was elected president. In the years that followed the left-wing tribune and his authoritarian successor, Nicolás Maduro, purged PDVSA’s professional staff, strong-armed its international partners and raided its coffers. A sweeping American probe of bribery at the company has so far charged more than 20 people. Its current boss is a brigadier general with no oil experience. Since January, when America announced tough sanctions on PDVSA, production has plunged to the lowest levels per citizen since the 1920s. Meanwhile, millions of Venezuelans lack food and basic medicine.

PDVSA is a caricature of mismanagement. But a survey of state-controlled energy giants in Latin America, which accounts for around 10% of global oil output and 20% of proven reserves, shows dysfunction is not confined to Venezuela. Five years after the oil price crashed, output remains depressed in much of the region, even as the industry as a whole faces unprecedented disruption. The shale boom helped the United States produce 15.3m barrels of oil a day last year, about one-sixth of global output. Concerns about carbon emissions and the rise of electric cars mean that worries about peak supply have been supplanted by fears of peak demand.

This uncertainty has added new urgency to the old question of how to maximise the value of crude reserves. Instead of tackling this head on, Latin America’s national energy champions—or rather, their political taskmasters—are relitigating debates of yore. Subject firms to political pressures or keep them independent? Invite foreign investment or shun it? Maximise efficiency or create jobs? Subsidise petrol or let prices move with the market? Their responses have, for the most part, been discouraging.

States control about 90% of the world's oil and gas reserves. They do so in different ways, as Latin America illustrates. In Guyana, the region's youngest petrostate, production is about to boom following a discovery in 2015 by ExxonMobil, but the country has yet to create its own oil company. Pemex, by contrast, was founded as a state-owned monopoly in Mexico in 1938. Other countries have both state companies and foreign ones, often in an uneasy partnership. Brazil's state-run giant, Petrobras, listed shares in America in 2000. Its Argentine and Colombian counterparts also have private minority shareholders. In Ecuador the state controls more than 80% of oil output. Perupetro, Peru's firm-cum-regulator, oversees private companies' exploration and production. Venezuela, having opened up its oil sector in the 1990s, in 2006 declared that PDVSA would take majority control of oilfields managed by foreign firms. BP and Chevron were among those that agreed; ExxonMobil and ConocoPhillips packed their bags.

Despite their different corporate forms, most of Latin America's oil giants share three problems in common. The first is mismanagement of cash in good times. That included pouring too much money into government coffers and too little into investment for future growth. In 2013, when the oil price topped $100 a barrel, Pemex transferred about half of its revenue to Mexico's government. Despite rising crude prices, Petrobras saw its share price decline, as it loaded up on debt and invested in too many marginal projects. As oil prices plummeted, Latin America's oil companies racked up long-term liabilities of more than $400bn, or 8.5% of their countries' combined GDP, according to data from the Natural Resource Governance Institute, a think-tank. Petrobras accounted for nearly half the total.

Some politicians and executives also used the companies as personal piggy banks—the second common problem. Corruption scandals rocked Petrobras, Petroecuador and Pemex, as well as PDVSA. Petrobras took a particular nosedive when it emerged that construction firms paid Brazilian politicians billions of dollars in bribes in exchange for padded contracts to build refineries and other infrastructure. This, combined with the mountain of debt, led credit-rating agencies to downgrade Petrobras to junk in 2015. Between August 2014 and February 2016 the company's market capitalisation shrivelled by $115bn, or 80%. Only some of that was down to the collapsing oil price; ExxonMobil's stock dipped by 18% in the period (see chart).

The Economist

There are signs the sleaze is being cleaned up in Brazil and elsewhere. Several senior Petrobras executives, and scores of Brazilian politicians, have been prosecuted over the *Petrolão* ("Big Oily") affair. On July 5th Mexican authorities said they had issued an arrest warrant for Emilio Lozoya, who led Pemex from 2012 to 2016 (and has fled the country). As Lenín Moreno, Ecuador's president, mops up the mess at Petroecuador, American prosecutors continue to file charges alleging bribery at the company during the tenure of his predecessor, Rafael Correa.

However, companies remain susceptible to political whims—the third and most vexing shared challenge. Start with Petrobras. The region's biggest producer has made progress. Last year it agreed to pay minority shareholders $2.95bn in a class-action settlement in America. Pedro Parente, who became chief executive in 2016, cut costs, began selling less profitable assets, reformed pricing policy and set about boosting production from vast resources tucked under thousands of metres of salt beneath the seabed.

Still, Petrobras remains vulnerable to political undulations. Last year the government reintroduced petrol subsidies to appease angry lorry drivers. Mr Parente resigned and Petrobras shares took a knock. Jair Bolsonaro, Brazil's new president, appointed Roberto Castello Branco, a well-regarded economist who had served on the company's board and looked set to continue Mr Parente's market-friendly policies.

But faced with the risk of another strike in April, Mr Bolsonaro asked him to scrap plans for a 5.7% increase in the price of diesel. Petrobras's share price, which had risen sixfold since the trough in 2016, wobbled. The government rushed to calm the market, announcing the auction of several oil refineries and a price increase only slightly lower than planned. But investors are shaken. "You're not going to sell a single screw of a refinery until the market has confidence that there won't be government interference," says one local oil veteran.

Crisis of abundance

The situation in Mexico, second to Brazil in regional oil production, looks worse. Pemex has been a symbol of sovereignty and national pride since Lázaro Cárdenas expropriated oilfields in 1938. With oil tethered to politics, strategy has been liable to swing from one presidency to the next. As Mexico realised the potential of the giant offshore Cantarell field in the 1970s, José López Portillo, the president, declared that all Mexico needed to do was "manage the abundance". Instead the Cantarell boom bred complacency and investment declined. Last year the field produced 80,000 barrels per day, down from 2m in 2014.

Complicating matters, for years Pemex has borrowed money to pay its taxes, accumulating government-guaranteed loans. This has turned it into a vehicle for public debt, leaving Mexico particularly vulnerable to its waning fortunes. Pemex has overtaken Petrobras as the world's most indebted oil company, with long-term liabilities equivalent to 15% of Mexico's GDP. On June 6th Fitch Ratings stripped it of its investment grade.

Pemex is now led by a political ally of Andrés Manuel López Obrador, Mexico's populist president, with no experience in oil or gas. It had sought foreign partners to jump-start production, but Mr López Obrador has frozen future auctions of exploration sites. Keen to reduce dependence on American fuel imports, he plans to build a refinery in his home state of Tabasco for $8bn (or more), which may aggravate Pemex's woes, not alleviate them. Mr López Obrador's finance minister has just resigned, apparently in part because he objected to the president's strategy for Pemex (see article). Further plans for the company are expected this month. JPMorgan Chase, a bank, described an earlier rescue package as worse than underwhelming. Fitch thinks taxes would need to be halved for the company to retain enough cash either to invest in its business or pay down debt. The president's goal of raising crude production by around 50% by 2024, from 1.7m today, looks fanciful.

Latin America's other state oil champions are minnows next to Petrobras and Pemex. But their experiences are nevertheless instructive. In Argentina, the oil industry has been scarred by the decision in 2012 by the then president, Cristina Fernández de Kirchner, to renationalise 51% of YPF, privatised 19 years earlier. Ms Fernández's market-friendly successor, Mauricio Macri, has made it easier for foreign firms to invest in the country.

As it competes with overseas rivals, and forms occasional partnerships with them, YPF is at last beginning to tap Argentina's rich shale deposits in the Vaca Muerta formation in northern Patagonia. But in dollar terms, the company's share price languishes 80% below its peak in 2005. Progress could be undone if Ms Fernández's Peronist ally wins the presidency (the former president herself is currently campaigning as his running mate).

In some ways the region's brightest spot has been Colombia. Álvaro Uribe, president from 2002 to 2010, set about restructuring Ecopetrol. His changes included the creation of an independent regulator and the listing of 11% of Ecopetrol shares, which provided an infusion of capital that helped the company enlist better managers. In 2015 it recruited Felipe Bayón Pardo, a former senior executive at BP, a British oil giant, who became boss in

2017. After the downturn in oil prices at the end of 2014, Ecopetrol slashed spending. When prices ticked up, spending rose, though more slowly than in Mexico. But Ecopetrol's reserves are dwindling. To boost them, it is teaming up with international oil majors and investing $500m in fracking.

Success is not assured, in Colombia or elsewhere. The International Energy Agency, an intergovernmental forecaster, predicted that Brazilian output would boom last year—yet output dipped as new oilfields were slow to begin production and mature ones fell.

Those concerned about climate change might argue that the region's inefficient state-run firms would do well to return more money to shareholders and invest the rest in cleaner energy. Rivals in other parts of the world are taking tentative steps in that direction. Statoil, Norway's titan, has reinvented itself as Equinor; its portfolio comprises both oil projects and wind farms. Even the world's oil colossus, Saudi Aramco, is making a bet on petrochemicals and refining, demand for which should remain robust even if a global carbon price one day depressed that for crude. Latin American oilmen are too consumed by old challenges to deal with these new ones.

JEDI orders

Amazon is eyeing billions in federal contracts

The American bureaucracy may prove a lucrative customer

Jul 13th 2019 | NEW YORK

OVER THE past decade Amazon Web Services (AWS) lured untold numbers of consumers and corporations onto its billowing cloud. The division earned its giant e-commerce parent $7.3bn in operating profits last year. It could soon be earning more. Jeff Bezos, Amazon's boss, is going after a potentially more lucrative customer: the government. Amazon has outspent all technology firms on lobbying in the first quarter, and is building a second headquarters in Virginia, near the Pentagon.

No wonder. Next month the Defence Department may award a cloud-computing contract worth $10bn. The Joint Enterprise Defence Infrastructure (JEDI) initiative aims to create a unified "war-fighter cloud" to modernise the Pentagon's existing networks and data centres. In April AWS and Microsoft edged out Oracle and IBM onto the final shortlist.

JEDI is just the start. America's federal agencies were slow to adopt cloud computing, notes Gary Labovich of Booz Allen Hamilton, a consultancy. The CIA led the way in 2013 by awarding a $600m cloud contract to Amazon (familiarising cautious officials with AWS). Today agencies are outsourcing with gusto. Bloomberg Government, a research outfit, reckons that annual spending on cloud computing by the federal bureaucracy will leap to $5.3bn this year, from $2.5bn in 2015. The feds will pay an extra $4.6bn for related digital services.

Amazon may hit snags, however. For a start, the mood in Washington, DC, is turning against Big Tech. President Donald Trump has criticised Amazon and Mr Bezos over two dozen times on Twitter. Bernie Sanders, a leftie senator running for the Democratic presidential nomination, introduced a bill (dubbed "Stop BEZOS") to levy hefty taxes on giant firms. Chuck Grassley, a Republican senator, has pressed the Pentagon to answer allegations that it its procurement process favours AWS.

This points to a second niggle: Amazon's rivals are crying foul. In a case before a federal court, Oracle is arguing that the JEDI procurement process was biased. The *Washington Post* reported that Deap Ubhi, a former Amazon executive named in the lawsuit, tweeted, "Once an Amazonian, always an Amazonian", in praise of Mr Bezos, while allegedly involved in designing the JEDI process. The suit also questions meetings between senior officials including James Mattis, a former defence secretary, and Amazon bosses. AWS and the Pentagon deny any impropriety.

The final complication is a potential backlash over Amazon's cosiness with government. In May some shareholders at Amazon's annual meeting called for it to stop selling facial-recognition software to governments. The resolutions failed but may resurface. (San Francisco has banned city departments from using such technology.) AWS has also come under fire for supporting Mr Trump's immigration crackdown.

Confronted last year with an employee backlash against its sale of artificial-intelligence software to America's armed forces, Google backed off and withdrew from the JEDI tender. Amazon is standing firm. Last month Andy Jassy, who runs AWS, responded to employee concerns about the use of its facial-recognition tools in law enforcement by citing a core Amazon principle: "Have backbone; disagree and commit." Spoken like a soldier.

Net gains

Women's football is becoming big business

As the sport's popularity grows, sponsors and broadcasters are taking note

Jul 13th 2019

"IS THIS HOW we should show up before you come to our games?" read the frustrated slogan of the French national team, posing nude during the women's football World Cup in 2011. At this year's tournament in France figures smashed records without such desperate measures. FIFA, the game's governing body, estimates that it drew a total of 1bn viewers, up from 750m four years ago in Canada. The semi-final featuring England was the most watched television programme of the year so far in Britain. Some 14m Americans saw their team beat the Dutch 2-0 to win their fourth title on July 7th, more than tuned in to most basketball and baseball league finals.

Sponsors have taken note. Visa, a payment-card network with a taste for supporting high-profile sports events, spent as much promoting it as it did on the men's competition. Earlier this year Barclays, a bank, became the first ever title sponsor of the English Women's Super League (WSL) in a deal said to be worth over £10m ($12.6m). On July 5th Alipay, China's electronic-payments giant, announced a 1bn yuan ($145m) ten-year deal with the Chinese women's football team.

