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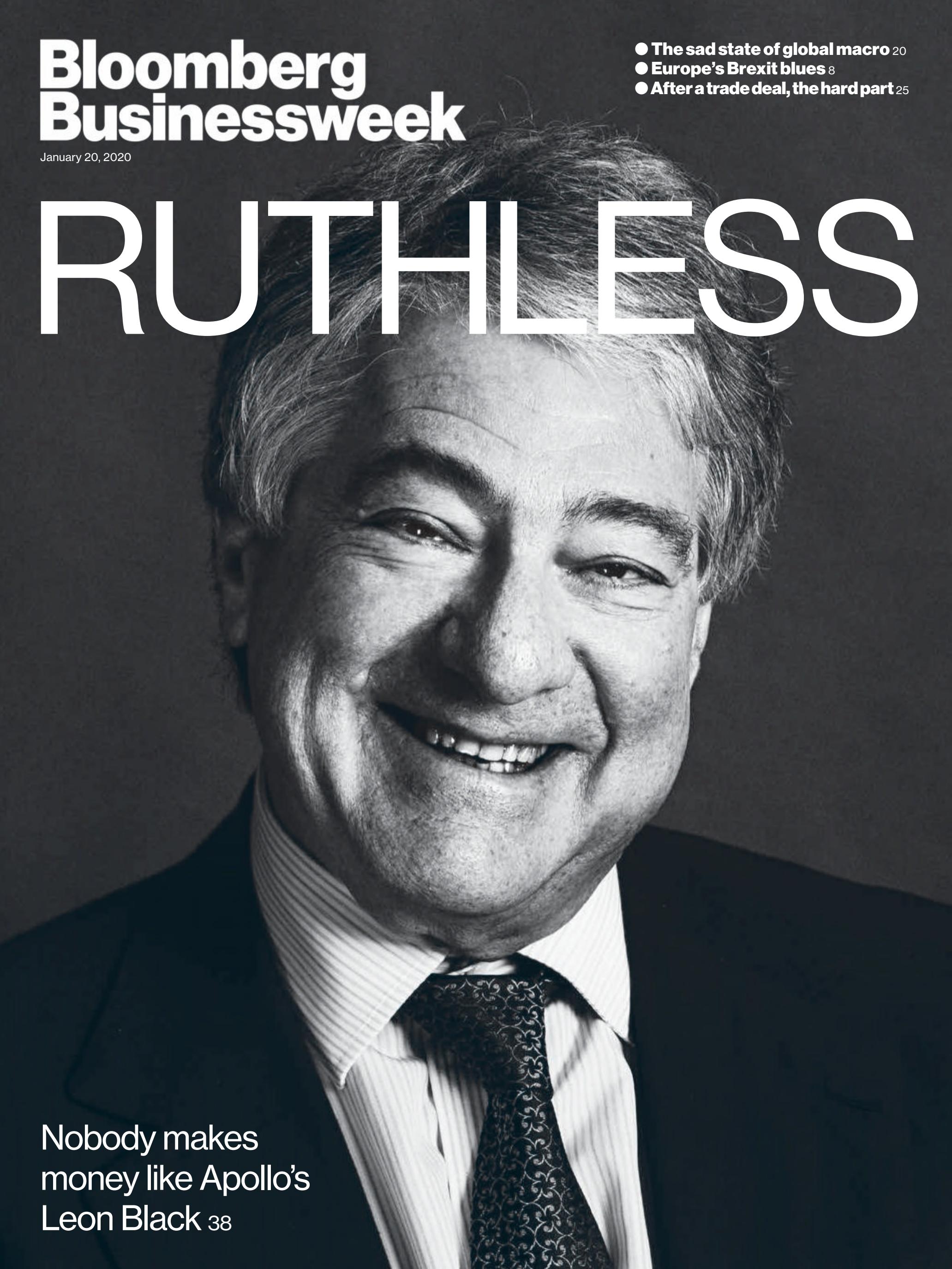
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Value from Innovation



January 20, 2020

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# RUTHLESS

A black and white close-up photograph of Leon Black, a middle-aged man with dark hair and a warm smile. He is wearing a dark suit jacket over a light-colored button-down shirt and a dark, patterned tie. The lighting is dramatic, highlighting his face against a dark background.

Nobody makes  
money like Apollo's  
Leon Black 38



# Hennessy

軒揚逸彩  
生生不息

ART BY ZHANG HUAN



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◀ Ghosn at his press conference in Beirut on Jan. 8

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EDITORIAL 212 617-8120 ● AD SALES 212 617-2900, 731 Lexington Ave. New York, NY 10022 ● EMAIL bwreader@bloomberg.net  
 ● FAX 212 617-9065 ● SUBSCRIPTION CUSTOMER SERVICE URL businessweekmag.com/service ● REPRINTS/PERMISSIONS  
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## ■ COVER TRAIL

How the cover gets made

1

"This week's story is about Leon Black, a corporate-raiding, bankruptcy-inducing, fee-harvesting PE head who's made a ton of money."

"Sounds like a great guy. You said his name is Black? I got this."

2



"He's agreed to a shoot."

"Oh, thank God."

3



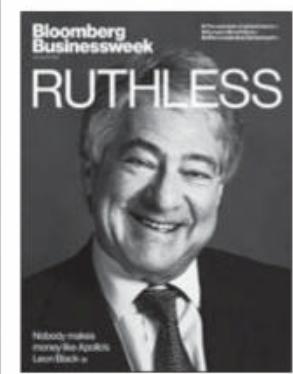
"You know what? He was actually super nice."

"Let's try a few headlines, we need some tension."

4



"Very funny."



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In the global commodity markets, investment opportunities abound. Whether you're in precious metals, agriculture or the energy sector, our team of experienced fund managers will ensure your investments are always in the right place, at the right time.



● Violent protests erupted in Iran after the government admitted to accidentally shooting down a Ukrainian passenger plane shortly after it took off from Tehran, killing all 176 people on board.

● Turkey and Russia failed in their joint effort to end the almost decade-long civil war in Libya.

Khalifa Haftar, commander of the insurgent Libyan National Army, who's leading the assault on Tripoli, the capital, rejected a proposed truce agreement, jeopardizing a provisional cease-fire.

● The Oscar nominations brought a windfall to Netflix, which got 24 nods, more than any major Hollywood studio. Warner Bros.' *Joker*, with 11 nominations, had the most of any film.



● After ousting longtime sidekick Dmitry Medvedev as prime minister, Russian President Vladimir Putin called for sweeping constitutional changes, fueling speculation he's moving to extend his grip on power beyond 2024.

● Visa agreed to pay **\$5.3b** for Plaid, a fintech company that connects popular apps such as Venmo to customer data in the established banking system.

● The price of Tesla shares topped \$500 for the first time.

Analysts are more optimistic that the carmaker can generate free cash flow now that its factory in China has begun rolling out the popular Model 3. Since October, the share price of the electric-car pioneer has doubled.

● The British royal family sought to limit the fallout from Prince Harry and Meghan Markle's decision to step back from their official duties. After a crisis meeting, Queen Elizabeth II said she supports her grandson's "desire to create a new life as a young family."



● “The Senate is on trial as well as the president.”

Representative Jerrold Nadler of New York spoke to the press after House Speaker Nancy Pelosi selected him as one of seven impeachment managers who will make the case in the Senate for the removal of President Trump.

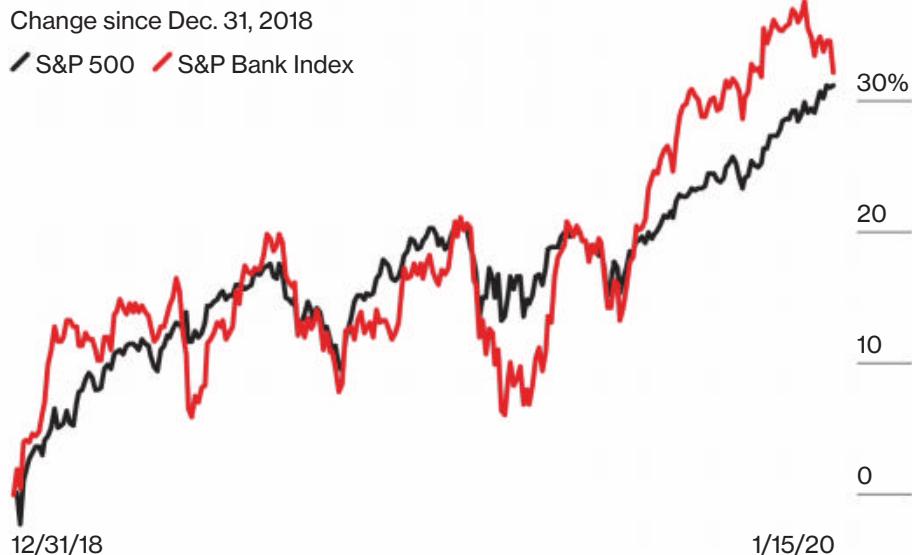
● Dennis Muilenburg, removed as Boeing CEO last month without severance, will keep awards and stock options that had already vested, along with his pension and deferred pay—totaling as much as

**\$80.7m**

● Sultan Qaboos of Oman died on Jan. 11 at 79 after almost half a century ruling the country, which is strategically located near key oil shipping lines at the eastern tip of the Arabian Peninsula.



- For bank stocks, 2019 was the best year in more than two decades, as strong trading profits helped offset the drag of low interest rates. Fourth-quarter results were mixed.



- The Dow Jones Industrial Average closed above **29,000** for the first time on Jan. 15.

● Apple came under pressure from the U.S. government to unlock two iPhones used by the gunman behind an attack in Florida in December. While the company has handed over data from the virtual backups of the devices, it has refused to create dedicated tools that would give investigators access to locked phones.



● France's government sought to defuse widespread demonstrations against a proposed pension overhaul by abandoning a plan to raise the baseline age for full retirement benefits from 62 to 64. The country has been crippled for weeks by strikes protesting President Emmanuel Macron's reforms.



● Taiwanese President Tsai Ing-wen (with running mate William Lai) was reelected in a landslide. Her win over a China-friendly challenger represents a setback for Xi Jinping and his goal of bringing Taiwan under his control.