The women's game is luring brands which have previously been shut out of the sport because of the way sponsorships of women's teams were bundled with those of men's sides. Avon, a beauty and cosmetics company, became the first to sponsor a women's professional football club, signing an exclusive deal with Liverpool FC Women in 2017. In April Boots, a pharmacy chain, struck partnerships with the national teams of England, Scotland, Wales and Northern Ireland, as well as the Irish Republic. Arkema, a chemicals firm, recently bought the naming rights to the top French women's league in a deal worth €1m ($1.1m) a year over three years—peanuts compared with the €15m a year the men's league receives from its main sponsor, but a start.

Sixty percent of women’s football teams in the biggest leagues now sport front-of-shirt patrons different to those for the men’s team at the same club, according to Deloitte. The consultancy reckons this could approach 100% by the next World Cup in 2023. The number of European national associations with dedicated women’s football sponsors rose from nine in 2013 to 17 in 2017.

Kelly Simmons, director of the professional women’s game at England’s football association, says that these multi-million-pound deals have been transformative. The big bucks, though, will come with broadcasting rights. Men’s English Premier League games bring in more than £3bn a year from broadcasters. France’s top female league sold five-year rights to Canal+, a pay-TV firm, for €6m—a trifle but six times more than two years ago. TF1, the most popular French TV station, raised ad prices twice in a week for France matches, earning an estimated €9m as the home team reached the knockout stages. In Britain women’s-football rights were handed over to BT, a telecoms company, and the BBC, the public broadcaster, at virtually no cost. Expect negotiations for new contracts, set to begin now that the tournament is over, to be much more of a contest.

Faster than a speeding bullet

Superhuman tries to reinvent email

The service plays on two of Silicon Valley's biggest desires: for efficiency and status

Jul 13th 2019 | SAN FRANCISCO

EVEN FUTURE-OBSESSED Silicon Valley occasionally looks back in time. A case in point is Superhuman, a service that aims to reinvent something as antediluvian as email. It has created more buzz than anything for a while in the world's tech capital, by marrying two of technologists' biggest desires: for efficiency and status.

Many a venture capitalist or entrepreneur in the Valley would sympathise with David Ulevitch of Andreessen Horowitz, a big venture-capital firm, who recently likened his overflowing inbox to the final level of Tetris, a classic video game. It is just as engrossing; tech types often spend four hours a day fielding emails. Superhuman (in which Mr Ulevitch's fund has invested) tries to speed emailing up—no command is meant to take longer than one-tenth of a second to execute—while making it less taxing. Keyboard shortcuts, conversion of messages to tasks, instant unsubscribing from newsletters and other tricks, plus nudges to get people to use them, can cut emailing time by half, boosters claim. The firm regularly quizzes users and adds features requested by the most committed among them.

But its greatest superpower may be to make adopters feel special. This is partly by design. "We aspire to treat you like you're our only user," explains Rahul Vohra, the firm's chief executive. Forget "onboarding" (startup speak for setting up your account) with a few taps on an app. Superhuman has you sit through video-conference tutorials. This limits uptake—but increases exclusivity, further augmented by requiring an invitation to join. The service has welcomed 15,000 users, each paying $30 a month for the privilege. The waiting list exceeds 200,000 names.

Superhuman is not invincible. Last week it faced the first backlash when it emerged that senders can track when and even where emails have been opened. The problem has since been fixed but others may prove harder to solve. One is that once taught Superhuman tricks, users could easily replicate them in Gmail and other free services. A bigger one is that by focusing on power users it may become a niche offering. This would limit the scope for fulfilling Silicon Valley's number-one desire—for growth.

Mr Vohra argues that serving one group of customers well is the first step. With confidence typical of a startup founder he believes growth opportunities will present themselves later. Recipients could, for instance, have the service charge some senders for postage.

Superhuman can probably afford to bide its time. With a steady revenue from subscriptions and, for the time being, no cash-hungry customer-acquisition costs to speak of, it has a good shot at making money soon. If it manages to grow and make money at once, that would, in a world of perennially lossmaking startups, be a superhuman feat indeed.

Schumpeter

The business of the body

The world is becoming a temple to wellness. Is this quackery?

Brett Ryder

Jul 13th 2019

IN A. DICKSON WRIGHT'S "Quacks Through the Ages", a study published in 1957, the "outstanding quack of all times" was James Graham, an 18th-century Scottish doctor who conceived mystical cures for all sorts of ailments using fiery electric lamps, magnets and perfumes of the Orient. The centrepiece of his Temple of Health in London was a celestial bed that he claimed could combat sterility and produce perfect babies by pouring out waves of magnetism. High society flocked to his events, which had an air of eroticism and culminated in the scantily clad appearance of the Goddess of Health—none other than the future Lady Hamilton. He may have been an impostor, but Graham deserves special reverence at *The Economist*. His magnetic love bed lay adjacent to the site of our current headquarters overlooking the Thames.

Once again miracle cures are all the rage, not just in London but all around the world. Electric currents are out of fashion, replaced by yoga boot camps, meditation and veganism. To immerse himself, Schumpeter hauled his flabby body to Taryn Toomey's The Class in New York, which invites its sometimes A-list, mostly female clientele to "witness their resistance to discomfort" by leaping around on a mat to thumping music. He threw his shoulders, sweat, spit and howls of agony and ecstasy about with the best of them, and felt quite brilliant afterwards. Ms Toomey's mix of Dyonisian priestess and soothing guru helped. So, no doubt, did the underfloor crystals.

Welcome to the cult of wellness, a phenomenon of mind-and-body worship that is moving beyond the boutique to shake up industries from health, food and beauty to insurance and property. PWC, a consultancy, estimates that what it calls the market for "wellcare", incorporating preventive health, nutrition, fitness and beauty, was worth $810bn last year.

Is it just modern-day quackery, a hankering for any life-prolonging quicksilver, however unscientific and unorthodox? There have been alleged frauds—consider Theranos, a Silicon Valley firm founded by the silver-tongued Elizabeth Holmes, which raised more than $1bn to promote a blood-testing device which was later found to produce flawed results (a court case begins next year).

Some in the industry say they blend science with age-old healing methods. Take Gwyneth Paltrow, a Hollywood star, with her "psychic vampire repellents" and "Goop-approved lubes".

Big business is lunging into action. In the pharmaceuticals industry, GSK is merging its consumer-health businesses with that of Pfizer, a big rival, to create a $12.7bn powerhouse to take advantage of the trend for over-the-counter self-care (think headache tablets), as opposed to prescription drugs. Nestlé and Danone, European food giants, are increasingly mindful of selling healthier fare. Brazil's direct-sales cosmetics firm, Natura, has just agreed to acquire Avon Products, its 133-year-old London-based rival, to strengthen its grip on the door-to-door beauty business. CVS, an American pharmacy chain, hopes to install 1,500 "HealthHUBS" by the end of 2021, including "care concierges", dieticians and yoga rooms, to monitor people's wellness and save on the hospital bills for its newly acquired insurance company, Aetna. Life insurers such as 156-year-old John Hancock in America are tying their policies to the use of fitness-tracking devices. In Asia life-insurance companies are offering policyholders health-care tips.

Asset markets are perking up, too. Todd Caruso of CBRE, a property firm, says large gyms are replacing department stores as the anchor tenants in shopping malls. By far the most sizzling initial public offering (IPO) of the year has been that of Beyond Meat, which makes healthy plant-based burgers; its shares have soared sixfold since May 1st. Peloton, which sells exercise bikes to the well-heeled, last month filed confidential documents for an IPO.

Smart money, then, appears to be flowing with the endorphins. But there are other reasons to take the latest trend seriously. In health, prevention is better than cure. Yet for most of the 20th century, sickness was prioritised over wellness. Private health was mostly a business-to-business enterprise, involving hospitals, insurers, drug firms and employers. Patients needed lots of, well, patience. Adverts for fatty foods were interspersed with those for fat-busting medicines, fuelling a sickness culture. Surgeons were pillars of society, herbalists the loony fringe. The health-care provider, not the customer, was always right.

Today, the customers are taking back control. This may be because they are sick of the over-stretched health-care system, cannot afford it, can use the internet to self-diagnose and are more aware of the dangers of lifestyle diseases, such as obesity and stress. It may also be because they are more body-obsessed, on account of Instagramming, even while doing the Downward Dog.

Business trends are encouraging the shift. The lines between industries such as Big Pharma and Big Food are blurring—witness the growth of nutraceuticals and cosmeceuticals. Globalisation is fusing cultures. Mindfulness comes from Buddhism. The 3,000-year-old Indian tradition of Ayurvedic balance between mind, body and spirit is popular among Delhi's yuppies. Turmeric lattes are sipped by Brooklyn hipsters. And through it all runs technology: fitness, stress-relief and health apps are now central to the growth of wearable devices such as smart watches.

If it quacks like a duck

The bigger the business of mind and body becomes, the more likely it will be regulated and quality-controlled. That is a good thing. But watch out for impostors. A recent study suggests there is no evidence vitamins or minerals slow cognitive decline or dementia—despite what is often claimed on the tin. Health apps have the potential to misuse data, exacerbate eating disorders and keep people permanently on a treadmill. As society ages, the promise of eternal youth becomes all the more seductive. When you are invited to a Temple of Health, think twice before entering.

Finance and economics

Business	Sections	Science and ...

Free exchange

Should egalitarians fear low interest rates?

Monetary stimulus is said to have been a boon for the rich. It is not so simple

Jul 11th 2019

JOHN MAYNARD KEYNES once fantasised about a world of permanently low interest rates. In the final chapter of "The General Theory" he imagined an economy in which abundant available capital causes investors' bargaining power, and hence rates, to collapse. In such a world markets would reward risk-taking and entrepreneurial talent, but not the mere accumulation of capital. The result would be the "euthanasia of the rentier".

That low rates could feature in a leftish Utopian vision might come as a surprise today. It is commonly argued that a decade of monetary-policy stimulus has filled the pockets of the rich. Low rates and quantitative easing (QE) are said to have sent stock and bond markets soaring, thereby exacerbating wealth inequality. They have also boosted house prices, adding to intergenerational tension. A glance at financial markets suggests more of the same is coming: long-term rates have tumbled this year in anticipation of monetary easing, while stockmarkets have boomed.

Central bankers have defended their policies by arguing that, without loose money, unemployment would have been much higher, badly hurting the poor. That is true. But the effect of monetary stimulus on financial markets has nonetheless angered left and right alike. Judy Shelton, one of President Donald Trump's new picks for the board of the Federal Reserve, has blamed central banks for "exacerbating income inequality". She has called for a return to the gold standard. The left, meanwhile, prefers fiscal loosening such as giving money to the poor, or fiscal-monetary hybrids such as the "people's QE" once advocated by Jeremy Corbyn, the leader of Britain's Labour Party, under which the central bank would finance government investment.

Who is right? Do low rates spell euthanasia or euphoria for those who live off capital? And should concerns about inequality determine which policy lever to pull in a downturn?

A starting-point is that falling interest rates make all streams of future income more valuable. That includes dividends from stocks, coupons on bonds and homeowners' privilege of being able to occupy their houses without paying rent. But the resulting increases in asset values can be captured easily only by people who are willing to change their plans. Imagine a homeowner. A higher house price is of little benefit to him if he has no desire to sell and move. Similarly, a bondholder about to retire may need the steady stream of coupon payments the bond provides. A capital gain from selling bonds today might fund a lavish around-the-world cruise, but blowing through retirement funds is unlikely to be prudent.

Now consider a penniless millennial. She sees no capital gain when low rates boost asset prices. But she does have assets that will yield income in the future: education and skills. Were this human capital valued on financial markets, it too would rise in value when interest rates fall. She too could change plans and spend more today, but by borrowing cheaply rather than selling assets.

A recent paper by Adrien Auclert of Stanford University sets out a framework for judging who wins and who loses from changes in monetary policy. Three channels must be considered. One concerns the impact of lower rates on the macroeconomy—the effect trumpeted by central banks. Another concerns the higher inflation that lower rates might cause. That hurts creditors and benefits debtors, who see the real value of their obligations shrink.

The third channel concerns asset prices. It is wrong to claim that asset-holders generally benefit when rates fall, says Mr Auclert. What matters is the full picture of an individual's assets and liabilities. The latter he defines to include future consumption plans (such as whether the homeowner wants to stay in his house, or whether the retired person seeks to maintain a steady standard of living). Only by looking at an individual's balance-sheet in full can you judge whether he wins or loses from low rates—or whether, in the jargon, he has "unhedged interest-rate exposure".

The crucial question is whether someone's assets and liabilities mature at different points in time. People with short-dated assets but long-dated liabilities—for example a saver with lots of cash in the bank to fund a purchase ten years hence—do badly when rates fall. They are the euthanised "rentiers", who must save more to fund spending later (a rare example of lower rates depressing consumption). But those who wish to spend today and hold long-dated assets, such as long-term government bonds, do well.

What does this framework imply for rich and poor? Mr Auclert presents some evidence that Americans who are older, or whose incomes are higher, tend to be on the losing end of asset-price effects when rates fall. But he says it is hard to measure the effect precisely. A recent working paper by Panagiota Tzamourani of the Bundesbank finds that within the euro area, average unhedged interest exposure varies a lot between countries, seemingly in line with the prevalence of floating-rate mortgages. But Ms Tzamourani also finds that younger households and those with low net wealth benefit from lower rates almost everywhere.

Good hedges make good neighbours

That seems to turn conventional wisdom on its head. Far from helping the well-heeled, the changes to financial markets induced by low rates could be hurting them, just as Keynes argued. Some might object that they do not deserve the hit: surely those who save in cash for future consumption are more responsible than those who wish to borrow and spend? Keynes would have retorted that in a world awash with capital, extra saving does not benefit society. In a slump it is harmful. In any case, if fiscal stimulus is preferred to low interest rates, taxpayers would end up with debts instead.

Monetary stimulus may not help the poor as much as deficit-financed welfare or progressive tax cuts. Structural problems in the economy, such as market power, may allow the rich to earn high returns even as rates fall. But egalitarians—and those without wealth—probably need not fear doveish central banks.

Changing of Lagarde

The choice of the IMF's next boss could be a coronation

That will not prevent a fight over the fund's future

Jul 13th 2019

FOR THE purposes of decision-making, the IMF's 189 member countries are divided into 24 constituencies of peculiar shapes and sizes. Ghana, for example, belongs to the same group as Afghanistan. Ecuador sits with East Timor. But in choosing the next boss after Christine Lagarde moves to the European Central Bank in October, the most decisive constituency may be a different group entirely: the "New Hanseatic League". This includes eight small, northern members of the European Union (EU) with bad weather and good credit ratings. They lost out in the fight for big EU jobs earlier this month. In compensation they may have a large say in Europe's pick to lead the fund.

That could be good news for Mark Carney, the charismatic and credentialled boss of the Bank of England. As well as Canadian and British citizenship, he holds a passport from Ireland, one of the new Hanseatics. If Ireland champions his cause in the league, and the league backs him within the union, he would be hard to resist within the fund. By convention the IMF is led by whichever European candidate the Americans can live with. And the Americans are unlikely to object to him, especially after the Europeans dutifully supported Washington's choice to run the World Bank earlier this year.

What about an Asian rival? One obvious candidate is Tharman Shanmugaratnam, a former finance minister and deputy prime minister of Singapore, who also chairs its monetary authority. As well as a background in economics, he has the virtue of hailing from a small country that is neither improvident nor imperious—the kind of country that would be a member of Asia's Hanseatic league if it had one.

But even in a fair race he would struggle to beat Mr Carney, who has run two of the world's biggest central banks. And given the horse-trading between Europe and America, the IMF race will not be entirely fair. Why, then, bother entering? Candidates from outside Europe face a Catch-22: anyone credible enough to win an unrigged race will not be crazy enough to enter a rigged one. That is a pity, because a contest might force the fund's members to think harder about the institution's future.

In 2004 Mr Shanmugaratnam revealed that he kept four canes in his cupboard, one for each of his children. But he never had to use them. That is many people's ideal for how the IMF should work. Borrowing countries would live up to its standards of economic behaviour, fearing that otherwise it would refuse further lending. And speculators would be intimidated by the "flexible credit lines" and other tools in its cupboard, meaning that they would never test the currencies and creditworthiness those tools are designed to defend.

In practice the fund rarely operates that way. It is reluctant to cut its members off, especially if they have powerful friends. This month, for example, it approved a $6bn loan to Pakistan, which has often flouted its prescriptions in the past. And even its biggest-ever loan, over $50bn approved for Argentina last year, was not enough to stop capital fleeing and the peso slumping in subsequent months. Rather than rely on the uncertain protection of the fund, many members have chosen to look after themselves, accumulating over $11trn-worth of reserves between them.

Its next boss will find its cupboard a little bare. America is opposed to increasing members' "quotas": their permanent financial commitments to the fund (which now come to $660bn). Instead the IMF is trying to shore up alternative sources of financing, including $250bn it has borrowed for five years from 40 richer members.

Limited firepower also threatens its legitimacy. A country's financial contribution to the IMF determines its share of votes in the institution. So without an overall increase in quotas, the fund will struggle to redistribute voting power from over-represented countries in Europe to faster-growing members elsewhere. To do so would require cutting some members' stakes in absolute terms, rather than merely freezing them as others expand. China, according to the IMF'S independent evaluation office, is now more under-represented than it was before the voting reform of 2008, because its share of global GDP has grown faster than its share of IMF votes.

The fund's response to this impasse has been innovative. Just as it has sought alternative sources of financing, it has also sought alternative wells of legitimacy. Ms Lagarde has energetically broadened its concerns to include inequality, gender and climate change.

Critics worry that the IMF is now spreading itself too thinly, taking on new tasks when it has yet to master its customary responsibilities. It does not seem sure how to stop prices from rising in Argentina or those in Japan from threatening to fall. Should it wage an additional crusade against rising temperatures worldwide? But its new preoccupations may also help it meet some of its core duties. Its traditional advice to tighten belts, for example, carries more weight in many parts of the world because it has shown that it is sensitive to broader social ills. Good parents know that showing the cane is no substitute for showing that you care.

Buttonwood

Why everybody is concerned about corporate-bond liquidity

Investors expect to find sellers at all times, but dealers lack capacity to buy

Jul 13th 2019

IN SEPTEMBER 2007 Britain suffered its first bank run in a century. Television pictures showed a long queue of depositors outside a branch of Northern Rock. Alistair Darling watched in dismay from Portugal, where he and his fellow European Union finance ministers were gathered. “They’re behaving perfectly rationally, you know,” Mervyn King, the governor of the Bank of England, said in the smarty-pants manner that economists are cherished for. Mr Darling was uncharmed. “It was not what I wanted to hear,” he recalled.

What Lord King probably had in mind was a well-thumbed textbook model. Banks have a liquidity mismatch. One side of the balance-sheet is hard-to-sell loans; the other side is deposits that can be withdrawn in a trice. If depositors believe that a bank is sound, there will be no runs on it. But if enough start to demand their deposits back, it makes sense for everybody to join the rush.

This model can also be applied in other areas. Take the corporate-bond market. Every policy body of stature, from the IMF to the European Central Bank (ECB), has worried about a growing mismatch between investors’ expectations that they can sell out at any moment and an underlying shortage of liquidity in the market. More investors are using corporate-bond funds as an alternative to cash. But fewer dealers are willing to trade bonds in size. A big scare could feasibly start a run.

The dynamics of capital-market runs are similar to those of bank runs. You see them in currency crises. Foreign-exchange reserves, say, are slim relative to the scale of local-currency assets held by flighty investors. Should enough of those investors sell out, others will soon follow. The result is a rout. There is a similar pattern with investment funds that promise speedy withdrawals but hold assets that cannot be sold quickly. Bad news prompts withdrawals. The speedy get paid. Other investors then try to get out, too. But the fund cannot sell assets fast enough. It is forced to suspend redemptions.

Such trouble is especially likely with corporate bonds, which are inherently illiquid. In contrast with trading in shares, where buy and sell orders are matched on electronic order books, corporate bonds are traded over-the-counter. Bonds are not as standardised as shares. A company may have bonds of several different maturities. If you want to buy or sell, you call a dealer.

The ease with which investors can trade bonds—the market's liquidity—depends a lot, then, on the readiness of dealer banks to stockpile securities. Where there is heavy selling, dealers would ideally warehouse cheaper bonds for when people want to buy again. But since the financial crisis new rules have made it less cost-effective for banks to use capital for trading of any kind. The inventory of corporate bonds held by dealers has fallen sharply in the past decade (see chart).

The Economist

As the role of dealers has shrunk, the thirst for instant liquidity has increased. Derisory yields on the safest government debt have drawn investors towards riskier securities, including corporate bonds. A cheap and convenient way to invest in them is to buy an exchange-traded fund, or ETF. These are low-cost investment funds that hold a basket of bonds, usually mirroring a benchmark index. They trade on stock exchanges just as listed shares do. The ease of buying and selling bond ETFs is a big part of their appeal. They are also often used as depositories for spare cash. Studies are divided on whether ETFs make the underlying bonds more or less liquid. But there are concerns that in a stressed market, outflows from ETFs might make a bad situation worse.

And it is not hard to make a case that the corporate-bond market has become more fragile. Many firms in America have issued lots of bonds to buy back their own shares. With extra leverage comes more risk. Half of all investment-grade bonds have a credit rating of BBB. In a recession a chunk of those bonds will be downgraded to junk. Many mutual funds and ETFs can hold only investment-grade bonds. If a lot of bonds have to change hands quickly, that could easily overwhelm the market's limited liquidity. Prices might fall a long way.

Just how messy the next big shake-out in the corporate-bond market is depends on many things: on how weak the economy gets; on how many BBB borrowers can avert a downgrade; on how quickly funds can be raised to buy at fire-sale prices. For now, it seems rational to hold bonds that afford a little extra yield. Smart-alecks say this will surely end badly. But who wants to hear that?

Another self-inflicted wound

Recep Tayyip Erdogan sacks the head of Turkey's central bank

The defenestration of Murat Cetinkaya could lead to a currency crisis

Jul 13th 2019 | ISTANBUL

TURKEY'S ECONOMY had just begun to show signs of recovery. High interest rates, a measure of calm following local elections earlier this year and attempts to rebuild a strained relationship with America had allowed the lira, which fell by 12% against the dollar in the first four months of the year, to strengthen. Inflation had fallen to 16%, from 25% last autumn.

But in the small hours of July 6th Recep Tayyip Erdogan, Turkey's president, put the progress in jeopardy by sacking Murat Cetinkaya, the boss of the central bank. Though Mr Cetinkaya was not widely admired by investors, his peremptory removal unsettled markets. Mr Erdogan compounded the damage by proclaiming that high lending rates were to blame for inflation (a view roundly mocked by economists) and making clear that it was he who was in charge of monetary policymaking. "We told him several times to cut interest rates at meetings on the economy," said the president of Mr Cetinkaya. "We said that if rates fall, inflation will fall. He didn't do what was necessary."

Mr Erdogan scored an own goal, says Paul McNamara, an investment director at GAM, an asset manager. "The best case is that they get a lira sell-off that keeps rates higher than they otherwise would have been. The worst case is that they set off a currency avalanche." Mr Cetinkaya's sacking showed that hopes of a respite in Turkish politics after the local elections were misplaced, says Wolfango Piccoli of Teneo, a risk-advisory firm.

The lira plunged by over 3% against the dollar when trading began on July 8th, before recovering slightly. Turkey's stockmarket index dropped by 1.5%.

Mr Cetinkaya had reportedly been pressed by Mr Erdogan and his son-in-law, Berat Albayrak, the finance minister, to use the bank's dollar reserves to support the lira ahead of the local elections. When Mr Erdogan and Mr Albayrak leaned on him to cut rates or resign, Mr Cetinkaya declined to do either—and was shown the door. He is the first central-bank boss to be sacked in Turkey since 1981, when an army junta dismissed most of the country's political class after a coup.

The new boss of the central bank is Murat Uysal, Mr Cetinkaya's deputy—who is off to a terrible start. On July 8th he faced accusations of plagiarism in his Master's thesis (as it happens, on inflation-targeting). He has not yet responded to the claims. Renewed pressure on the lira means he will struggle to cut rates at the next meeting of the monetary-policy board, on July 25th. Doing so could set off another rout, says Ibrahim Turhan, a former head of the Istanbul stock exchange.

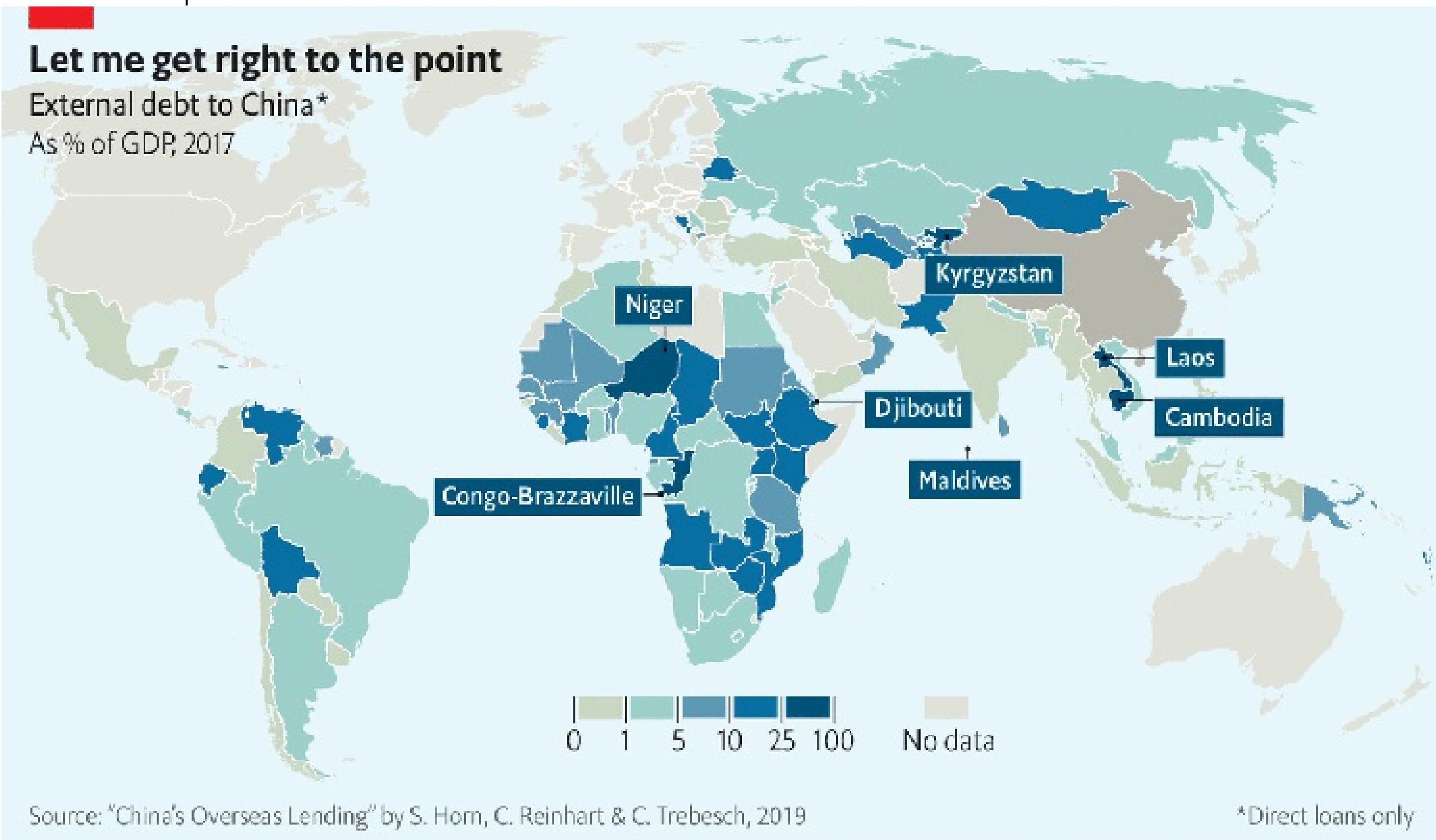
More bad news for the economy may be in store. America has threatened economic sanctions against Turkey regarding its purchase of Russia's S-400 air-defence system. (Under a law passed in 2017, America can punish "significant transactions" with Russia's defence sector.) Despite rumours of a compromise between Mr Erdogan and President Donald Trump, officials in Washington say sanctions are imminent. The Russian weapons were scheduled to arrive in Turkey as *The Economist* went to press. Mr Uysal faces a baptism of fire.