## JPMORGAN CHASE & CO.

With earnings of \$36.4 billion in 2019, JPMorgan Chase had the most profitable year of any U.S. bank in history. Fueled by a rebound in trading, especially in fixed income, profit jumped 21% in the quarter.



Citigroup's net income rose 15% in the quarter, thanks to a surge in fixed-income trading, plus strong results from debt underwriting and consumer banking.



Legal costs were also a problem at Wells Fargo, causing a 53% drop in fourth-quarter net income from a year earlier. It was CEO Charles Scharf's first quarter at the helm. "It is still early days—I don't have all the answers yet," he said on a call with investors.

## Goldman Sachs

Goldman Sachs took a \$1 billion legal charge as it nears a settlement of the 1MDB scandal. That helped drive quarterly profit down 24%. The bank remained at the top of the rankings for global mergers and acquisitions and equity offerings.

## ■ AGENDA



### ► The President and the Activist

The 50th edition of the Davos World Economic Forum, taking place Jan. 21-24, will focus on sustainability. Donald Trump plans to attend, as does his young nemesis, Swedish eco-activist Greta Thunberg. ▶ 34

► On Jan. 21, Netflix reports earnings for the fourth quarter, during which it began streaming its most ambitious and costly production so far: *The Irishman*, starring Robert De Niro and Al Pacino.

► UBS also unveils fourth-quarter earnings on Jan. 21. The Swiss banking giant has begun a sweeping round of job cuts at its wealth management unit, its most important business.

► The extradition hearing for Huawei CFO Meng Wanzhou begins in Vancouver on Jan. 20. U.S. authorities want to bring her to trial on charges of violating sanctions against Iran.

► The heads of some of Europe's biggest power companies will meet at an annual Handelsblatt conference in Berlin on Jan. 20-22 to discuss the future of fossil fuels.

► Japan's central bank sets interest rates on Jan. 21. While domestic demand remains weak, economists say the negative borrowing costs are unlikely to change anytime soon.

► The 47th annual March for Life demonstration takes place in Washington on Jan. 24. The movement enjoys strong support from President Trump.

■ REMARKS

# The One Who Got Away



## ● The U.K. was never comfortable in the EU. But did the bloc really know how to make it feel at home?

● By Ian Wishart

The European Union's leaders looked anxiously at their watches and asked where the British prime minister was. They'd gathered in a 500-year-old monastery in Lisbon for a special ceremony to sign a landmark treaty, and it wasn't really the done thing for one of their number not to turn up. It was December 2007, and Gordon Brown was the PM. "We need Gordon," then-French President Nicolas Sarkozy was heard to say in English at one point, but when the leaders picked up their pens, Gordon was still in London.

If ever you wanted an example of Britain's not-quite-sure-about-all-this attitude to the EU, that was it. Brown's no-show wasn't because he opposed the treaty. In fact, his plan was to get it ratified by Parliament as soon as he could. He just didn't want TV pictures of him celebrating with European counterparts as they made the bloc more powerful. So he arrived three and a half hours late and awkwardly signed the document in a small room, while on the other side of the door the other 26 EU leaders were already shuffling out of lunch.

The episode shines a light on the U.K.'s uneasy relationship with the union of countries it joined in 1973. With one foot inside and one foot out, it was never sure which way to turn—and the bloc never seemed to know how to make it more comfortable. Finally, given a chance to have a say in a referendum in 2016, 52% of U.K. voters opted to leave. That triggered three years of complicated, bad-tempered, and at times chaotic negotiations with the EU over the terms of the country's withdrawal and contortions in Parliament that split parties, ended political careers, and led to two general elections. Finally it will all be over: The U.K. departs on Jan. 31.

In the EU's corridors of power, people ask where it all went wrong: How did we lose Britain? In Brussels, the home of most EU bodies, some officials think Britain shouldn't have joined in the first place. (It was let in 15 years after the six founding nations came together, having twice been rebuffed by French President Charles de Gaulle.) Britain saw itself as too culturally apart, it had stronger links to the U.S., and its political and legal systems were too different, many thought then and some think still. When then-Prime Minister Theresa May said in a speech in Florence in 2017 that "perhaps because of our history and geography, the European Union never felt to us like an integral part of our national story in the way it does to so many elsewhere in Europe," there was more than a flicker of recognition across the Continent.

Yet the overriding feeling among the EU's political elite remains one of regret. British people were almost never so told, but the U.K. played an important and influential role as

a member. While its politicians badmouthed Brussels and its population became increasingly euroskeptic (a word invented for the purpose), its diplomats played a constructive role. Indeed, Welshman Roy Jenkins, who rose to become European Commission president in 1977, and Arthur Cockfield, the U.K.'s commissioner from 1985, were architects of the monetary union and the single market, respectively. Throughout its membership, Britain served as a counterweight to the competing powers of France and Germany; the U.K.'s rebellious streak gave equally critical countries a troublemaker to hide behind; and its free-trade instincts ensured the bloc wasn't taken over by the protectionist-minded southern members. Britain shaped European policy and supported new legislation far more regularly than it opposed it.

Several European officials interviewed for this article speculate that Britain started slipping away—gradually and subtly, yet decisively—about 16 years ago. Paradoxically, this was also a time when the U.K.'s influence in Europe was as strong as at any point in history. In Tony Blair, it had a prime minister desperate for his country to be at Europe's heart. On May 1, 2004, the EU saw its biggest transformation since its creation when 10 new countries, mainly from the ex-Soviet East, swelled the ranks, something the U.K. had spent years pushing hard for. The impact in Brussels was felt literally overnight. Gone was the cozy club run by the French and Germans, as the EU welcomed nations that were excited by capitalism and that valued their new, unfettered access to a huge trading bloc above any ideas of political or social union. Not only did the U.K. share this priority, the new countries' diplomats and politicians largely did business in English rather than French.

But amid the giddy celebrations, there was a time bomb. If the EU machine was turning more British, the British people were about to feel less European. Opening up the EU to new countries meant giving whole new populations the right to live and work anywhere in the bloc. From 2003 to 2016, the year of the Brexit referendum, the number of non-British EU citizens living in the U.K. rocketed from 1.5 million to 3.5 million, according to the Office for National Statistics. They came to work on Britain's farms, set up as manual laborers, and worked in pubs. London was used to immigration, but the sudden transformation of traditional communities proved more unsettling for the local population than politicians expected. Anti-EU campaigners soon seized on the issue, warning of pressures from foreigners on hospitals and schools. When the opportunity finally arose, the people in these areas voted decisively to leave the EU.

Wind the clock forward seven years from the EU's eastern expansion, and you come to an episode many European officials consider the pivotal moment in the U.K. relationship. On Dec. 9, 2011, the future of the euro hung in the balance as Europe dealt with its worst economic crisis, a result of the global financial downturn. At a late-night Brussels summit, the EU hoped to draw up an emergency treaty to safeguard the currency. But Prime Minister David Cameron, badly misjudging the moment, demanded it include concessions to ►

◀ protect the U.K. financial-services industry. He didn't get them, so at 2:30 a.m., he vetoed the whole thing.

While Cameron might have succeeded in looking strong at home, the EU called his bluff: The other countries drew up an intergovernmental treaty that amounted to the original plan. German Chancellor Angela Merkel and other leaders were furious, and relations remain soured to this day. One European official said the ill feeling weakened Cameron's hand when he came to renegotiate Britain's membership.

At the time of Cameron's veto, the U.K. was a force to be reckoned with in EU circles. Catherine Ashton, a member of Blair's Labour Party, was the second most senior member of the European Commission and the bloc's first foreign policy chief. Jonathan Faull, the EU's top British civil servant, was head of the commission's financial-services directorate as it drew up legislation to save the continent's banking industry. Sharon Bowles, another British politician, led the European Parliament's influential economics committee. In London, Nick Clegg, a multilingual EU fanatic who'd studied at Belgium's College of Europe (training camp for many of the bloc's top brass), had become deputy prime minister.

But that was the high-water mark. As Cameron set about to extract concessions from the EU before the referendum, the relationship declined rapidly. When Boris Johnson became prime minister in 2019, he stopped British diplomats from attending all but the most important EU meetings, saying they needed to be "unshackled" to spend time on other things. Officials from other countries are incredulous: Instead of attending gatherings they're entitled to, the U.K.'s civil servants wait outside in corridors or phone their bloc counterparts afterward, begging for news.

A common thread through all these moments is the role of the British media. Prime ministers were desperate for a good write-up; they loved being portrayed as standing alone but strong, like St. Paul's Cathedral during the Blitz, even at the expense of good European diplomacy. European officials think the tabloid press did more to push the U.K. out of the EU than anything else. Since the 1980s, newspapers fed the public a diet of French plots of a United States of Europe or German attempts to take over the continent. When Prime Minister Johnson was the Brussels correspondent of the *Daily Telegraph* in the 1990s, he created a model of reporting that owed more to making readers laugh or scoff or fear the European bogeyman than it did to facts. One of his successors described his own job as "essentially entertainment." The day after the 2016 referendum, another journalist from a euroskeptic publication, who was making his name writing Brussels-bashing reports himself, said he'd suddenly realized he was being used as "cannon fodder" for his newspaper proprietor's desire to engender Brexit. Government spin doctors often played the game, too. The EU wasn't adept at countering the torrent of bad press or at taking on the politicians' anti-Brussels narrative.

Officials in Brussels still speak highly of Britain's diplomatic service, which for decades brokered deals, cajoled

rivals to cooperate, and spoke truth to power. Even as the EU scored a famous early PR victory when, on the first day of the Brexit negotiations, its representatives were photographed with fat wedges of paperwork opposite their empty-handed British counterparts, the Europeans secretly confided that they expected U.K. diplomats to have plenty of tricks up their sleeves. These never materialized. Britain's civil servants seemed hamstrung by their political masters, EU officials involved in the negotiations said. May's government was in such disarray that the EU often found itself taking the lead and drawing up plans for the U.K.'s withdrawal. "It's as if they've outsourced Brexit to us," Sabine Weyand, the bloc's formidable top negotiator, said privately, according to people familiar with the talks.