Hey, big lender

A new study tracks the surge in Chinese loans to poor countries

Nearly half of China's credit is hidden, and much of it goes to vulnerable borrowers

Jul 13th 2019 | SHANGHAI



The Economist

LOAN TALKS with Belarus; funding for bridges in Liberia; a possible gas project in Timor-Leste; accusations of exploitation in Tanzania; a corporate dispute in India; pledges to support the Rwandan private sector. And that was just the past few weeks. Such is the frenetic pace of China's overseas lending that its outstanding loans have risen from almost nothing in 2000 to more than $700bn today. It is the world's largest official creditor, more than twice as big as the World Bank and IMF combined. Yet tracking the money is hard because of limited transparency in its disclosures.

A new study by Sebastian Horn and Christoph Trebesch of the Kiel Institute for the World Economy and Carmen Reinhart of Harvard University offers the most comprehensive picture yet of China's official credit flows (including state-owned banks). It adds to concern about whether China has sowed the seeds for debt problems abroad. They find that nearly half of China's lending to developing countries is "hidden", in that neither the World Bank nor the IMF has data on it.

The problem is most severe for the most vulnerable borrowers: the authors conclude that in its reporting to the Bank for International Settlements, an organisation of central banks, China has disclosed no loans to Iran, Venezuela or Zimbabwe, despite giving them plenty in the past 15 years. They speculate that China avoids cross-border claims by disbursing loans directly to Chinese contractors, so that recipient governments will not misuse funds.

According to the authors, the 50 biggest recipients now have debts with China worth about 17% of their GDP on average (see map), up from 1% in 2005. Strikingly, many were granted debt relief by wealthy creditors in the early 2000s after a wave of defaults. But thanks to China's largesse they are now on track to reach the same level of debt that they had before the crisis.

Whereas the norm for other official creditors is to lend at concessional terms, about 60% of Chinese loans are extended at higher interest rates and shorter maturities. They often have commodity revenues as collateral. China has started to talk about making its loans more sustainable, but there is little evidence of that so far.

Though China is often depicted as an unforgiving lender, the study finds that it has engaged in at least 140 restructurings and write-offs of external debt since 2000. Moreover, the boom could soon tail off. Chinese economic growth and capital outflows are closely correlated. As China slows its lending floodwaters might recede.

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A threadbare lender's new style

Recognising reality at Deutsche Bank

After so many failures, investors will take some convincing

Jul 13th 2019

"THE MOST fundamental transformation of Deutsche Bank in decades." So Christian Sewing described his refashioning of the chronically unprofitable firm, announced on July 7th. Germany's biggest lender is trimming its investment bank—and excising the trading of shares altogether. Mr Sewing, chief executive since April 2018, intends to cut costs by €5.8bn ($6.7bn) a year, a quarter of the total, by 2022. Eighteen thousand jobs, a fifth of the payroll, will go. Some equity traders were shown the door on July 8th.

The restyling has taken five months to plan (during which time Deutsche also pondered and dismissed a merger with its Frankfurt neighbour, Commerzbank). It looks bold. Yet it is also a belated recognition of reality. For years after the financial crisis, Deutsche clung to the hope that it would again strut alongside Wall Street's most glamorous names, as it had for a heady 20 years. Mr Sewing has binned the last threads of that ambition. The remodelled Deutsche—150 years old next year—will look a lot more like the sober servant of international companies it originally was.

Mr Sewing is reshaping the bank around four lines. At the centre will be a corporate bank, chiefly providing European businesses with cash management, trade finance, foreign exchange and so forth: dull-sounding work but steady. A substantial investment bank remains, bringing in 30% of revenue, but geared to the needs of corporate clients, by arranging issues of securities and advising on mergers. The third element is Germany's biggest retail bank, combining an eponymous posh brand and the dowdier Postbank, and the fourth is DWS, its biggest asset manager, of which Deutsche owns 80%. Mr Sewing is stuffing €74bn of risk-weighted assets he wants to discard into a "capital-release unit" (he balks at the term "bad bank" but may have to live with it).

Restructuring will cost Deutsche €7.4bn, of which €5.1bn will land in 2019, entailing a fourth net loss in five years. Mr Sewing also plans to spend €13bn on sharper technology and €4bn on improving internal controls. Deutsche has been in legal hot water too often. According to the *Wall Street Journal*, America's Justice Department is investigating whether Deutsche broke laws in its work for 1MDB, a Malaysian state development fund. Yet he intends to raise no new equity. By 2022 he expects Deutsche to be returning 8% on tangible equity and starting to pay shareholders a bounty of up to €5bn.

The restructuring is a start in itself. The four core businesses notionally returned 1.7% last year and the bad bank, much of which Deutsche hopes to run off briskly, lost 6%. A more stable business model should mean lower funding costs. Still, an 8% return might be the bare minimum that shareholders expect. According to the European Banking Authority, a supervisor, four-fifths of European banks estimate their cost of equity to be above that mark. Even at a spruced-up Deutsche, costs will soak up 70% of revenues. That beats today's 90%-plus, but the best banks do far better.

The targets may also be hard to hit. Granted, Deutsche has met Mr Sewing's cost-cutting goals so far; and he says his projection for revenue growth is "conservative", just 2% a year. But European banking is far from lucrative. Interest rates are rock-bottom and growth is slow. Worse, in Germany an army of public-sector and co-operative banks tussle for the custom of savers and companies. Michael Rohr of Moody's notes that Deutsche's revenues have dropped since its last strategic revamp, in 2015. Quitting equity trading, he adds, makes Deutsche's investment bank even more reliant on fixed income, where fee pools have been shrinking.

Sensible as Mr Sewing's plan looks, because Deutsche has fallen short so often investors will take some convincing. After it was unveiled, the share price fell to new lows, of just a fifth of net book value. "It is different this time," Mr Sewing told journalists on July 8th. It has to be.

Ball-game theory

To get a ticket to Wimbledon you must be rich, patient or lucky

Organisers allocate seats in a variety of ways

Jul 13th 2019

ECONOMICS IS ALL about allocating scarce resources. Usually that is done by pricing. If demand for strawberries exceeds supply, prices will rise. Customers may switch to raspberries, or farmers may plant more strawberries. But some markets are more complex.

Take those for tickets to popular events—like Wimbledon. The tournament is played over a fortnight each July at the All England Lawn Tennis & Croquet Club, which has a fixed capacity. Raising prices until demand met supply would exclude most tennis fans, tarnishing the tournament's image. A price overshoot would leave some seats empty, ruining the atmosphere.

Around a sixth of seats on Centre Court, where the big-draw matches are played, are reserved for debenture-holders, who pay through the nose for a specific seat for five years. These can be freely resold. Debentures for 2021-25 went for £80,000 ($100,000); a single resale ticket costs thousands.

Other seats are rationed in different ways. The first is chance: the All England Club runs a ballot six months before the tournament each year. Winners get the option to buy a randomly allocated pair of tickets at a price that varies according to the day and court—this year, between £33 and £190. These cannot be resold.

The second is queuing. Except on the final four days, 500 tickets for the top courts are sold every day to those first in line. And every day thousands more ground tickets are available for £8-25; these allow access to all other courts. The tickets of those leaving early are also resold for just £10-15.

With so many rationing methods, fans must be tactical. Scoring a ticket to Centre Court generally means turning up a day in advance; a ground ticket merely requires getting up at the crack of dawn.

Your correspondent favours a more relaxed approach. Avoid the first few days, when the top seeds dispatch their opponents in short order—and the last few, when there are fewer matches. In between are plenty of contests, many of them close-fought and therefore long. Maximise your tennis-watching and minimise your queuing by joining the resale line in the early afternoon—thereby enjoying the perfect match.

Science and technology

Automotive engineering: Back to the future
A new type of engine for electric cars.

Pigments: Studying scarlet
A team of chemists are searching for a new red pigment.

Palaeoanthropology: The ancientest Greek
The oldest known Homo sapiens outside Africa was Greek.

Conservation and tourism: What? Me worry?
Contrary to the fears of some, penguins and people do mix.

Automotive engineering

A new type of engine for electric cars

Putting motors in wheels lightens vehicles and shrinks batteries

Jul 13th 2019

AT THE DAWN of the motor industry one of its pioneers, Ferdinand Porsche, caused a sensation at the Paris World Fair in 1900 with a vehicle driven by a pair of electric motors incorporated into its front wheels. This arrangement allowed the Lohner-Porsche (pictured above) to dispense with cumbersome belts, chains and gears. It was thus able to nip along at a heady 35kph for up to 50km after its lead-acid batteries had been charged up.

Porsche, like other carmakers of the time, eventually turned to the internal-combustion engine for greater range and flexibility. His eponymous firm went on to build some of the fastest sports cars around. But despite the fact that electric vehicles are now returning to the road with a vengeance, the idea of using “in-wheel” motors of the sort Porsche pioneered has failed to follow suit. Some vehicle manufacturers and their suppliers, including Michelin, a French tyremaker, and NSK, a Japanese component-producer, have developed modern versions of in-wheel drives for cars, but these have yet to make it into production models.

There are two reasons for this reluctance. One is that an in-wheel motor’s components and wiring are exposed to the elements rather than being snug inside a vehicle’s body. They must therefore be robust enough to handle the high voltages such motors normally require while simultaneously being protected against damage from road debris and the risk of shorting out when periodically soaked in water. The other concern is that the additional weight of the motors on each wheel increases a vehicle’s “unsprung” weight—the part of its mass not supported by its suspension. A high unsprung weight results in a bumpy ride and poor handling.

Taking a load off

All this means that most electric cars continue to use drivetrains that resemble those found in combustion-engined vehicles. They have an electric motor at the front or the rear (or, sometimes, both) which turns the wheels via shafts and gears. But if Indigo Technologies of Cambridge, Massachusetts has its way, all this will change. Since the firm was founded in 2010 by Ian Hunter, a professor of mechanical engineering at the Massachusetts Institute of Technology, Indigo's engineers have been developing an in-wheel drive system they call the T1. They believe that their system, a module that incorporates brakes, steering and an active suspension, as well as a motor, overcomes both the electrical problem and the unsprung-weight problem, thus paving the way for in-wheel drives to become mainstream.

To reduce the electrical difficulties, the T1 runs at 48 volts instead of the 400 volts or more used by the motors in existing electric cars. The choice of 48 volts is not arbitrary. That voltage is also rapidly becoming standard for the circuits which run things like lighting, climate control, entertainment systems and adjustable seats, even in conventional combustion-engine-driven cars. Lowering the voltage almost tenfold in this way does, though, make the T1's motor easier to protect and insulate, which in turn makes it cheaper to produce than higher-voltage motors, says Brian Hemond, Indigo's boss.

All this is possible because fitting T1s to all four wheels eliminates the need for driveshafts, transmissions, suspension parts and other weighty components. Those weight savings allow the size of the battery pack to be reduced, saving still more weight.

Reduced vehicle weight means also that the propulsive motors do not need to be as powerful as those of conventional electric cars—especially as the task of propulsion is divided four ways between them. Nor are any gears involved, for the motors turn only as fast as the vehicle's wheels, which is a relatively low speed for an electric motor and further reduces its need to be powerful. That translates to a low voltage because the power of such a motor is a product of voltage and current (P=V*I, one of the fundamental equations in electricity). At a constant current, voltage can be reduced.