Could the EU have done more to keep Britain in the club? In a 2011 speech at Bloomberg's London headquarters, Cameron called for wide-ranging reform of the EU to allow some countries to have a far looser relationship than others. Despite having some support in the bloc—with French President Emmanuel Macron recently expressing similar views—there's no sign of any shift in that direction. Ivan Rogers, who resigned as Britain's ambassador to the EU in 2017 after falling out with May's top advisers, acknowledged in private as far back as 2013 that Britain's departure was likely. He's mostly critical of Britain's politicians, but he said in his book *9 Lessons in Brexit* that the EU bears responsibility too, claiming that it's still blighted by "complacency, fatigue, and strategic myopia" when it comes to the U.K.

There's no one reason why the EU lost Britain. Alongside the examples mentioned here, Margaret Thatcher's belligerence in the 1980s, Brown persuading Blair to reject joining the euro in the 1990s, Cameron's decision to pull his Conservative Party from the Merkel-aligned biggest group in the European Parliament a decade later, and his and May's exaggerated idea of Merkel's willingness to compromise before and after the Brexit referendum may have all played their part in people feeling less European and politicians having less influence. Nothing was a foregone conclusion, and even as recently as in the runup to last month's general election some EU officials—and, secretly, some British ones too—still held out hope that a less-than-convincing win for Johnson would lead to a second referendum and a reversal of the original vote.

Practically 12 years to the day of Brown's solo treaty signing, a U.K. prime minister was again absent from an EU summit. This time, on Dec. 12, 2019, Johnson had a better excuse: It was election night. As the bloc's other leaders debated into the night, a small group of senior British diplomats, as well as a few friendly officials from other countries, gathered in a house near Place Brugmann, a swanky Brussels neighborhood 2 miles from where the leaders were sitting. Fortified with mulled wine and mince pies, they crowded around a laptop TV stream of the BBC's election night coverage.

At 11 p.m., when the exit poll predicted a large majority for Johnson, a silence descended. That was it. They knew it was game over. And in that moment, Britain was finally gone. ■



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20:30 Berlin  
22:30 Sydney

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# Can the Renault-Nissan Marriage Be Saved?



## ●The automakers' global alliance is fraying now that its architect, Carlos Ghosn, is out

For Renault SA and Nissan Motor Co., the Carlos Ghosn saga is a nightmare that never seems to end. Fallout from their ex-boss's November 2018 arrest in Tokyo for alleged financial crimes permeated deep into the French and Japanese carmakers' operations, paralyzing decision-making and straining their two-decade partnership nearly to the breaking point.

Yet in the last few months of 2019, the companies gave themselves a second chance to mend the shattered relationship. In a bid to start anew, Nissan replaced top management and Renault dramatically ousted its chief executive officer, former Ghosn protégé Thierry Bollore. But the bad dream came back with a vengeance when Ghosn burst back onto the global scene as an international fugitive, following a spectacular escape from Japan and his strict bail restrictions to his native Lebanon (page 52).

Ghosn regained the freedom to speak publicly, and judging by what he's said, during a 2½-hour Beirut press conference and subsequent interviews, much of his vitriol is directed at the automakers, which along with Mitsubishi Motors Corp. form the world's biggest carmaking alliance. He accused Nissan executives of colluding with Japanese prosecutors out of spite over losing power to Renault in the alliance. He also seemed to snub Renault's managers for not completing merger discussions with Fiat Chrysler Automobiles NV, which he said were well under way before his arrest. The question now is whether Ghosn's media assault has rekindled the spark of suspicion between the companies enough to put them on an inexorable path to separation.

Before Ghosn's escape, Nissan executives had already examined that possibility, weighing the pros and cons of sustaining the alliance especially when it comes to engineering and technology sharing, according to a person familiar with the matter who asked not to be identified discussing confidential matters. After Ghosn skipped bail, a top French official described the government's concerns that the fugitive would distract Renault from its efforts to patch things up with Nissan.

Nissan has denied it's considering dissolving the partnership with Renault. "The alliance is the source of Nissan's competitiveness," the Yokohama-based company said in a statement on Jan. 14. "Through the alliance, to achieve sustainable and profitable growth, Nissan will look to continue delivering win-win results for all member companies."

Yet for some, such as Evercore ISI analyst Arndt Ellinghorst, the financially disappointing alliance—the shares of the two companies were the worst performers among major automakers last year—seems already beyond salvage. "In such a hostile situation and with so much mistrust, I would question whether it's even worth trying to save it," he says. "Where's the value if both Renault and Nissan are less profitable than their peers?"

Ghosn was the linchpin that kept the partnership together despite a lopsided shareholding relationship favoring Renault that was put in place when Nissan was financially ailing. The French carmaker owns 43% of Nissan, with full voting rights, while the Japanese company holds only a 15% stake in Renault and lacks the ability to vote its shares. This, along with a significant stake held by the French government in Renault, has bred deep resentment among some Nissan executives—especially now that Nissan's revenue and market value are more than 50% higher than those of the French company.

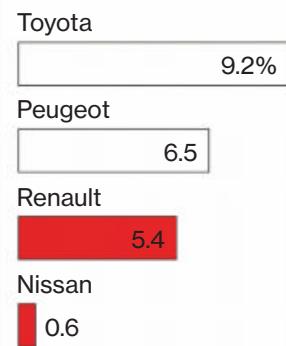
Still, in theory at least, the need for the alliance is more important than ever as the industry spends more to develop electric and self-driving technologies. Ghosn gauged the progress of the three-way partnership through cost savings, a measure that's now largely questioned by the companies as a relevant metric for successful integration.

A breakup would set Nissan and Renault adrift at a time when both are performing poorly and the auto sector is consolidating. Peugeot maker PSA Group and Fiat Chrysler agreed to merge in December, a deal that was particularly painful for Renault Chairman Jean-Dominique Senard, who'd tried and failed to engineer a tie-up with Fiat only months before but was hampered by Nissan, which withheld the explicit backing for the deal required by the French government.

Both Nissan and Renault are suffering from a drop in car sales in China, Europe, and other key markets, and their profitability is below that of regional rivals PSA and Toyota Motor Corp. Nissan has slashed its profit and sales forecasts for the fiscal year ending March 31, 2020, and says it will cut 12,500 jobs globally. New CEO Makoto Uchida faces the huge task of restoring the brand's image and rolling out models that appeal to retail customers, which would allow the company to step back from the heavy use of retail incentives and low-margin sales to fleet and rental-car operators that it's increasingly relied on in recent years.

Renault's poor showing stems from its aging model lineup and a geographic reach that doesn't extend much beyond Europe and North Africa. In February it's expected to report that net income ►

▼ Operating margins for most recent six-month period\*



◀ for 2019 fell to a six-year low of less than €2 billion (\$2.23 billion), according to Bloomberg estimates.

A split would cause political strain between Japan and France. Prime Minister Shinzo Abe and President Emmanuel Macron discussed the companies' ties last year, and the French government worked behind the scenes to mend relations, using diplomatic channels and handing Renault's Senard the responsibility to get the alliance back on track.

The stakes are especially high in France, where unemployment tops 8% and Renault is one of the biggest employers, with more than 48,000 workers. Any breakup would be messy, because of the companies' intertwined operational ties. The most important vehicle made at Renault's biggest and oldest car factory, in Flins, is the Nissan Micra. The French automaker also produces engines for Nissan at another plant in Cleon.

As Nissan's largest shareholder, Renault stands

to lose big as it lowers its dividend to conserve cash. Nissan dividends added €233 million to Renault's third-quarter earnings, less than the €384 million contribution a year ago, the French carmaker said in a statement in November. And Nissan withdrew its outlook for a 40 yen (36¢) per-share payout for the year in a filing in November. Renault had received €784 million in dividends from Nissan for 2018.

That means whoever is recruited for the top job at the French automaker will face plenty of uncertainty about one of its biggest assets. "Visibility is zero on the alliance," says Invest Securities analyst Jean-Louis Sempe. "Renault's new CEO will have no idea whether he's coming in to lead a company that's on its own or with Nissan as a partner."

—Tara Patel and Ania Nussbaum

**THE BOTTOM LINE** Two decades ago, Renault and Nissan formed a global carmaking alliance to compete against industry leaders. In the wake of the Carlos Ghosn drama, its future is in doubt.

## 5G Has a Health-Scare Problem

● The next-generation wireless technology has sparked fears in some European nations

In the small Alpine town of Wohlen, a fierce backlash against the latest generation of mobile phone technology is under way. The Swiss municipality won't allow Sunrise Communications AG or other phone companies to build masts to broadcast 5G, citing concerns about health risks from the towers' electromagnetic radiation. Activist group Frequencia, which calls for limits on 5G's rollout in part because of fears about cancer risks, attracted hundreds of people to a mass protest outside parliament in Bern in September.

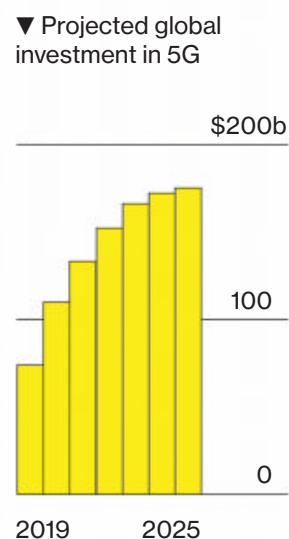
Reticence in Wohlen and other parts of Switzerland, including Geneva, has created an obstacle to Sunrise's plans to provide the latest services. "All this stuff has delayed my rollout vs. my own company plan," says Olaf Swantee, who resigned as chief executive officer on Jan. 3 in the wake of a failed deal to buy a cable business. He says Sunrise was able to build only half the number of 5G sites he'd wanted to complete by the end of 2019.

With 5G, or fifth-generation, wireless technology, you get data speeds as much as 100 times faster than what's available with 4G, the current standard. That means faster downloads, boosting the potential of automated cars and factories and helping realize the

promise of the internet of things. For phone carriers, 5G offers a chance to bolster revenue by enabling a range of new commercial services; governments view it as a path to business opportunities.

But to realize those benefits, carriers must add 5G equipment to existing mobile masts, so they can emit more powerful signals. On the older standards, towers broadcast wireless signals far and wide, hitting any and all devices in their range at low intensity. Masts that are 5G-enabled use a high-energy process known as beamforming to transmit only to devices that can read the signals.

The increased energy intensity has sparked health concerns from activists. Matthias von Herrmann, a spokesman for the Stuttgart-based environmental group Diagnose:Funk, which has been critical of the 5G build-out, says the additional radiation raises the risk of cancer, infertility, and other serious ailments. He says his group gets about two or three requests a week from people across Germany for advice on building opposition to 5G. The mobile phone industry is facing "a level of protest they clearly hadn't expected," von Herrmann says. "It's not about denying people the use of mobile phones. But we can't just expose people



to radiation without running the necessary checks."

Protests have percolated from Berlin to Bristol, England, despite little scientific backup from major government health bodies. One study, from the U.S. National Toxicology Program, showed rats exposed to very high levels of electromagnetic radiation developed tumors. But the Food and Drug Administration says weaknesses in that research, including a failure to establish a clear relationship between radiation doses and cancers, mean it shouldn't inform public-health guidelines. The International Commission on Non-Ionizing Radiation Protection, which works with the World Health Organization on research and policy, agrees with the FDA. "There's no reason to be concerned" about the potential for 5G to raise the risk of cancer or other ailments, says commission Chairman Eric van Rongen, a radiobiologist.

Despite "a lot of noise in social media" on the possibility of 5G damaging health, U.S. carriers have been largely unaffected, says Jack Rowley, a senior research director on electromagnetic radiation at GSMA, the international lobbying group for the mobile communications industry. Opponents in locales such as Mill Valley, Calif., which has attempted to block the erection of 5G towers, face a tough adversary: Ajit Pai, head of the U.S. Federal Communications Commission. Pai, who sees 5G as a national priority, has streamlined antenna approval processes. He's said it's illegal for local governments to set a moratorium on telecom infrastructure.

It's a different story in parts of Europe. In Belgium, regional governments have set strict limits on mast emissions that will make any 5G rollout there difficult for now, says Michael Trabbia, CEO of mobile operator Orange Belgium. A 2018 study by the country's communications regulator said setting limits on the amount of energy a telecom mast can use is necessary to "protect the public against the effects that may arise as a consequence of exposure to electromagnetic fields."

Europe's biggest carrier, Deutsche Telekom AG, has also had to modify its 5G program in areas where there's been pushback. In January 2019 residents of the small Bavarian district of Graswang protested the company's plans to build a 100-foot mast near their homes in part because of concerns about health risks. Deutsche Telekom has agreed to build the tower at a site that's farther away.

In England, local governments including that of Glastonbury, home of the well-known music festival, are threatening to frustrate mast applications on health grounds. The prospect of prolonged and expensive local planning disputes is causing some companies to consider avoiding problem areas in

Britain. "That sort of time is not something that any part of the mobile industry can really afford, nor wants to spend its time and its money on, and we will focus on areas where there is a more supportive environment," says Howard Jones, head of network communications at BT Group Plc.

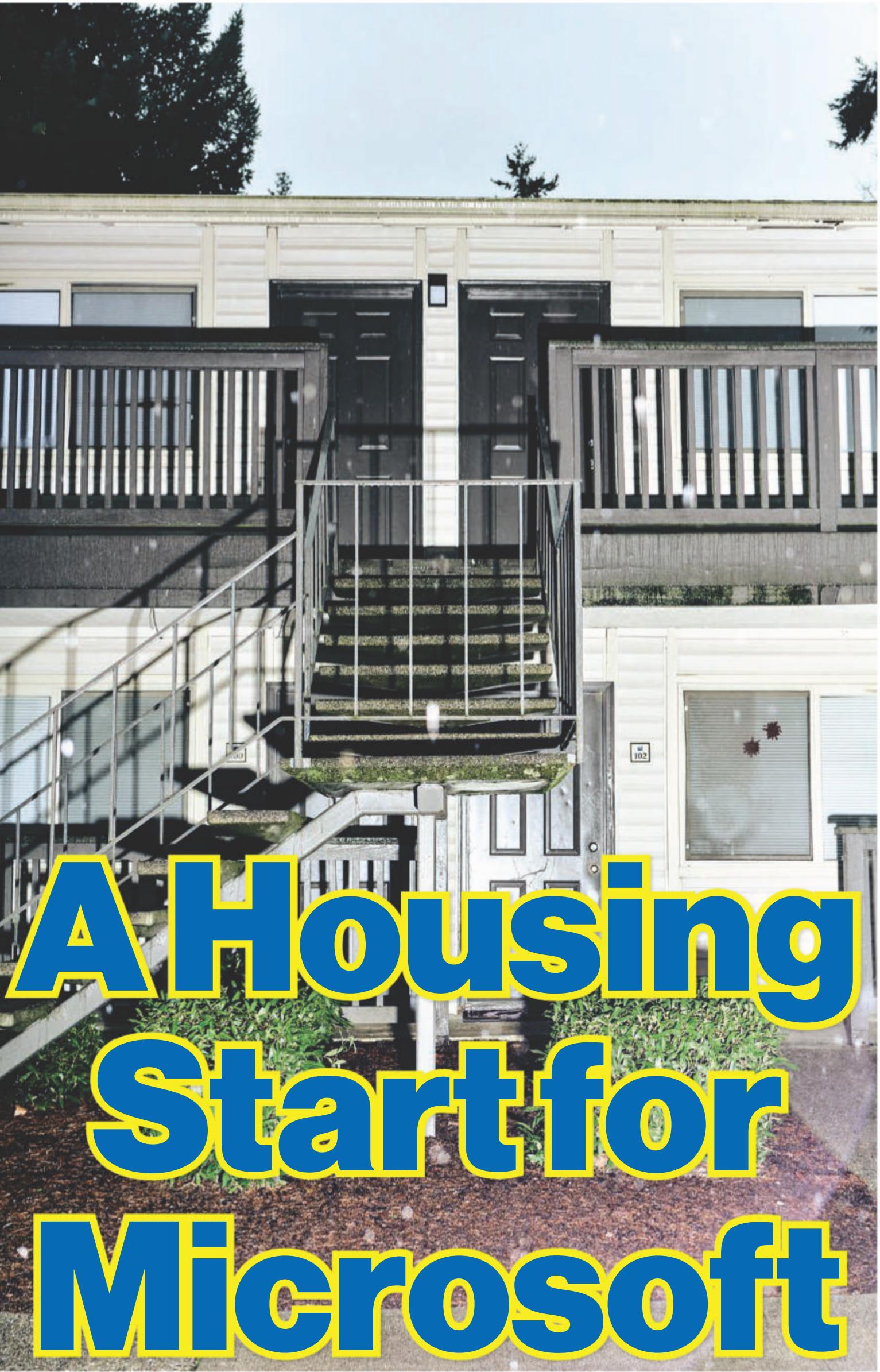
System operators aren't likely to quiet 5G opponents anytime soon, because collecting indisputable evidence of the technology's effect, or lack thereof, would require decades of observation across big populations. And the WHO's classification of mobile phone emissions as "possibly carcinogenic" still resonates with some critics—even though aloe vera and pickled vegetables fall under the same category.

**U.S. carriers have been largely unaffected, despite "a lot of noise in social media"**



Former Sunrise CEO Swantee says Swiss officials could help wireless carriers by offering reassurance to citizens. So far, though, they've been "pretty much silent" on the topic, he says. "They should say, 'This is fake news. Telecoms are applying normal laws. Birds are not falling from the sky because of 5G.'" —*Thomas Seal and Albertina Torsoli, with Stefan Nicola and Leonard Kehnscherper*

**THE BOTTOM LINE** Scientists and regulators say 5G technology poses little health risk. But that hasn't stopped opponents in parts of Europe from slowing the telecom upgrade's rollout.



## ● The company is increasing its nine-figure, loan-centric pledge to the Seattle area by 50%. There's still a lot left to do

When Microsoft Corp. unveiled a \$500 million pledge last January to tackle the housing crisis in the Seattle area, the event had most of the trappings of a product launch. During a slick presentation, President Brad Smith walked through the numbers: A booming economy had led to a housing shortage that was squeezing everybody whose wages couldn't match Microsoft-level salaries. His company, then valued at \$800 billion, had taken an interest in evening things out. "Every day for 40 years, we at Microsoft have benefited from the support of this community," Smith said. "We want our success to support the region in return."

The only thing the launch was missing was a fully fleshed-out product. Microsoft wanted help investing the money.

In the year since, Apple, Facebook, and Google have followed Microsoft's lead, announcing splashy efforts to alleviate the Bay Area's housing crisis. All issued outlines of plans that were short on details. Critics dismissed the moves as publicity stunts meant to deflect attention from the ways in which the industry has made surrounding communities less affordable.

If Microsoft's experience over the past year is any gauge, the companies are approaching the task thoughtfully. But good intentions and careful investments won't be enough to address a complex, urgent dilemma decades in the making. "We can't expect that a couple of corporate gifts is somehow going to solve the problem," says Jenny Schuetz, a fellow at the Brookings Institution who studies housing policy. "The scale of need is just so much bigger."