All this frees up space elsewhere in the vehicle, allowing an electric car to be designed from scratch to be more efficient and therefore cheaper to run. Other benefits also come from lightness. A smaller battery can be topped up more effectively by the regenerative braking built into the module, as well as being faster to recharge when plugged into the mains. Indigo has tried the T1 out on prototype cars redesigned to be more aerodynamic. It reckons these prototypes need only a tenth of the power required by a combustion-engined vehicle, even at highway speeds.

A combination of a lighter vehicle and lighter components in the T1 modules also reduces the amount of unsprung weight. As for ride and comfort, the active suspension and the ability to control separately the power applied to each wheel permit better grip and increased stability during braking and cornering.

Indigo is talking to carmakers and components firms and hopes, by the end of the year, to land its first production contract. Dr Hemond expects particular interest from firms developing ride-sharing and autonomous vehicles. The sort of small, sleek vehicles or personal-mobility pods which such in-wheel drive systems might inspire would be a world away from the perambulatory Lohner-Porsche. But they would have made Porsche himself wonder what might have been had he stuck with the electric motor.

Pigments

A team of chemists are searching for a new red pigment

Ten years ago they found the first new blue for two centuries

Mas Subramanian

Jul 13th 2019

HUMANS ARE creatures with sophisticated colour vision, so the market for pigments is big—about $30bn a year. In this marketplace, however, not all colours are equal. In particular, bright reds, much desired for their attention-grabbing qualities, are tricky to make, and each of the existing options has flaws.

The especially vivid reds made from cadmium, lead and mercury are toxic and so their use is now restricted. Cochineal, created by crushing up *Dactylopius coccus*, a species of scale insect, is safe to handle and consume, but its safety is trumped in the minds of some by its animal origin. A campaign by vegans in 2012, for example, forced Starbucks to remove cochineal from its Strawberry Frappuccinos. Other red pigments, meanwhile, either start off dull (oxides of iron) or fade to dullness unless given special protection from ultraviolet light (Pigment Red 254, the source of Ferraris' characteristic scarlet livery). The hunt is therefore on for a non-toxic, non-controversial, chemically stable red.

One of those searching is Mas Subramanian, a materials scientist at Oregon State University. Dr Subramanian already has one new pigment to his name. In 2009, when trying to find a material known as a multiferroic, which has distinctive electronic and magnetic properties, one of his research students mixed oxides of yttrium, indium and manganese and heated them to 1,200°C. The result was a powder as brilliant as a bluebird's wing. YInMn (pictured), as it is now known, was the first new blue discovered for two centuries.

The perfect red has so far eluded Dr Subramanian—in part because it is hard to predict the colour of a material before you make it. Small alterations to a crystal's structure can dramatically alter which parts of the spectrum that crystal absorbs and which it reflects. The green of emeralds and the red of rubies, for instance, are both caused by chromium atoms, but the atoms in question are bonded into their respective lattices in different ways.

As it happens, rubies are one of Dr Subramanian's inspirations. His hope is that by piggybacking on the structure of their crystals—already known to yield an appropriately, well, ruby, colour—he might be able to reproduce the effect. A weakness of this approach is that rubies themselves make an unsatisfactory pigment. When crushed, they become pale pink.

A second avenue may be more promising. Many inorganic reds, including those based on cadmium, lead and mercury, are semiconductors. Dr Subramanian and his team hope to use tin—a metal in the same group of the periodic table as lead—to produce a similarly vibrant, though non-toxic, semiconductor pigment.

Inevitably, the semiconductor approach does bring problems of its own. A semiconductor's colour depends on a phenomenon called its band gap. This is the ease with which its atoms can shed electrons. The process of shedding requires energy, often in the form of light, so a substance's band gap helps determine which frequencies of light it absorbs and which it reflects. Unfortunately, band gaps can, themselves, be altered by exposure to energy in the form of heat or light. That changes the pigment's colour.

For example, mercury sulphide, known to painters as vermilion, has a small band gap. This means it absorbs much of the visible spectrum, reflecting only red because red light is insufficiently energetic to shift the relevant electrons. If the gap is diminished still more, as sometimes happens when vermilion is exposed to light, the pigment absorbs all visible light and turns black. Making a semiconducting red is not enough, then. It also needs to stay red when in use. And that essential property remains elusive.

Dr Subramanian and his team have got close. The tin approach has resulted in some promising flame-bright superconducting oranges. But shrinking the band gaps of such materials just that little bit further, to the point where a brilliant red is reflected instead, has so far proved beyond their chemical skills.

Human origins

The oldest known Homo sapiens outside Africa was Greek

The skull was dug up in the 1970s, but only now identified

Jul 11th 2019

EARLY HUMAN fossils are so rare that each new discovery may rewrite the textbooks. A chance find two years ago in Morocco, for example, pushed the origin of *Homo sapiens* back to at least 315,000 years ago, from a previous minimum of 260,000 years based on remains found in South Africa. Now, as they report in this week's *Nature*, a group of palaeontologists have extended the known geographical range of early *Homo sapiens* from Africa to Europe.

Katerina Harvati of the University of Tübingen, in Germany, and her colleagues found the relevant skull fragment not in the ground, but in a museum in Athens. It was one of a pair of specimens dug up in the 1970s from Apidima, a cave in southern Greece. Both were recognised as being human fossils of some sort, but had not been dated or properly analysed. Dr Harvati and her team have now done so, using techniques unavailable to the original finders.

One fossil is a reasonably complete, though fragmented, skull. Radioisotope dating shows it is 170,000 years old. Computer reconstruction reveals it to be an example of *Homo neanderthalensis*, Neanderthal man, a species widespread in Europe until 40,000 years ago, when *Homo sapiens* took over. The other fossil, the back half of a cranium (pictured, attached to some rock) turned out to be *Homo sapiens*. It is 210,000 years old, and thus the third-oldest known example of modern humanity.

That is interesting. But what has excited attention is that it is also the oldest *Homo sapiens* specimen found outside Africa—the continent where, according to all the available evidence, the species originated.

How *Homo sapiens* spread from Africa to dominate the world is a story that once looked simple, but is getting rapidly more complex. Genetic data suggest most people alive today who are not African or of recent African descent can trace their ancestry to one or a few “out of Africa” migrations that began about 60,000 years ago into Asia, and thence spread to Australia, Europe and the Americas. More detailed analysis, though, shows that on the way through these places some of those ancestral humans interbred with other human species, now extinct, including Neanderthals.

Fossils also show that *Homo sapiens* was present in the Middle East well before 60,000 years ago. Not, however, as long ago as the inhabitant of Apidima whose remains Dr Harvati has now analysed. Why, having reached Greece, *Homo sapiens* did not continue to spread into the rest of Europe and thus take it over 170,000 years earlier than happened in reality is a mystery—perhaps one on which future fossil discoveries will shed a little light.

Correction (July 11th 2019): *An earlier version of the title of this piece incorrectly stated that the oldest known Homo sapiens was Greek. In fact this story is about the earliest specimen found outside of Africa. This has been updated*

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Conservation and tourism

Contrary to the fears of some, penguins and people do mix

At least, that is what an analysis of their guano suggests

Jul 13th 2019

IN 1969 A cruise ship called MS *Lindblad Explorer*, the first vessel purpose-built for such a trip, and carrying 90 passengers, arrived in Antarctic waters. Since then, Antarctic tourism has increased dramatically. Nowadays, well over 35,000 visitors a season make landfall in the austral summer. Most of these landings take place on the Antarctic peninsula and its adjacent islands, with the intention of visiting colonies of gentoo penguins.

That worries many conservationists, who fear such quantities of people may be disturbing the penguins, to the birds' detriment. However, a study just published in *Polar Biology* by Maureen Lynch of Stony Brook University, in New York, brings good news for penguins, tourists and tour-operators alike—for, as far as Dr Lynch can determine, the tourists' visits are not stressing the birds at all.

The conventional way of deciding whether visits by tourists are stressful to the animals so visited is to recruit a bunch of PhD students to observe those animals and make copious behavioural observations when tourists are and are not present, in order that the two may be compared. This is arduous and expensive, for even PhD students, lowly as they are, need to be housed and fed. An alternative is to sample the animals' blood and analyse it for stress hormones such as corticosterone. The problem with this is that catching animals to measure their hormone levels is, of itself, stressful.

There is, however, a third way, which is to look for stress hormones in animals' droppings. Dr Lynch knew from previous work by her collaborators at the University of Houston that corticosterone and its metabolites show up in penguin guano. Moreover, the data showing this hinted that corticosterone concentrations in guano went up shortly after animals were approached by human beings, and then returned to normal later. With that in mind, she decided to compare guano from penguin colonies visited by lots of tourists with those farther off the beaten track.

She and her colleagues therefore visited the Antarctic peninsula during the tourism seasons of 2017-18 and 2018-19. Once there they collected 108 guano samples from 19 gentoo penguin colonies and returned them to the laboratory for analysis. A few of the sites sampled (like Bryde Island and Moot Point) are hard to get to and never see tourists. Others see between 5,000 and 15,000 visitors a season. One (Neko Harbour) sees more than 20,000.

As the researchers expected, all the samples contained corticosterone and its associated metabolites. Contrary to their expectations, however, there were no significant differences between samples from different sites, regardless of the number of visitors those sites played host to. It seems, then, either that penguins do not worry about human visitors in the first place, or that they quickly get used to them, which is good news all round. What is more, Dr Lynch's method provides an easy way to monitor the situation. If it does transpire that, as tourist numbers grow, they cross a threshold where they become oppressive to the birds, it will be possible to advise tour operators of the fact and ask them to put their charges ashore to look at less-visited colonies.

Books and arts

Liquid assets

India’s magnificent stepwells are relics of a nuanced history

A restoration drive is reviving their glory—and uncovering their wisdom

Jul 13th 2019 | DELHI

THE STORY goes that devout followers of Nizamuddin Auliya, a Sufi saint who lived from 1238 to 1325, had already begun work on his *baoli* or stepwell when Ghazi Malik, the new sultan of Delhi, ordered all projects to stop until the construction of an impregnable citadel for him was finished. Out of adoration for Nizamuddin, the labourers worked on the fortress by day and the *baoli* by night. Enraged, Ghazi Malik banned the sale of oil for lamps—whereupon Nizamuddin blessed the well’s water and told his followers to use that instead. Miraculously, it burned.

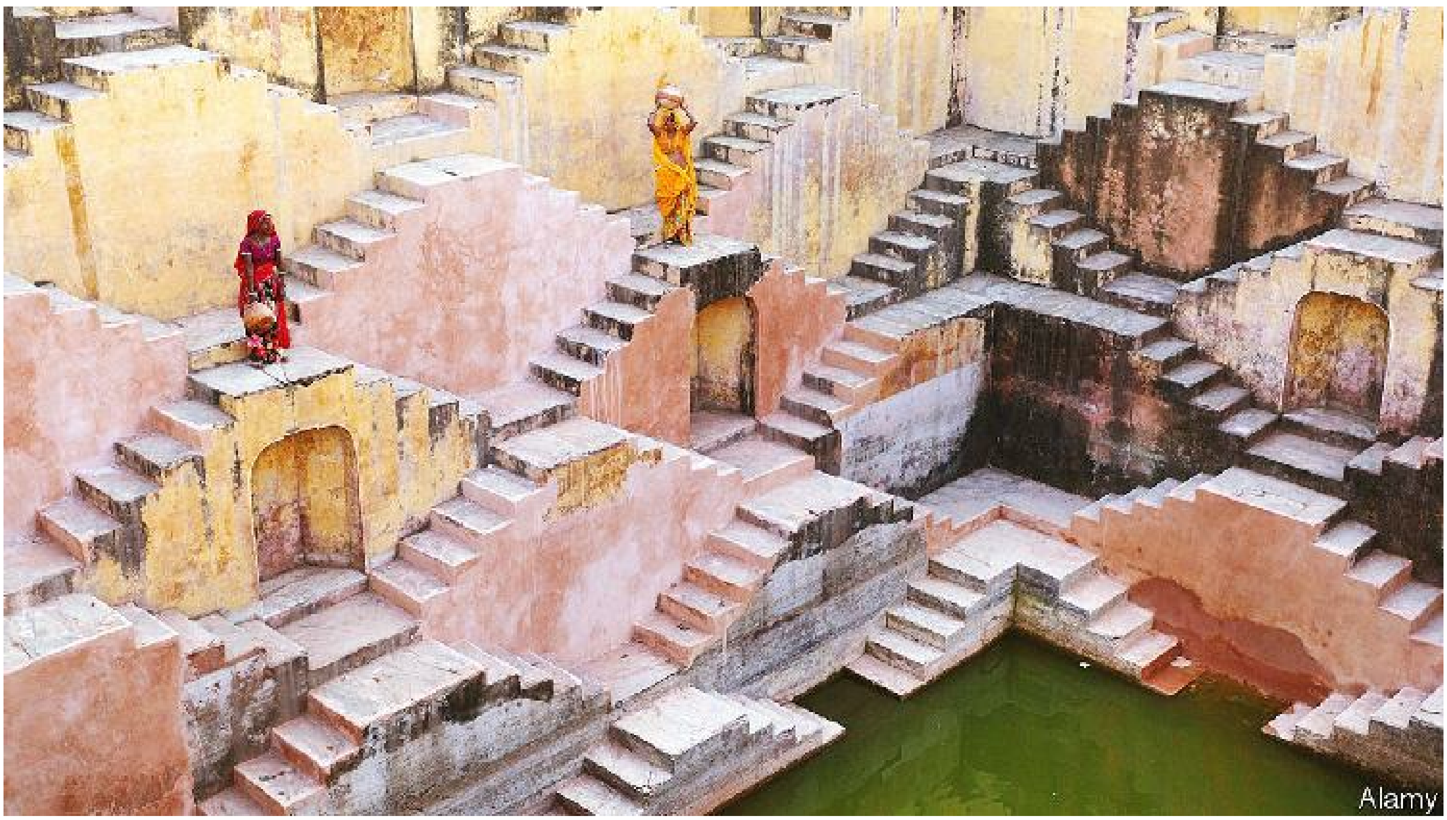
Today, Nizamuddin remains one of South Asia’s most admired Sufi saints. His message of tolerance and humanity appeals in an age when political leaders preach communal division. Not just Muslims but Hindus, Sikhs and Christians flock to his *dargah*, or shrine, in New Delhi, where *qawwali* songs of devotion are performed. Thousands crowd every day down the narrow, beggar-lined passageway that runs alongside the *baoli* on their way to strewing rose petals on the holy man’s tomb. Many pilgrims believe in the healing power of the *baoli* water (pictured above).

Until recently that water was filthy. The tank was full of rubbish; the neighbourhood’s raw sewage flowed into it. Worse, the structure, which is more than 160 feet (49 metres) deep, was in an advanced state of dilapidation. One section of its walls of grey Delhi quartzite had collapsed. Other parts were bulging alarmingly—and, for the dozens of families who had built homes atop them, perilously.

India has thousands of surviving stepwells, but the great majority are similarly run-down. Many others have vanished, often filled in and built upon. This neglectful attitude is extraordinary, for they are one of India’s unsung wonders. At last, through restoration efforts by the Aga Khan Trust for Culture (AKTC), among others, they are starting to get the recognition they deserve.

The earliest of the wells date back almost 2,000 years. They were first and foremost a response to a climate in which a year's rains fall chiefly in the four brief months of the summer monsoon, when they fall at all. The point of the staircases and side ledges is to provide permanent access to ever-fluctuating water levels—and cool shelter in the hottest months. In the north-western regions that are India's most arid, such as Rajasthan and Gujarat, the *baolis* underwrote life, as sources of both irrigation and drinking water. They were often located on ancient trade routes. In Delhi, every community once had its own tank.

Many stepwells were used for ablution; the tanks associated with mosques, Hindu temples and other shrines offered the most purificatory form. Summoning water from the depths was also a symbol of temporal power. Around Hyderabad in south-central India, many of the *baolis* were built by kings and zamindars. A surprising number were built at the behest of women, including princesses, courtesans and merchants' wives, who wished to attain immortality through the gift of water. Indeed, stepwells have always been considered women's spaces—places to gather without inhibitions, away from men's domineering eyes (in India, after all, it is traditionally a woman's job to fetch and carry water). Rani-ki-Vav, or the queen's stepwell, in Patan in Gujarat, graces the new 100-rupee note.



And, as you descend into them, what mind-boggling structures these wells are. Their early builders were capable of astonishing feats of engineering. The Chand Baori in Abhaneri, east of Jaipur (the capital of Rajasthan), resembles an inverted ziggurat. Its 13 storeys and 3,500 narrow steps prefigure M.C. Escher's "impossible objects" by centuries. The Panna Meena Ka Kund stepwell (pictured above), also near Jaipur, is another elaborate masterpiece. Hindu embellishments to *baolis* included covered arcades and pavilions that served as refuges from the heat and even as lodgings. Sculptures and friezes were crammed with gods, animals and humans. Spreading Muslim rule introduced a more austere, though no less impressive, architecture of arches and *jaalis* (stone lattice windows).

Not a drop to drink

But all this was abandoned. The decline of the stepwell began with the British raj, which insisted *baolis* were unhygienic havens of vermin and disease. They called for them to be filled in or barricaded. The raj's administrators were blind to their role in socialising and as subterranean caravanserais. Independent India's encouragement of diesel-powered borewells proved to be the *baoli*'s death-knell.

Yet these borewells' impact on the water table, plus untrammelled urban development, have led to a drastic depletion of natural aquifers and a countrywide water crisis. That is one reason why the restoration efforts of the AKTC and like-minded groups have struck a chord: more Indians are wondering whether old-fashioned water-conservation methods have lessons for today.

At Nizamuddin *dargah*, the trust has saved the *baoli*. Its workers cleared the tank of tonnes of sludge, and relaid the neighbourhood's sewage pipes. Marrying traditional workmanship with laser scans and ground-penetrating radar, the trust rebuilt the *baoli* in a form as close to the original as possible. In the process, a subterranean passage from the saint's tomb to the tank was uncovered, along with water springs and the well's wooden foundations.

Meanwhile, the trust also turned to the adjacent, huge gardens belonging to Humayun's tomb, a Mughal building of even more breathtaking beauty than the Taj Mahal. The lush grounds are covered in tanks and wells that the trust is restoring. With Ratish Nanda, the AKTC's enthusiastic head in India, this correspondent recently descended to the bottom of a *baoli* that was being cleared of centuries of rubble and sludge, bucket by laborious bucket. Two weeks later, water was starting to gush in. One find, covered over by the British, is a 16th-century well built not to capture water, but to ensure it flows back into the underlying aquifer. Mr Nanda says the restoration work has helped raise the area's water table by several metres.

Next door, in Sunder Nursery, the trust has converted 90 acres (36 hectares) of abandoned land into the sooty capital's first new park in years, laid out as a classical Persian garden. Again, tanks and wells are an essential component. "Delhi needed a refuge," says Mr Nanda. The gardens have become one of the most popular spots for the city's families and lovers. The AKTC is now taking on the most ambitious project yet: a 106-acre site in Hyderabad, where seven stepwells were built by the Qutb Shabi dynasty in ornate, white-plastered granite. As became clear during the restoration, they were linked by underground channels that also connect to aquifers.

Some of the obstacles to this effort are not physical but political. To help pay for its conservation work, the trust seeks donations from Indian companies. Yet supporters of the Hindu-nationalist government of Narendra Modi, the prime minister, dislike the idea of a body headed by the Aga Khan, an Islamic leader, being involved in Indian cultural work; besides, the Hindutva agenda is to expunge Mughal influence from Indian life, as if it were an alien, Muslim carbuncle rather than an intrinsic part of the country's inheritance. They are said to have been leaning on companies not to donate. That arid worldview is refuted by the joyful families picnicking in Sunder Nursery, and the devotion of pilgrims at Nizamuddin *baoli*.

The only way out

A grimly compelling study of the psychology of fanaticism

Understanding the suicide wave in Germany in 1945

Jul 13th 2019

Promise Me You'll Shoot Yourself. By Florian Huber.*Allen Lane; 304 pages; £20. To be published in America by Little, Brown Spark in March; $14.99.*

IN AUGUST 1991 Marshal Sergei Akhromeyev, a former head of the Soviet armed forces, hanged himself in his office, lamenting a superpower's end. During the war in Cyprus in 1974, mothers told daughters how to electrocute themselves if Turkish soldiers approached, to avert the pain and shame of rape. For Japanese warriors, self-disembowelment was not a forlorn act but a way to regain their honour.

Among those facing defeat or humiliation, suicide can arise from hopelessness, defiance or calculation. In the many that occurred in Germany during and immediately after the Nazi regime's collapse in 1945, there was a broad range of motives and methods—as Florian Huber, a German writer and film-maker, shows in "Promise Me You'll Shoot Yourself". A bestseller in his homeland, it offers a grimly compelling insight into the psychology of fanaticism.

The best-known acts are those of the Nazi leaders. Adolf Hitler put an end to his life in a bunker below Berlin on April 30th 1945, together with Eva Braun. A day later, his propaganda chief Joseph Goebbels killed himself with his wife Magda, who procured cyanide pills for their six children. But Mr Huber is more concerned with the ordinary people who succumbed to terror or despair, in particular as the Red Army approached Germany's eastern lands.

He focuses on the town of Demmin, where more than 1,000 people are thought to have perished—the numbers are still vague—out of a population of around 15,000. Dozens of bodies were extracted from rivers and lakes in the vicinity, but East German propaganda generally covered up the story, just as it concealed the Soviet cruelties which pushed many to self-annihilation. Whatever the technique (poisoning, shooting, drowning), one striking feature of this suicide wave was that it was often based on a family decision. People who did not want to survive generally did not want their loved ones to live either. The book's title comes from an incident in Berlin, when a middle-aged man gave a pistol to his 21-year-old daughter and implored: "Promise me you'll shoot yourself when the Russians come, otherwise I won't have a moment's peace." In the event, she threw the gun away.

Mr Huber uses many such vignettes to portray the atmosphere of a nationwide epidemic that seems to have claimed at least 20,000 lives (and perhaps many more). An officer on leave from serving in a concentration camp burbled drunkenly about inmates who were electrocuting themselves: "I'll end up running into those wires myself." In smouldering Demmin, a doctor presented his maid with a parcel she assumed was poison; in fact it was a parting gift of two wedding rings, offered hours before he and his wife and daughter ended their lives. The maid was left to write to the couple's son, a prisoner of the British, recounting his family's extinction.

Dreams and nightmares

In the second half of his book, Mr Huber switches tack to give a broad sweep of the Nazi era, tracing the dark exhilaration that overtook previously sane individuals as they came to feel that Hitler could solve all their problems. He describes the denial or glib justifications with which people reacted to the persecution of Jews; some readers may feel he should have dwelled more on that subject. Closer to his main theme, he pinpoints reactions to the assault on the Soviet Union in June 1941. Some had a bleak sense the invasion might fail, others still believed devoutly in the military and moral superiority of the Reich. As news emerged of the atrocities the invaders were committing, and the titanic reverses they began to suffer, some Germans experienced cognitive dissonance. Their faith in Nazism's ultimate triumph grew all the more fervent.

Thus the book hints at a deep truth about war at its dirtiest. When people sense crimes are being committed in their name, they can become even more fanatical in their devotion to the cause, so that an all-out drive for victory, or else martyrdom, seem the only ways these sins can be redeemed. Although he does not make the links explicit, the background Mr Huber sketches provides some important context for the suicides. They were not simply driven by fear of the Red Army's depredations. They reflected the implosion of a Nazi fantasy which had grown even more zealous as its evil became more obvious. Self-destruction did not signify a search for honour or redemption, but rather the collapse of a twisted idea of what honour meant.

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A sea change

Telling Britain’s story from its “ocean-gouged fringe”

David Gange’s book is an argument for a different kind of history

Jul 13th 2019

The Frayed Atlantic Edge. By David Gange.*William Collins; 400 pages; £18.99.*

FOR A KAYAKER caught in heavy swells, the world is all sea. Waves tower. Land is lost. The coastline vanishes to a thin strip, glimpsed for a moment before it veers drunkenly behind the next wave.

If this seems an unusual environment for a historian, David Gange’s book suggests otherwise. “The Frayed Atlantic Edge” is an account of a year-long kayak voyage that he made down the western seaboard of the British Isles, from the northernmost tip of Shetland to the most southerly point of Cornwall. It is also an argument for a different, more personal sort of history. Mr Gange’s subject is the “archipelagic world” of Britain: an interlinked constellation of Atlantic-facing settlements, which are scattered geographically but bound by shared cultures and language. He turns conventional records of the British Isles inside out. Instead of rooting his story in metropolises such as London, he tells it from the “tattered ocean-gouged fringe”.

This is an apposite moment for his project. Over the past few decades, there has been a revival of Gaelic culture and language—led largely by the kind of coastal communities that were previously overlooked. Institutions such as the University of the Highlands and Islands, which has a campus in the Outer Hebrides, have overseen a surge of vigour and confidence. The depopulations that in the 18th and 19th centuries afflicted the outer islands of the archipelago—such as Fair Isle and Foula in Shetland—are being reversed. Young people are staying, Mr Gange observes, and newcomers arriving. There and elsewhere, localism has become a point of pride.

The strength of Mr Gange’s account is his generosity. His own wry persona never overshadows the voices of past and present inhabitants. Artists and writers are his principal guides: Rob Donn, an 18th-century crofterchronicler, sits companionably alongside the modern Scottish poet Robin Robertson, their writing harmonising across time. The references are democratic, familiar names such as Virginia Woolf and Walter Scott keeping company with lesser-known figures, who are nonetheless noteworthy in their own ways. Mr Gange considers a meditation on Bardsey Island, off the coast of Wales, by the poet Christine Evans, and the eerie seascapes of Peter Lanyon, a Cornish painter.

In this way he presents the landscapes that he traverses anew—not just as beautiful wildernesses, but as the by-product of human history, an occasionally troubled braiding of people and place. The craft of the historian, he thinks, lies in "interpreting the intertwining".