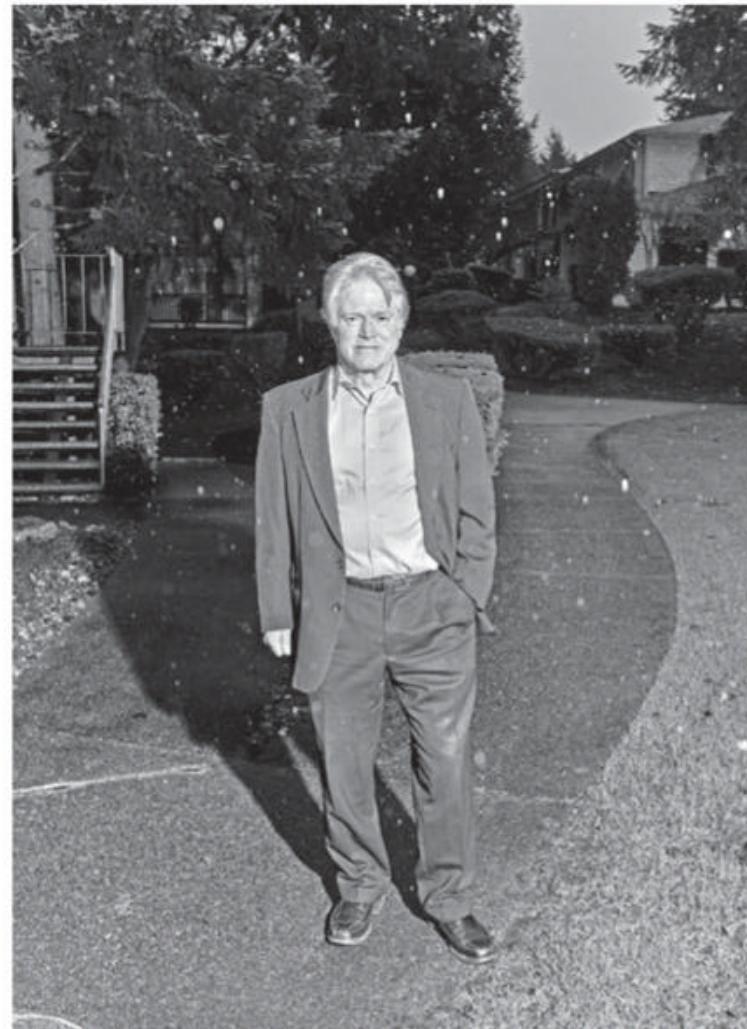
On Jan. 15, Microsoft—now valued at more than \$1.2 trillion—announced an additional \$250 million line of credit to the Washington State Housing Finance Commission, along with several new projects and grants. The company's efforts so far are expected to preserve or create more than 6,700 affordable homes, with about half the \$750 million total yet to be committed. Still, even Microsoft acknowledges it wants to pick up the pace. "There is great momentum," says Jane Broom, senior director of Microsoft Philanthropies and one of four executives at the company who've been putting the pledge into action. "But we really do want to move faster."

Last spring, Microsoft asked developers to

present their best ideas for building and preserving middle- and low-income housing. "To be honest," Broom says, "we were a little underwhelmed." Most of the 15 or so proposed projects weren't far enough along to fund, she says, or didn't target the suburbs Microsoft wanted—within an hour's commute of Bellevue, Wash., near its Redmond headquarters, areas where there are few affordable developments under way. The standout proposal was from the King County Housing Authority, which administers federal rental assistance and owns more than 11,000 units in the cities around Seattle.

On a damp morning just before the new year, Dan Watson, the housing authority's deputy director for development, stepped into a two-bedroom apartment at Kendall Ridge, a low-slung 1970s-era Bellevue complex. A cozy living room with thick brown carpet opened onto a clean but dated kitchen. It's nothing opulent, but at \$1,800 a month, it's a good deal for a home on a rapid bus line in a Seattle suburb known for high-quality schools. In the age of Microsoft and Seattle-based Amazon.com Inc., comparably sized apartments in the neighborhood might go for \$2,100 a month. "What happens is that big money takes on these places," Watson says. "They'll upgrade appliances, fixtures, cabinets, bathrooms. Then they'll bump the rents quite a bit."

Not at Kendall Ridge. Last year, Watson's group used a \$60 million loan from Microsoft (interest-only for 15 years at 1%) to help buy the complex and four other properties in the region. Its plan is to boost ►



◀ Kendall Ridge

◀ Watson and the King County Housing Authority used a \$60 million loan from Microsoft to help buy five properties where they can slow rent increases

► rents only as much as the housing authority's operating costs rise—typically about 3% a year, vs. 5% to 8% a year for a market-rent increase in the area. Over time, that difference could add up, saving renters hundreds of dollars a month and keeping about 1,000 apartments markedly more affordable.

Such technocratic solutions don't lend themselves to ribbon-cuttings, but they can be effective. Preserving a unit of affordable housing costs around \$300,000 to \$350,000 in the Seattle area, compared with more than \$400,000 for new construction, says Stephen Norman, the housing authority's executive director. Preservation, however, requires competing with aggressive private investors looking to gut units and start fresh. "When a property goes on the market, you have about three nanoseconds to put your money up," Norman says. Microsoft's money has helped his organization keep pace with higher prices.

Fixing the mess will require new housing, too, which means overcoming some tough math. In San Francisco, not far from where Apple, Facebook, and Google are based, it costs about \$425,000 to build an affordable, family-size apartment, according to the Terner Center for Housing Innovation at the University of California at Berkeley. Land, fees, and other soft costs can add an additional 30% to 40%, says David Garcia, the center's policy director.

The companies are looking to stretch their dollars across a wide range of projects in California and contribute land that can be used for residential development. But costs to build are so high that Google and Facebook, which each pledged \$1 billion, say they'll probably create only about 40,000 homes combined—in a state that needs millions of them.

None of this is entirely altruistic. In each case, much of the funding is structured as loans, so the projects will generate some kind of direct return on investment. Plus, the worsening housing crises in the Seattle area and Silicon Valley have started to hurt the companies' ability to recruit. The pricing out of working-class populations (cops, nurses, firefighters) has rendered these areas less attractive. It's much tougher for, say, schools to hire talented teachers who know they'll be signing up for a 90-minute-or-longer commute each way.

While the housing money is helpful, the tech companies would create a more durable legacy if they worked to change policy. The federal government has pulled back dramatically from housing assistance, currently spending about a third of what it did in the late 1970s. Meanwhile, Nimby-influenced policies have all but outlawed construction of new affordable housing in many places. Large employers have an outsize ability to sway that sort of thing.

Microsoft's pledge came along with a commitment from several suburban mayors to support pro-growth policies, such as increasing housing density near transit and reducing development fees. The company also backed last year's increase to the state's housing trust fund. "That was really the muscle of Microsoft," says former Governor Christine Gregoire, whose group Challenge Seattle has worked with the company to advocate for more middle-income housing. Facebook has backed a controversial bill that would force California cities to rezone for higher density.

Corporate advocacy for such reforms is a relatively new phenomenon, says Schuetz, the Brookings researcher. She argues that the big tech companies' focus on the issue could help convince people who've dismissed it as a concern only for the poor. "Talking about it draws more attention to it," she says, "and puts more pressure on local governments." —Noah Buhayar, with Dina Bass

THE BOTTOM LINE Microsoft is increasing its commitment to affordable housing near its headquarters, but the money isn't enough to make a major dent in the problem.

## Killing Pests Without Pesticides

● Gene editing, targeted viruses, and insect sex pheromones are being deployed in the fight against crop-eating bugs

For decades, Adam Baldwin's family used chemicals with multisyllabic names to keep caterpillars such as earworms and podworms from chomping their corn, soybeans, and sorghum. While the pesticides were generally effective in getting rid of the hungry invaders, they also killed beneficial insects such as ladybugs, which help control aphids that cover crops in a gooey residue and reduce yields. So for the past two years, Baldwin, a fifth-generation farmer in McPherson County, Kan., has used a lab-grown virus that takes out the caterpillars while leaving other bugs alone. "It's very specific to the one insect, a safe product," he says. "It killed what we were going after, but it didn't kill what we weren't."

Baldwin uses Heligen, a natural virus harvested from infected caterpillars that's sprayed on crops at the first sign of infestation. The virus spreads among

the bugs, and each infected insect becomes a source of infection for others, giving further protection to the crop as it passes from generation to generation. "Once the caterpillars feed on the virus, they die and liquefy and release billions of new virus particles," says Peter Berweger, chief executive officer of AgBiTech Pty Ltd., the company that makes Heligen.

The virus is one of a growing number of tools that provide natural protection for crops, ranging from bacteria to insect sex pheromones to substances derived from spider venom. Global sales of such products will double to \$10 billion annually by 2025, researcher DunhamTrimmer LLC predicts. While that's a fraction of the \$61 billion farmers will spend on agrochemical crop treatments in 2020, alternatives are gaining traction with investors. Biological crop protection startups drew \$184 million in venture capital last year, up fivefold from 2018, researcher PitchBook estimates. "New companies are emerging in the space almost monthly," says DunhamTrimmer managing partner Mark Trimmer.

Giants of the crop protection business are also taking note. The venture capital unit of BASF SE has invested in Provivi Inc., which sells pheromones that disrupt mating by making it harder for insects to find one another. Bayer AG, which is developing technologies focused on microbes that can protect plants from diseases and pests and help them better absorb nutrients, is also teaming with Joyn Bio LLC to explore probiotics, beneficial bacteria that can improve crop yields and reduce chemical fertilizers. And Syngenta AG has put money into 15 startups in the sector in the past decade. "The science that's happening in this space is pretty extraordinary," says Corey Huck, who heads Syngenta's biological crop protection business.

Pests, fungi, and weeds reduce crop yields by as much as 40% globally, costing \$1.4 trillion a year, according to CABI, an English nonprofit that researches agriculture. The damage is growing as many insects develop resistance to established treatments, which spurs farmers to spray even more chemicals on their fields. That in turn causes a litany of concerns about the environmental toll and safety of compounds such as Bayer's weedkiller Roundup, which is the subject of more than 40,000 lawsuits alleging it causes cancer. Advocates say biopesticides are safer than conventional methods because they target individual species, and they're likely to be permitted under regulations governing organic produce, allowing farmers who use them to sell their harvests at a premium. "Consumers want it and innovators see a path to market, so growth is inevitable," says Rob Dongoski, agribusiness leader at Ernst & Young LLP.



◀ Lab-grown viruses have become many farmers' weapons of choice against earworms

At least 200 companies sell biopesticides, researcher Mordor Intelligence estimates. AgBiTech has seven virus products aimed at fighting bugs that attack dozens of plant species. Vestaron Corp. makes insecticides based on spider venom to fight bugs that infest fruits and vegetables in greenhouses. Agragene Inc. is using gene editing to breed sterile male fruit flies for release into orchards or berry fields, where they mate with wild females, which then produce unfertilized eggs. "It's insect birth control," says Gordon Alton, Agragene's CEO. "It's not an insecticide per se. We prevent them from being born in the first place."

Still, there are many hurdles to widespread acceptance of biologicals. They can be pricier than traditional pesticides, and they frequently require more attention from users. Farmers must apply them within a relatively tight time window, and since they contain living organisms such as viruses, fungi, or bacteria, they often need refrigeration—a challenge in developing countries. And while the U.S. has simplified licensing, many other countries regulate them like traditional products, which means approval can take years.

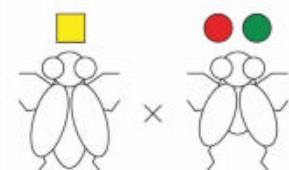
Kenyan farmer Kelvin Sauroki is waiting for approval of Fawligen, an AgBiTech virus aimed at controlling fall armyworm, which attacks crops worldwide. Sauroki says farmers he knows have tried to battle the pest with applications of toxins such as battery acid and engine oil. "They're desperate," he says. He's used conventional chemicals, but growing resistance forced him to spray each crop multiple times. Fawligen, by contrast, worked after a single application in a test in November. But Sauroki can't get more because the Kenyan government has yet to allow its commercial sale—though he hopes that will happen before he plants again in April. "That's my prayer," he says. "It's cheaper, and it's safe."

—Agnieszka de Sousa

THE BOTTOM LINE Biopesticide sales are on track to double to \$10 billion annually by 2025, and startups in the space got more than \$180 million in backing last year, up fivefold from 2018.

▼ Breeding sterile pests

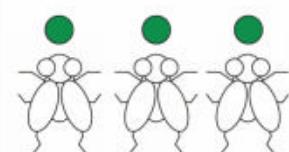
- Gene-binding enzyme
- RNA carrying female lethality
- RNA carrying male sterility



● Female pests with edited genes mate with males carrying genes designed to yield only sterile male offspring



● Female eggs don't survive, and new males are born sterile



● The sterile males are released into the environment to reduce overall pest populations

# Big Ideas



## ● The post-crisis era has been tough for global macro funds. Some managers are adjusting

Greg Coffey's hedge fund firm, Kirkoswald Asset Management, gained 28% for clients in 2019. That's a decent profit by any standard, but what makes it more impressive is that Coffey is what's known as a macro investor. That's a tough trade to ply.

It wasn't always this way. The macro style used to be synonymous with the hedge fund industry. Imagine a money manager sitting in judgment on the entire world, sifting through trends in global economies and geopolitics to make big bets on everything from currencies to interest rates to stock indexes. That's macro. Its roots go all the way back to economist John Maynard Keynes, who had a side gig in the 1920s running money for the endowment of King's College, Cambridge. Take any titanic economic event of the past century, and there was a macro manager making a reputation by profiting from it: The fall of the British pound had George Soros; the 1987 stock market crash had Paul Tudor Jones; and the financial crisis of 2007 and 2008 had Alan Howard.

But macros have struggled in the past decade or so. From 1990 to the end of 2008, returns for macro managers averaged 14% a year, according to Hedge Fund Research, or about twice the S&P 500's gain.

Since then the S&P has averaged 14.7%, while macro has eked out an annualized 1.9%.

Last year, Soros's operation—now a family office that runs money for his philanthropies—fired most of its internal and external macro traders, all but dropping the kinds of trades that made him famous. Another hedge fund pioneer, Louis Bacon, effectively retired from the business in November, saying he was returning outside investors' money in his three main funds and stepping back from trading. Bridgewater Associates' Ray Dalio, who oversees about \$80 billion in his Pure Alpha macro funds, lost money in his flagship fund for the first time in two decades. It's averaged a return of about 4% a year since 2011.

One problem for macro is size. The funds were once relatively rare and relatively small, which helped in several ways. There was less competition when it came to seeking out key information—such as what central bankers were thinking—and a smaller asset base meant they could make meaningful trades without moving prices so much that their edge disappeared.

Then there are interest rates. The U.S. Federal Reserve pushed the key rate to almost zero after the financial crisis. Although rates have crept up since, they're still low. Money managers can easily make money on falling rates—bond prices rise when rates fall—and they can use derivative contracts to profit from rising rates. But they're stuck when rates barely budge. Jones, the hero of '87, groused in 2014

that hedge funds needed “a macro doctor to prescribe central bank Viagra”—that is, higher rates.

Technology is shrinking the opportunities for macro managers, too. Information moves faster, making it harder to stay ahead. Algorithm-based quant traders smooth out disparities in market prices so quickly that potential profits get smaller, and it gets harder for managers to discern anything as squishily human as market sentiment.

It doesn’t help sophisticated macro managers’ case that investors are doing just fine with simple strategies. S&P 500 index funds rose 29% in 2019, far more than most macros. Being trounced by a diversified buy-and-hold investment available to most people with a 401(k) is awkward for Wall Street heavyweights who routinely charge even more than the traditional “2 and 20”—a 2% management fee, plus 20% of profits—that other hedge funds levy. In fairness, most hedge funds don’t simply promise high returns—they advertise consistency. Still, few clients are likely to be impressed by average returns below 2% in the midst of a long bull market.

Despite these challenges, some managers have been putting better numbers on the scoreboard. Beside Coffey, there’s Ben Melkman, whose Light Sky Macro fund climbed 18% in 2019. Jeff Talpins, who runs 15-year-old Element Capital Management, has been beating his peers for much of the past decade, and his fund rose 12% last year. Even Jones, who struggled for several years, produced an 11% return in 2019 after climbing 10% the prior year.

One thing that’s likely helped some macro funds is that interest rates are finally offering a little action. After modest Fed hikes beginning in 2015, the central bank turned around and cut again in 2019, creating an opening for a big trade on the direction of rates. It may also be that modern macro traders have stopped waiting for the end of the low-interest-rate era in Europe, Japan, and the U.S. They’ve taken the “go-anywhere” mandate of classic macro seriously and scoped out new places to invest.

Some, like Coffey, focus more on developing markets. While some of his gains came from trading rates in the U.S., he also caught government bond moves in Brazil, Chile, and Russia, according to a person familiar with the firm. Melkman profited by betting on Brazil’s currency, as well as shorting Norwegian bonds, according to investors. (Despite overall U.S. equity gains, he also made money shorting stocks in May when they briefly plunged.)

Others did well by learning to love the market rally. Talpins’s Element made much of its gains from bullish equity wagers. Another advantage has been a heavy investment in technology,

with detailed models that, for example, weigh the impact of quantitative traders on the market.

Some managers fundamentally changed the way they invest. Andrew Law decided two years ago, amid losses at his Caxton Associates, that he would put more money on themes that would take two to three months to play out. This was an acknowledgment that quant trading had made shorter-term trades unprofitable, according to investors. Caxton made 19.5% in 2019. Michael Platt, a British macro manager who gained 50% last year, decided his best bet was to stop running outside money. He kicked clients out of his BlueCrest Capital Management a few years ago because, in part, investors wouldn’t stomach how much leverage he wanted to use.

With the divergence of returns among macro funds, it will be harder for macro managers to blame only difficult market conditions. “For the most part, there are always things to do in macro,” says John Sedlack III, an investment manager focused on macro hedge funds at Aberdeen Standard Investments. “For those who purport to not see macro opportunities, it’s likely they haven’t cast a wide enough screen.” —*Katherine Burton and Katia Porzecanski*

**THE BOTTOM LINE** There are still places for macro hedge fund managers to find an edge—if they search far enough. Or perhaps get rid of clients who can’t handle higher risk.

**“There are always things to do in macro”**

## Wanted: Rivals for Australia’s Banks

- Regulators hope new competition will get giant lenders to clean up their acts

Over the past several years, Australia’s financial industry has been gripped by a series of scandals involving everything from mortgages to investment advice. A sweeping government-ordered inquiry into misconduct lambasted the industry for letting down consumers.

In an effort to force big banks into line, policymakers want to give consumers a chance to vote with their deposits. The Australian Prudential Regulation Authority, the watchdog for lenders, licensed five new online banks in 2019, with more expected ►

◀ this year. In July an “open-banking” initiative will make it easier for people to take their money elsewhere. For now, though, customers seem unmoved.

As of December, roughly 7 out of 8 Australians said they had no interest in trying a digital alternative to the country’s four biggest banks, according to data from RFi Group, a retail banking consulting firm. Australia & New Zealand Banking Group, Commonwealth Bank of Australia, Westpac Banking, and National Australia Bank still account for about 75% of the market share in mortgages and customer deposits, frustrating politicians and smaller competitors alike. Market research firm Roy Morgan says that while there hasn’t been a mass exodus, it’s seen a rise in the number of people who say they no longer deal with the major banks. Australians “are outraged, they are devastated by the behavior, by the greed,” Chief Executive Officer Michele Levine said on Bloomberg TV. Even so, she added, “when it comes to their own bank, they kind of like the service.”

Banking customers are notoriously hard to poach because moving accounts can be a headache. About half of Australians are still with their first bank. “People don’t know what really good banking—what smart banking—looks like until they try it,” says Rob Bell, CEO of 86 400 Ltd., which started taking deposits in 2019. The newcomers are trying to gain a foothold by offering such services as bill payment reminders and accounts that can be opened quickly without paperwork. They also offer higher interest rates; 86 400, a reference to the number of seconds in a day, is offering 2.25% on savings, triple the benchmark interest rate set by Australia’s central bank. Another newcomer, Volt Bank Ltd., is paying 2.15%. The best rate on offer from the legacy banks is 1.7%, according to the comparison site Finder.

Still, the large banks have been working hard to keep customers happy. ATM charges, one of the fees that most annoyed consumers, are gone. Commonwealth Bank—which has apologized for breaching anti-money-laundering laws, charging customers for services they didn’t receive, and selling inappropriate insurance—is among those trying to prove it’s changed. In October it quietly deposited A\$50 (\$34.48) into accounts hit by a service outage, and it’s created a cash-back rewards program. All the big banks are investing heavily in digital services.