It helps that Mr Gange's prose is itself poetic and precise. The hills and lochs of Assynt, for instance, tessellate in shapes "like Euclidian art". He conveys the experience of kayaking through mountainous "scarps of sea"; his enthusiasm for snoozing in soggy sleeping bags is infectious. By the end, his book makes a persuasive case for chronicling the history of regions through the experiences and voices of the people who call them home. A dunking in the freezing sea, off the coast of County Mayo, leaves the author shivering but "ignited, elated". Surfacing from his book, the reader is invigorated, too.

Love me sweet

When the King saved Vegas

And vice versa

Jul 13th 2019

Elvis in Vegas. By Richard Zoglin.*Simon & Schuster; 304 pages; $28 and £18.99.*

MUCH WAS riding on Elvis Presley's return to Las Vegas in 1969. It had been nearly a decade since he had played to a live audience, and Vegas offered a chance to revive a career mired in middling movies and synthetic songs. The timing was right for the city, too, which had lost some of the glamour of its early-1960s heyday, when the crooning of cool cats such as Frank Sinatra and Dean Martin packed the lounges. The rise of the counterculture had made it look square; most young performers had little interest in supplying the kind of schmaltz it had become known for.

"In a town that got blindsided by the rock revolution, it was only fitting that Vegas would turn to the original rock 'n' roller, Elvis Presley, as the agent of its reinvention," writes Richard Zoglin, a longtime culture correspondent for *Time*. In "Elvis in Vegas" he argues that the singer and the city saved each other, at least for a while.

Las Vegas had always been derided for its kitsch, but in the late 1950s and early 1960s it was a necessary stop for Hollywood starlets, Broadway actors and nearly every nightclub turn in America. The resort began to lure high-rolling holidaymakers and the artists who helped empty their wallets in the 1930s, when Nevada became the first state to legalise gambling and liberalise divorce laws. Hotels multiplied along the strip in the 1950s; the advent of non-stop air travel from Chicago in 1960 helped draw visitors from across the country.

The mob bosses who ran the town (casinos were handy for laundering money) attracted talent by lavishing huge salaries and luxurious perks on the stars. For their part, the entertainers kept people in the casinos. Judy Garland was paid $55,000 a week for her heart-on-sleeve performances, though she preferred to sing at 2.30am owing to insomnia. Sinatra, a rather touchy and somewhat bigoted codger in these pages, earned as much as $100,000 a week for his residency at Caesars Palace.

But by the late 1960s the economics were changing. Howard Hughes, an eccentric billionaire, bought up Vegas properties, pushed out the free-spending mobsters (a national crackdown on organised crime helped) and instituted a new era of bean-counting. Hotels stopped coddling entertainers, many of whom seemed dated. Over the same period Elvis's manager, Colonel Tom Parker, had steered him towards films, in the mistaken belief that they offered a surer payday than rock 'n' roll. Fifty years ago this month, with Vegas in desperate need of a bankable star, Elvis arrived with his hat in his hand.

He delivered the goods. Trim, energetic and still impossibly handsome, he performed like a man hungry for redemption. His voice was richer and deeper for his 34 years and he prowled the stage like a panther, kicking up a sweat in his stretchy, karate-style outfits (Bill Belew, the designer of the increasingly ornate costumes, switched to jumpsuits after Elvis split his trousers). Backed by a dream-team of musicians, two vocal groups and a 40-piece orchestra, Elvis relished the reunion with his fans, many of them housewives who had screamed for him as teenagers. He played twice a night, seven days a week for four straight weeks and sold out every show. *Rolling Stone* hailed him as "supernatural, his own resurrection".

The King returned to Vegas twice a year for seven years, always playing to sell-out crowds. In a city where entertainers had been loss-leaders, Elvis turned a profit. Hotels learned that the right star could attract ordinary types from all over, who would bring their families for a holiday splurge. He paved the way for the lavish shows of Celine Dion, Elton John and Lady Gaga.

But the demands of these twice-a-night gigs proved less kind to Elvis. By 1971 he looked tired and heavy; by 1975 he often needed a chair on stage. Isolated in his penthouse suite, hooked on pills and bloated with bacon, he was "a prisoner of the town as well as its saviour". He died at Graceland in 1977 with 14 drugs in his system. But his spirit lives on in Las Vegas and in the pages of this enjoyable book.

School of scandal

Colson Whitehead’s searing new novel

“The Nickel Boys”, by the author of “The Underground Railroad”, is set in a reformatory

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The Nickel Boys. By Colson Whitehead.*Doubleday; 224 pages; $24.95. Fleet; £16.99.*

“EVEN IN DEATH the boys were trouble.” The first line of Colson Whitehead’s new novel introduces both its fierce vision and the mordant subtlety with which he ambushes his readers. Why are the boys dead—and what sort of trouble can dead boys have caused?

The boys in the “The Nickel Boys”, it turns out, are blamed and punished for all sorts of things. Elwood, the protagonist, is a teenage acolyte of Martin Luther King in the Jim Crow Florida of the early 1960s. Convinced he is “as good as anyone”, he pores over his “new secondhand textbooks” and awaits the desegregation of Tallahassee. After hitching an ill-starred ride to an extra-curricular class, he winds up in a reform school. There he falls in with the worldlier Turner, who during his short life has “tumbled down the street like an old newspaper”.

The horrors they experience unspool as casually as they are inflicted, so that, like other bystanders, readers might almost miss them. The black inmates’ food is swiped and hawked around town (the white boys get to eat theirs); their labour is sold to local officials. A strap known as “black beauty” is administered in a building called the White House—though some unfortunates are instead manacled to a tree “out back”, after which “they put you down as escaped, and that’s that.” Lovers’ Lane, the venue for sexual abuse, is a grisly basement. Nobly, naively or both, Elwood thinks it is his duty to resist the rackets and cruelties.

The dead become trouble when their graves are discovered. Survival, though, is hard. A character makes it to New York—exactly how is integral to the plot—where, years later, he remembers nights on which “the only sounds were tears and insects". Yet it is the incidental, half-told tales that lend this book its slow-burn power. Jaimie the Mexican, for example, "had an uncle with a quick hand"; he bounces between the white and black campuses, too dark for one, too light for the other. There is a grotesque boxing match that recalls Ralph Ellison's "Invisible Man". "Pain rolled off him like rain from a slate roof," Mr Whitehead writes of a fabled champ.

In his previous novel, "The Underground Railroad", which won a Pulitzer and a National Book Award, the escape route of the title magically becomes an actual railway; what begins as an unblinking depiction of slavery morphs into a phantasmagoric allegory of African-American history as a whole. "The Nickel Boys" is a simpler story (albeit with a late twist), inspired by a real episode in Marianna, Florida (see picture). Still, in the dialogue between Elwood and Turner it frames some perennial arguments over how to respond to injustice. "You can change the law," Turner reckons fatalistically, rejecting his friend's idealism, "but you can't change people and how they treat each other."

Quietly, meanwhile, Mr Whitehead insists that this tragic past is far from dead and buried. "The iron is still there," he says of that punishment tree. "Testifying to anyone who cares to listen."

Graphic detail

Europe’s economic history: Plumbing the glaciers

Arctic lead levels shed new light on Europe’s history.

Europe's economic history

Arctic lead levels shed new light on Europe's history

Lead trapped in Arctic ice tracks Europe's money supply over the past two millennia

Jul 11th 2019

TODAY JACHYMOV is a small Czech town nestling in a valley on the German border. In 1534, though, it was Joachimsthal, the largest city in Bohemia apart from Prague and home to the almighty thaler—a weighty silver coin that became the de facto currency of Europe and the New World. The thaler lent an English version of its name, "dollar", to the money of the United States and a score of other jurisdictions. Joachimsthal's silver rush began in 1512. By the middle of the century the local mines were the most prolific in Europe.

Joachimsthal's mines left another legacy, however: lead. Silver and lead often co-mineralise, and refining silver from its ore releases some of that lead into the atmosphere, where winds can carry it far and wide. Lead transported in this way to the Arctic often ends up trapped in layers of glacial ice. That is where a team of researchers led by Joseph McConnell of the Desert Research Institute, in Reno, Nevada found it, in ice cores pulled from glaciers in Greenland and Siberia.

In their new study, published in the *Proceedings of the National Academy of Sciences*, Dr McConnell's team used coring to analyse lead emissions and produce a record of the European economy from Roman to modern times. Moreover, by comparing records from Greenland and Siberia, Dr McConnell could distinguish mines in western and eastern Europe. Eastern mines left more lead in Siberia than in Greenland, and western ones the reverse.

The data illuminate the historical record. As Charlemagne conquered most of western Europe, his mints turned out huge quantities of new silver currency. After his reign, his empire disintegrated and smaller potentates took over minting. Silver production rose gradually but steadily through the prosperous medieval warm period. Conflict punctuates the record, as combatants fought over mining regions.

Disease, too, makes its terrible impact plain. Major modern economic shocks, like the Great Depression, have taken a decade or so to recover from. By comparison, the Black Death halved lead levels, and it took 100 years for them to recover afterwards. The implication is that silver mines were unprofitable—either because of a lack of demand, or of a shortage of affordable labour, or both—well into the Renaissance. When plague recurred across Europe in the late 16th and 17th centuries, growth in lead emissions stalled as well.

After 1750, industrial processes overtook silver production as the chief source of lead pollution. Leaded gasoline, introduced in the 1930s, sent lead levels still higher. Starting in the 1970s, environmental policies in America and Europe decoupled lead pollution from economic growth. Arctic lead levels have since fallen by more than 80%—but they remain 60 times higher than in the medieval era.

Obituary

Jennie Litvack: Call of the ages

Obituary: Jennie Litvack died on June 27th.

Call of the ages

Obituary: Jennie Litvack died on June 27th

The blower of the shofar was 55

Jul 13th 2019

THE CALL came, appropriately enough, while she was walking through the Old City of Jerusalem, her husband said. They had stopped at a small shop near the Roman Cardo. By the door stood a barrel of shofars. Not regular ram's horn shofars, but the long curved Yemeni instruments made from the horn of the greater kudu, an African antelope. She blew each one in turn. What emerged was a deep throaty musical summons that almost quivered, casting those who heard it back to one of the most significant moments in Judaism when God stopped Abraham from sacrificing his own son and ordered him to kill a ram instead.

In the street a crowd began to gather. They had never heard such a sound before. And then, somewhere in the barrel, she found it—the shofar that produced the perfect deep baritone, the primal call she'd long dreamed of but never made. When she blew it, the crowd fell silent. Shopkeepers, tourists, old men pushing carts: they all stopped. They knew this one was different. And so was born a new *ba'alat tokeah*, a high mistress of the horn.

It helped, of course, that she had played the trumpet since she was a child. At 14 she went up to Dizzy Gillespie after a concert at the Rising Sun jazz club in her native Montreal, and asked if she could have a go on his instrument—and a lesson. The next morning her mother dropped her at his hotel and waited patiently in the car outside. An hour passed. Then two. Then three. After four hours, her mother knocked on the door. There they were, the two of them—the father of Be Bop and the curly-haired teenager with the smiling eyes—laughing, playing backgammon, learning to twang the Jew's harp, just being friends. They remained friends for the rest of his life. He called her his god-daughter. She named her first son Benjamin Diz.

For a while she considered applying to a music conservatory after high school. When instead she chose to major in public policy at Duke University, she took her trumpet into the marching band. She played it, too, when she went on to the Fletcher School of Law and Diplomacy to write up her research that proved that in poor countries people were better off, financially and medically, if they were asked to pay a little bit of the cost of ensuring a supply of drugs to their local pharmacy rather than if they paid nothing—and got nothing. She played the trumpet some more when working as an economist for the World Bank, in northern Cameroon, Vietnam and Morocco. And then, at 43, having just had her last son, she decided to follow what she called her still, quiet voice and be part of a movement to revitalise Jewish spiritual life in America.

She resigned from the World Bank and joined the Adas Israel synagogue in Washington, DC, where in 1876 Ulysses S. Grant became the first American president to attend a service in a synagogue. There was meditation every Tuesday night, yoga every Wednesday night, lessons in Jewish mindfulness all through the week. But it was when she held aloft the shofar that she really found her voice.

After every morning service through the month of Elul, then through Rosh Hashanah—Jewish new year—on to Yom Kippur, the day of atonement, Rabbi Lauren Holtzblatt, her friend, would call out: *Tekiyah*. She would respond with a single note, the awakening summons to Jews to focus on the year that has passed and think about the type of people they would like to be. *Shevarim*, the cry from the heart, the triptych of notes that speak of a sense of brokenness. *Teruah* for the nine staccato notes that, like an alarm clock, she would say, would summon the listener, "Wake up, wake up, wake up. Now is the time to do something." And then *Tekiyah gedolah*, the final long note, that refers to a oneness, a total unity coming together. Over 100 notes in all, more than an orchestral hornplayer would expect to sound in an evening concert, blowing the shofar at Rosh Hashanah is a challenge that takes knowledge of the tradition, technique and spiritual engagement.

The shofar is usually men's business. As a woman, she had to be twice as good. She had help, she said—a perfect shofar, carved to fit her mouth exactly by a man called Shimon who lived on the Golan Heights and knew just enough English to tell her: "Blow!" There was also, she believed, divine assistance. At home when she took her deepest breath for the *Tekiyah gedolah*, she could manage only 40 seconds. But in the synagogue she managed to stretch that out to nearly a minute. Her son had timed her. And then there was how people responded to her call: the women who told her how welcoming her blowing made the Rosh Hashanah service for them, the National Public Radio listeners who heard her speak of her passion for her instrument and her encounter with Gillespie, the Justice on Israel's Supreme Court—an Orthodox Jew no less—who invited her to blow the shofar at the court itself, the joggers in Central Park who slowed down and then stopped to watch when she accompanied Alicia Svigals on the klezmer violin, playing "Amazing Grace".

Every thing that hath breath

Along with the birth of her sons, she liked to say that blowing the shofar brought her closer to God than anything else in her life. Even after her metastasing cancer meant the removal of a large part of both her lungs, she would take up her instrument with *kavanah*, "intention", close her eyes, shut out the world and concentrate on her breath, her shofar, her soul.

In the Old Testament the Book of Genesis says that God formed man out of dust from the ground when He blew into his nostrils the breath of life. The Hebrew word for soul, *neshama*, is intimately connected to the word for breath. Her breath had shushed her boys to sleep in their crib, it whooshed out of her whenever she jumped naked, as she liked to do, into a Canadian mountain lake, and it transported Adas Israel's congregation to Mount Sinai when it blew air into her shofar. That breath may have been stilled, but like Abraham's horn it lives on. At the start of her funeral, the shofar was sounded by her three sons.

Economic Indicators

Economic data, commodities and markets

Economic data, commodities and markets.

Economic data, commodities and markets

Jul 11th 2019

Economic data

	Gross domestic product % change on year ago: latest		quarter*	2019†	Consumer prices % change on year ago: latest		2019†	Unemployment rate %	
United States	3.2	Q1	3.1	2.2	1.8	May	2.0	3.7	Jun
China	6.4	Q1	5.7	6.2	2.7	Jun	2.9	3.7	Q1§
Japan	0.9	Q1	2.2	1.0	0.8	May	1.1	2.4	May
Britain	1.8	Q1	2.0	1.3	2.0	May	1.8	3.8	Mar††
Canada	1.3	Q1	0.4	1.6	2.4	May	1.8	5.5	Jun
Euro area	1.2	Q1	1.6	1.2	1.2	Jun	1.4	7.5	May
Austria	1.4	Q1	3.8	1.3	1.7	May	1.8	4.7	May
Belgium	1.2	Q1	1.1	1.2	1.7	Jun	1.9	5.5	May
France	1.2	Q1	1.4	1.2	1.2	Jun	1.2	8.6	May
Germany	0.7	Q1	1.7	0.8	1.6	Jun	1.4	3.1	May
Greece	0.9	Q1	0.9	1.8	-0.3	Jun	1.3	18.1	Mar
Italy	-0.1	Q1	0.5	0.1	0.8	Jun	0.9	9.9	May
Netherlands	1.7	Q1	1.9	1.6	2.7	Jun	2.6	4.1	May
Spain	2.4	Q1	2.7	2.2	0.4	Jun	1.2	13.6	May
Czech Republic	2.8	Q1	2.6	2.6	2.9	May	2.5	2.2	May‡
Denmark	2.4	Q1	0.5	1.9	0.6	Jun	1.1	3.7	May
Norway	2.5	Q1	-0.3	1.6	1.9	Jun	2.6	3.2	Apr‡‡
Poland	4.7	Q1	6.1	4.0	2.6	Jun	2.0	5.3	Jun§
Russia	0.5	Q1	na	1.2	4.7	Jun	4.9	4.5	May§
Sweden	2.0	Q1	2.4	1.7	2.2	May	1.9	6.8	May§
Switzerland	1.7	Q1	2.3	1.6	0.6	Jun	0.5	2.3	Jun
Turkey	-2.6	Q1	na	-1.7	15.7	Jun	16.1	14.1	Mar§
Australia	1.8	Q1	1.6	2.2	1.3	Q1	1.7	5.2	May
Hong Kong	0.6	Q1	5.4	1.8	2.8	May	2.3	2.8	May‡‡
India	5.8	Q1	4.1	6.7	3.0	May	3.6	7.9	Jun
Indonesia	5.1	Q1	na	5.1	3.3	Jun	3.1	5.0	Q1§
Malaysia	4.5	Q1	na	4.5	0.2	May	0.7	3.4	Apr§
Pakistan	3.3	2019**	na	3.1	8.9	Jun	8.4	5.8	2018
Philippines	5.6	Q1	4.1	5.7	2.7	Jun	3.6	5.1	Q2§
Singapore	1.2	Q1	3.8	1.6	0.9	May	0.6	2.2	Q1
South Korea	1.6	Q1	-1.5	1.9	0.7	Jun	0.8	4.0	Jun§
Taiwan	1.7	Q1	2.3	1.8	0.9	Jun	0.3	3.8	May
Thailand	2.8	Q1	4.1	3.3	0.9	Jun	1.2	1.1	May§
Argentina	-5.8	Q1	-0.9	-1.2	57.3	May‡	48.6	10.1	Q1§
Brazil	0.5	Q1	-0.6	0.8	3.4	Jun	4.0	12.3	May§
Chile	1.6	Q1	-0.1	3.0	2.3	Jun	2.4	7.1	May§‡‡
Colombia	2.3	Q1	nil	3.1	3.4	Jun	3.4	10.5	May§
Mexico	1.2	Q1	-0.7	0.8	3.9	Jun	3.9	3.5	May
Peru	2.3	Q1	-5.3	3.7	2.3	Jun	2.2	7.1	May§
Egypt	5.6	Q1	na	5.1	9.4	Jun	13.0	8.1	Q1§
Israel	3.2	Q1	4.8	3.1	1.5	May	1.4	3.6	May
Saudi Arabia	2.4	2018	na	1.9	-1.5	May	-1.1	5.7	Q1
South Africa	nil	Q1	-3.2	1.0	4.4	May	5.1	27.6	Q1§

Source: Haver Analytics. *% change on previous quarter, annual rate. †The Economist Intelligence Unit estimate/forecast. §Not seasonally adjusted. ‡New series. **Year ending June. ††Latest 3 months. ‡‡3-month moving average.

Economic data

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	Current-account balance % of GDP, 2019†	Budget balance % of GDP, 2019†	Interest rates 10-yr gov't bonds latest, %	Interest rates change on year ago, bp	Currency units per $ Jul 10th	Currency units % change on year ago
United States	-2.4	-4.7	2.0	-84.0	-	
China	0.2	-4.5	3.0 §§	-34.0	6.88	-3.8
Japan	3.8	-2.9	-0.2	-19.0	109	2.5
Britain	-4.1	-1.6	0.8	-56.0	0.80	-6.3
Canada	-2.7	-1.0	1.6	-56.0	1.31	nil
Euro area	3.5	-1.2	-0.3	-63.0	0.89	-4.5
Austria	2.1	0.1	-0.1	-64.0	0.89	-4.5
Belgium	0.1	-1.0	0.1	-61.0	0.89	-4.5
France	-0.9	-3.3	-0.1	-72.0	0.89	-4.5
Germany	8.1	0.7	-0.3	-63.0	0.89	-4.5
Greece	-2.7	nil	2.3	-154	0.89	-4.5
Italy	2.0	-2.9	1.7	-94.0	0.89	-4.5
Netherlands	10.2	0.7	-0.2	-66.0	0.89	-4.5
Spain	0.5	-2.2	0.4	-93.0	0.89	-4.5
Czech Republic	0.2	0.2	1.5	-74.0	22.8	-3.1
Denmark	6.8	1.0	-0.2	-58.0	6.63	-4.1
Norway	7.7	6.4	1.4	-30.0	8.59	-6.4
Poland	-0.6	-2.0	2.2	-96.0	3.80	-2.9
Russia	6.9	2.1	7.4	-31.0	63.3	-1.8
Sweden	4.9	0.5	-0.1	-60.0	9.42	-7.1
Switzerland	9.6	0.5	-0.5	-44.0	0.99	nil
Turkey	-0.7	-2.3	17.2	-43.0	5.71	-17.5
Australia	-1.5	0.1	1.3	-129	1.44	-6.9
Hong Kong	4.5	0.5	1.7	-52.0	7.82	0.4
India	-1.8	-3.5	6.5	-136	68.6	0.4
Indonesia	-2.6	-1.9	7.3	2.0	14,130	1.6
Malaysia	2.6	-3.5	3.6	-45.0	4.14	-2.9
Pakistan	-3.8	-7.1	14.1 †††	497	158	-23.0
Philippines	-2.0	-2.5	5.1	-122	51.5	3.9
Singapore	15.3	-0.6	2.0	-46.0	1.36	nil
South Korea	4.2	0.9	1.6	-100	1,181	-5.5
Taiwan	13.1	-1.2	0.7	-26.0	31.1	-2.5
Thailand	7.8	-2.9	1.8	-78.0	30.8	7.6
Argentina	-2.3	-3.4	11.3	562	42.0	-33.9
Brazil	-1.0	-5.8	5.6	-341	3.78	1.6
Chile	-2.6	-1.3	3.3	-128	685	-4.9
Colombia	-4.2	-2.5	5.8	-76.0	3,217	-10.7
Mexico	-1.7	-2.4	7.6	-11.0	19.3	-1.1
Peru	-1.7	-2.0	5.6	64.0	3.29	-0.6
Egypt	-0.8	-7.8	na	nil	16.6	7.7
Israel	2.8	-4.0	1.5	-47.0	3.55	2.3
Saudi Arabia	3.3	-5.6	na	nil	3.75	nil
South Africa	-3.4	-4.2	8.1	-58.0	14.1	-5.0

Source: Haver Analytics. §§5-year yield. †††Dollar-denominated bonds.

Markets

In local currency	Index Jul 10th	% change on: one week	Dec 31st 2018
United States S&P 500	2,993.1	-0.1	19.4
United States NAScomp	8,202.5	0.4	23.6
China Shanghai Comp	2,915.3	-3.3	16.9
China Shenzhen Comp	1,550.9	-3.1	22.3
Japan Nikkei 225	21,533.5	-0.5	7.6
Japan Topix	1,571.3	-0.5	5.2
Britain FTSE 100	7,530.7	-1.0	11.9
Canada S&P TSX	16,563.3	-0.1	15.6
Euro area EURO STOXX 50	3,501.5	-1.1	16.7
France CAC 40	5,567.6	-0.9	17.7
Germany DAX*	12,373.4	-1.9	17.2
Italy FTSE/MIB	22,045.0	0.6	20.3
Netherlands AEX	565.6	-1.3	15.9
Spain IBEX 35	9,252.9	-1.5	8.3
Poland WIG	60,242.6	-0.7	4.4
Russia RTS, $ terms	1,407.6	0.4	32.0
Switzerland SMI	9,937.6	-1.3	17.9
Turkey BIST	98,585.3	-0.8	8.0
Australia All Ord.	6,777.7	0.1	18.7
Hong Kong Hang Seng	28,204.7	-2.3	9.1
India BSE	38,557.0	-3.2	6.9
Indonesia IDX	6,410.7	0.8	3.5
Malaysia KLSE	1,679.0	-0.7	-0.7
Pakistan KSE	33,840.1	-3.0	-8.7
Singapore STI	3,340.4	-0.8	8.9
South Korea KOSPI	2,058.8	-1.8	0.9
Taiwan TWI	10,798.5	0.5	11.0
Thailand SET	1,739.4	0.1	11.2
Argentina MERV	42,807.1	3.6	41.3
Brazil BVSP	105,817.0	3.7	20.4
Mexico IPC	42,805.6	-1.6	2.8
Egypt EGX 30	14,013.3	-0.9	7.5
Israel TA-125	1,488.8	0.1	11.7
Saudi Arabia Tadawul	8,905.6	0.6	13.8
South Africa JSE AS	57,597.9	-0.7	9.2
World, dev'd MSCI	2,201.1	-0.6	16.8
Emerging markets MSCI	1,049.0	-1.0	8.6

US corporate bonds, spread over Treasuries

Basis points	latest	Dec 31st 2018
Investment grade	159	190
High-yield	480	571

Sources: Datastream from Refinitiv; Standard & Poor's Global Fixed Income Research.
*Total return index.

Commodities

The Economist commodity-price index

2005=100	Jul 2nd	Jul 9th*	% change on month	year
Dollar Index				
All Items	136.4	136.8	0.1	-5.6
Food	147.3	148.5	0.6	1.9
Industrials				
All	125.1	124.7	-0.4	-13.4
Non-food agriculturals	118.1	115.4	-2.0	-18.4
Metals	128.2	128.6	0.3	-11.3
Sterling Index				
All items	197.0	199.6	2.2	0.5
Euro Index				
All items	150.2	151.8	1.1	-1.2
Gold				
$ per oz	1,397.0	1,397.1	5.3	11.4
West Texas Intermediate				
$ per barrel	56.3	57.8	8.6	-22.0

Sources: CME Group; Cotlook; Darmenn & Curl; Datastream from Refinitiv; FT; ICCO; ICO; ISO; Live Rice Index; LME; NZ Wool Services; Thompson Lloyd & Ewart; Urner Barry; WSJ. *Provisional.

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