Small businesses may offer an opportunity to the new banks, says KPMG’s Ian Pollari. They’re more accustomed to banking with more than one institution, he says, and, compared with consumers, “typically take a more objective approach to deciding between providers.” Joseph Healy, a co-founder of Judo Bank, which focuses on

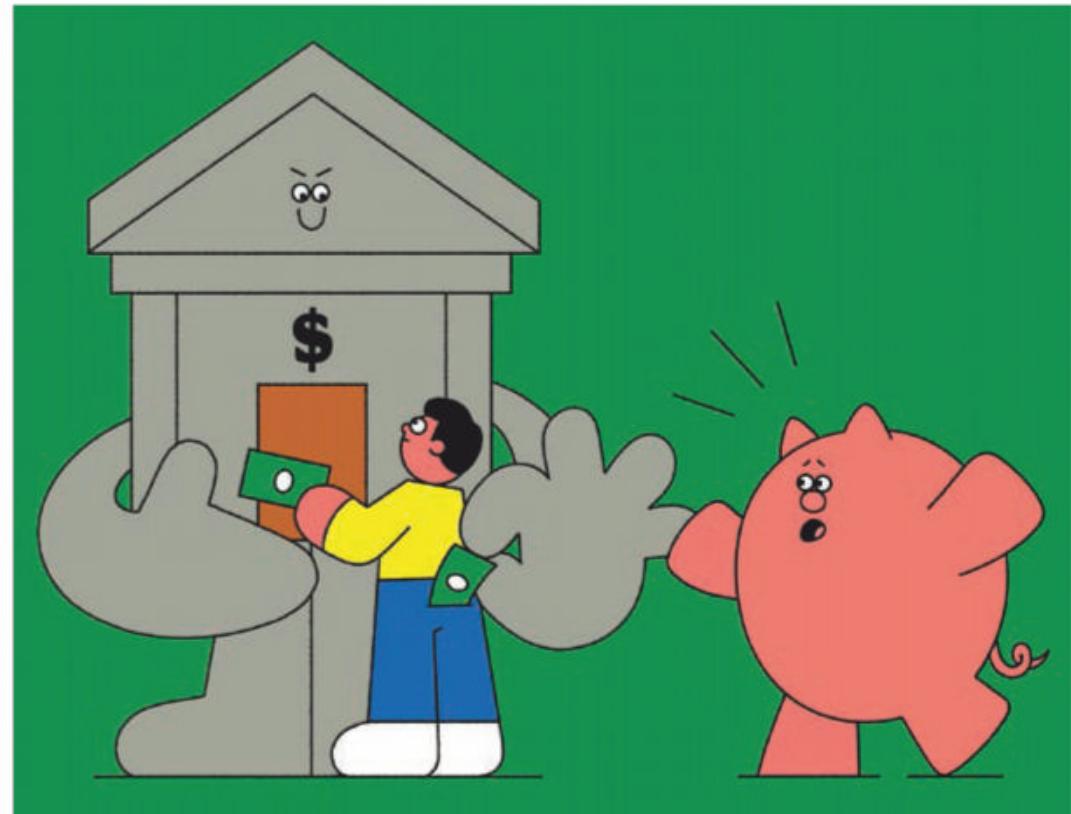
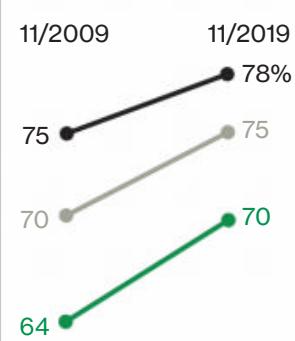
small-business lending, pitches that his bank can offer more personalized service and faster lending decisions. The big banks “have stripped a lot of cost and skills out of their business model and centralized a lot of things into call centers,” he says.

Australia’s regulators hope that open-banking rules will help new entrants and smaller banks. The idea of open banking is to make it easier for consumers to give a third party access to their financial data. If, for example, consumers can share their transaction histories at the touch of a button, that could allow quick credit assessment and offers from other providers, reducing the friction of switching.

A similar effort by the U.K. government after the global financial crisis has had a sometimes bumpy road. Shares of Metro Bank Plc, launched in 2010, hit a record low last year after regulators probed how it measured the risk of some assets. Virgin Money U.K. Plc suspended its dividend to shareholders in November. Even so, several startups

▼ Combined market share of Australia’s four largest banks

Mortgages  
Household deposits  
Loans to nonfinancial businesses



have attracted investors and customers with their promise to do things differently in the U.K. Revolut Ltd., which focuses on making it cheaper to spend money abroad, has 8 million customers. Monzo Bank Ltd. boasts that 40,000 people a week are opening an account. Both companies have yet to turn a profit—or even forecast when they will.

If Australia’s smaller banks can get large enough to stay viable, they can become significant for the whole system, says Melisande Waterford, head of licensing for regulator APRA. “Their existence alone can force incumbents to up their game,” she told an industry conference last year. — *Emily Cadman*

**THE BOTTOM LINE** Just four banks in Australia dominate the market in mortgages and customer deposits. A new technology initiative could make it easier for consumers to shop around.

# A Fight Over Missing Money

● Two American brothers want to hold a Mexican bank responsible for an employee's alleged theft

Monex Grupo Financiero may wish that it had never done business with Jim and Ken Karger. The American brothers, who're among a slew of expatriate investors who say they were ripped off, are doing what few in Mexico dare: taking on a bank in the nation's courts.

About this time last year, more than 50 retirees in San Miguel de Allende, most of them American, found their Monex savings and brokerage accounts had been cleaned out. The city, in Mexico's central highlands about 500 miles south of McAllen, Texas, has long attracted tourists and retirees from north of the border. The victims' personal banker, an English-speaking woman named Marcela Zavala Taylor, stopped all correspondence after millions of dollars went missing. Monex blamed Zavala, making a criminal complaint against her. It's been arguing with clients about how much cash should be returned.

Many settled with the bank, often for much less than they believed they held in the accounts. The Kargers won't back down. They not only declined Monex's offer for about 60% of their principal in dollars, they're suing and have mounted an internet campaign to draw attention to the case. They want their cash, but they also want to make a point that the Mexican banking system should take responsibility for the actions of employees. So far they've spent \$150,000 in pursuit of about \$1.5 million.

"This is a cause, and it's bigger than Jim and me," says Ken Karger, a retired dentist who lives in Fort Worth and has a business in San Miguel with his brother, a co-plaintiff. The Kargers have filed legal actions aimed at getting the matter taken up by Mexico's federal financial crimes prosecutors, and they want them to look at Monex and its officers as well as Zavala. The Kargers are hoping to use a two-year-old law that says financial institutions can be liable for the acts of their agents and employees. Zavala "was using tools of the bank, so the bank as an entity should face criminal charges," says Antonio Holguin, an attorney representing the Kargers.

Bank spokesman Fernando Garcia said in an email that the group has been cooperating with investigators and settled with all but three clients. "It is up to the judicial system to determine those

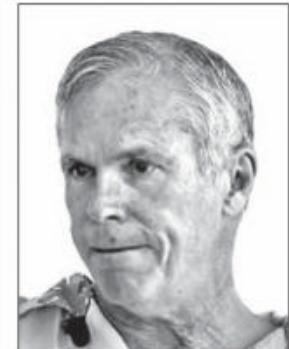
responsible," Garcia wrote. "Monex Financial Group reiterates that it is an institution that acts with strict adherence to national and international standards." Efforts to reach Zavala and her lawyer were unsuccessful.

The brothers have put up a website called BancoMonexFraud.com with news stories about allegations against the bank. Monex complained to the web host, alleging trademark infringement. The U.S.-based company took their site down. The Kargers put it back up using a Bulgarian host.

Proving that Monex is responsible could take a long time, says Kevin Carr, founder of financial technology company Finiden in Washington, D.C., and formerly the U.S. Treasury Department's primary representative in Mexico. Part of the dispute is that Zavala told clients their accounts were denominated in dollars. When the Kargers started talking to Monex about their missing funds in January, Monex told them their account had been in pesos. Since the peso has dropped in recent years, this could mean they'd get less back in dollars. Jim Karger says they had cash in a Monex bank account and U.S. stocks in a brokerage account, which allegedly was looted. He and Ken are suing for their principal investment in dollars.

Monex asked some of those who settled to sign an agreement blaming Zavala, but not the bank. Lani Van Petten, a retiree in Querétaro, was one of them. She says she got back her entire principal, a small amount, but none of the returns Zavala had said she earned. Howard Haynes, a college administrator from Kansas who retired to San Miguel, says he got 90% of his money back and no returns. He says he settled because he was just happy to move on. He says he refused to sign anything saying only Zavala was at fault.

"Most people settled for less than principal because they can't afford to do what we're doing," says Ken Karger. "It may be a long shot, but what we're doing will punish the bank, which will force them to the table." —David Welch



● Jim Karger

THE BOTTOM LINE American retirees in Mexico say they were cleaned out by an employee of Monex. Many have already settled with the bank, but two victims say more should be done.

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## After the Handshake Comes the Hard Part

● U.S. presidents have often struggled to get China to deliver on promises. Will it be different for Trump?

After three years of tweets and tariffs, President Trump has arrived at his China moment. The “phase one” deal signed on Jan. 15 contains commitments by China to respect American intellectual property and not manipulate its currency. U.S. officials also

anticipate \$200 billion in new purchases that should help reduce a yawning trade deficit and repair some of the damage suffered by farmers.

Yet this political victory leaves Trump confronting the same China conundrum that’s plagued his predecessors. The broad and bipartisan consensus in Washington is that American presidents have for decades been hoodwinked by a China that’s often failed to deliver on its promises.

Trump and his lieutenants, of course, insist that this agreement is different and that there will be real and immediate economic repercussions for ▶

◀ China if it comes up short. “A skeptic would say, ‘We’ll see,’ and that’s probably a wise position to take. But our expectation is that they keep their obligations and in any event, they’re enforceable,” U.S. Trade Representative Robert Lighthizer told reporters on Dec. 13.

Trump has made concessions of his own. He has held off on imposing further tariffs and ratcheted back some already in place. On the eve of the signing, the U.S. Treasury Department reversed an August decision to list China as a currency manipulator. Plus the administration has agreed to resume twice-yearly dialogues with China aimed at resolving economic disputes, a ritual instituted under President George W. Bush.

This deal is also not the end of the story, the White House says. Coming soon, though even Trump acknowledges probably not before the November presidential election, is a second phase that will address long-standing American complaints not covered in the initial 86-page document. Among those: the state subsidies—from discounted loans to cheap electricity—that have nurtured an expanding club of Chinese multinationals.

Some inside the White House and close to it have their own doubts that a second installment will ever materialize. But the more urgent question is whether China will even live up to the promises in the current deal. And if not, will Trump have the political courage to take action ahead of the election, even if it risks roiling the markets?

In a talking-points memo distributed to supporters last month, the administration said it called for each country to establish a special office to monitor the deal’s implementation and address any disputes. If conflicts aren’t resolved within 90 days, the U.S. could take unspecified “proportionate” action against China and vice versa. Either party could also abandon the deal, of course.

Wendy Cutler, a veteran trade negotiator now at the Asia Society Policy Institute, says that by not deferring to independent panels or arbitrators, the dispute mechanism leaves the determination of violations—and how to respond—in the eye of the beholder. That means politics along with competing economic pressures and interests are likely to intrude, as they have before.

Steve Bannon, Trump’s former White House chief strategist, says there won’t be enough time before November for the president to take action if China doesn’t abide by the deal’s terms: “I don’t think we’ll be able to ascertain whether they lived up to the commitments until after the 2020 election.” Bannon says hardliners like him who see communist China as an existential threat to

America remain disappointed by a phase one deal they see as easing the pressure on Beijing. A second phase will only be possible if China is put under “extreme duress” by an economic assault on multiple fronts, including restrictions on access to U.S. capital markets, he tells Bloomberg News.

More moderate observers have their doubts as well. Jude Blanchette, a China expert at the Center for Strategic and International Studies in Washington, says there are signs already that China and particularly its own economic nationalists have been emboldened by the phase one deal and are shrugging off the commitments it includes. “There’s a darn good chance we just see a repeat of this show, which has been going on certainly since WTO accession in 2001 of China doing what it can to get its tiptoes right up to the letter of the law but in fundamental ways ignoring the spirit of it,” he says.

That is in part because everything from Trump’s impeachment to the looming election and even the president’s attack on Iran is adding to China’s perception of weakness rather than strength in Washington. “They smell blood for Trump,” Blanchette says. “There has always been, especially since impeachment, a narrative in China that we’ve got him where we want him, we’ve got a lot more leverage over him than we had.”

Rod Hunter, who dealt with China policy while on George W. Bush’s National Security Council, argues that no single agreement can bridge the huge “asymmetry of interests” between the U.S. and China over key issues such as the heavy role of the state in the Chinese economy. “We see that as a problem. But the Chinese government sees that as a feature, a virtue of their system,” says Hunter, now a partner at law firm Baker McKenzie.

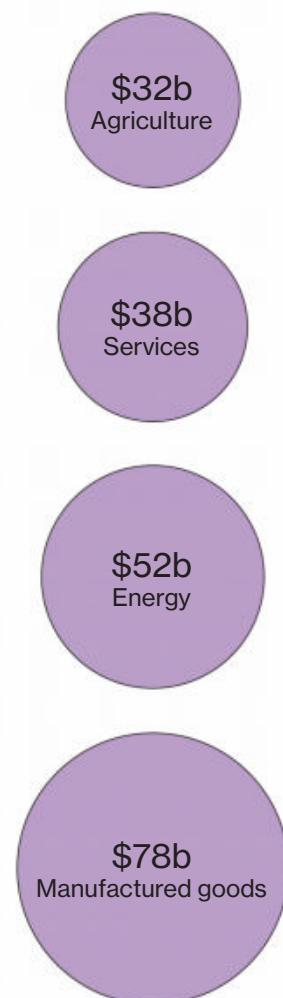
Beijing is pointing to steps it’s already taking. There is a new IP law on the books and legislation that took effect on Jan. 1 banning administrative agencies from forcing technology transfers in joint ventures involving foreign companies. The government also removed limits on foreign ownership of life insurers and securities and mutual fund companies effective on Jan. 1, a year earlier than planned. “China has made steady strides in reform and opening up over the past year,” Cui Tiankai, China’s ambassador to the U.S., said recently.

Hunter says that even if China doesn’t comply with the terms of the phase one deal, Trump has still managed to reset the relationship by curbing Chinese imports and prodding companies in the U.S. and elsewhere to lessen their dependence on China, prompting talk of a decoupling or a new Cold War.

The administration has enforced a broader conception of national security and given defense

**“There’s a darn good chance we just see a repeat of this show”**

▼ China’s commitment to increased purchases from the U.S. over two years



and intelligence officials a bigger say in economic policy, particularly on China. In practical terms, that's meant stricter curbs on Chinese investment in the U.S. and on the ability of American technology companies to do business with China, as seen most vividly in the blacklisting last year of Chinese tech giant Huawei Technologies Co.

Those efforts aren't ending with the new truce. In fact, they are expanding. In the pipeline is a U.S. Department of Commerce rule to restrict American imports of telecommunications equipment—such as that made by Huawei—that might threaten national security.

Tariffs, meanwhile, will remain a blunt

stick. According to the Peterson Institute for International Economics, average U.S. levies on Chinese imports will be 19.3% even after the deal takes effect—more than six times higher than before the trade war began in 2018. "A President Warren, a President Biden, they are not going to be able to unwind that," Hunter says. "They are not just going to be able to say on Jan. 21, 'Never mind, we're taking away the tariffs without getting something in return.'" —Shawn Donnan and Jenny Leonard, with Joshua Green and Miao Han

THE BOTTOM LINE Trump administration officials say unlike earlier U.S.-China deals, theirs is enforceable. But the president may not want to call Beijing on broken promises ahead of the election.

# China Goes In for Labor Mobility

- Reforms to China's residency system will drive urbanization in the country's interior

In China, where you're born can make all the difference. Since its introduction six decades ago, the nation's residency permit, known as the *hukou*, has determined where people can live, where they can work, and where their children go to school; it can even influence whom they choose to marry.

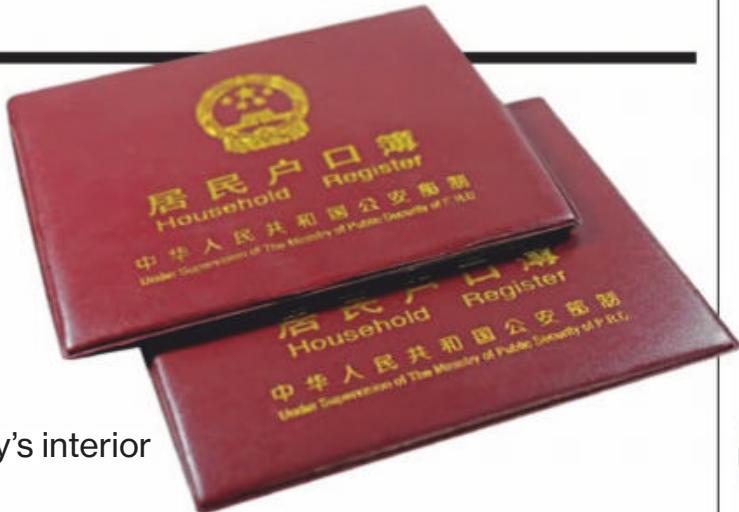
At its inception in 1958, the *hukou* provided China's policymakers with a means to regulate the movement of people to further national objectives. The system supported the twin goals of farm collectivization and rapid industrialization during the Great Leap Forward. Yet today there's a growing consensus that the maroon-covered documents may be holding the country back. In addition to helping institutionalize a yawning gap in living standards between rural and urban residents, restricting labor mobility may prove damaging to the economy over the long term.

President Xi Jinping has made overhauling the *hukou* a key policy goal. A statement issued on Dec. 25 by the State Council, China's cabinet, included a pledge to eliminate the registration system in cities with fewer than 3 million residents and relax it in cities with populations of 3 million to 5 million. For larger cities, such as Beijing and Shanghai, the household registration system will be simplified, it said, without giving details.

"This is by far the boldest and the most significant move to remove the institutional barrier responsible for maintaining the two classes of citizens within the same country," Wang Feng, a sociology professor at the University of California at Irvine who's studied China's urbanization, wrote in an exchange on a Chinese messaging app. "Such a move will no doubt increase labor mobility, usher in new economic dynamism, and reduce a type of social inequality that has plagued China for over half of a century."

The proposed changes also may help counteract the economic drag from a vanishing demographic dividend, according to Qian Wan of Bloomberg Economics. China's working-age population—people from 15 to 59—has been shrinking since 2015, so the country must lift productivity. Measures promoting a better allocation of labor are a way to do that.

*Hukou* reform is part of a broad urbanization strategy that will foster the emergence of new megacities (those with populations greater than 10 million) in central China, Wan says. China's urbanization rate climbed from about 20% in the 1960s to a little under 60% by the end of 2018, according to the latest available data. That's still lower than the 66% average for all upper-middle-income economies, which is how the World Bank categorizes China. ►



- Out of 100,000 *hukou* applicants in Beijing in 2019, the number of migrants to receive one

**6k**

In theory the new policy would effectively remove barriers to obtaining a hukou across much of China. Out of almost 300 prefecture-level cities, only 27 have populations exceeding 3 million, according to I-City Media. The pace of change, however, will ultimately be dictated by authorities in individual municipalities, many of which either lack the resources to expand public services to support larger populations or aren't inclined to make the necessary investments. "The central government has adopted loosening of the policy without providing financial support, so the local governments don't have strong incentive to carry out the reform," says Lu Jiehua, a sociology professor at Peking University and one of China's leading demographers.

The slowest economic growth in three decades is prompting some cities to ease residency restrictions. Since September at least 30 have done so. Because the permit is often a precursor to buying a home, the moves are expected to spur sales.

Some Chinese cities have taken a selective approach to relaxing hukou requirements. Hangzhou, the provincial capital city of affluent Zhejiang province, and Xi'an, the capital of Shaanxi province in central China, now offer permanent residency to migrants with college degrees. In August authorities in Yichang, a city of 4 million people along the Yangtze River, announced that anyone able to rent an apartment would qualify for a hukou—the latest in a series of government attempts to stem a population decline. Guangxi Zhuang Autonomous Region in southern China in November removed all barriers for rural residents applying for urban residency permits while allowing them to retain rights to their farmland.

The reform momentum has yet to reach China's first-tier cities. Shanghai, Beijing, and Shenzhen are magnets for enterprising Chinese, whether young college graduates or strivers from the countryside. By some estimates more than one-third of Beijing residents lack a locally issued hukou, while in Shenzhen it's as much as two-thirds. Local officials are fearful that enfranchising them would only bring fresh waves of migrants.

In 2017, Beijing instituted a points system to determine which migrants get a hukou, taking into account factors such as age and level of education. Last year 6,007 people made the cut, out of 100,000 applicants, according to data released by the Beijing Municipal Human Resources and Social Security Bureau in October. Employees of government agencies, state-owned companies, and those at high-profile private companies had the best

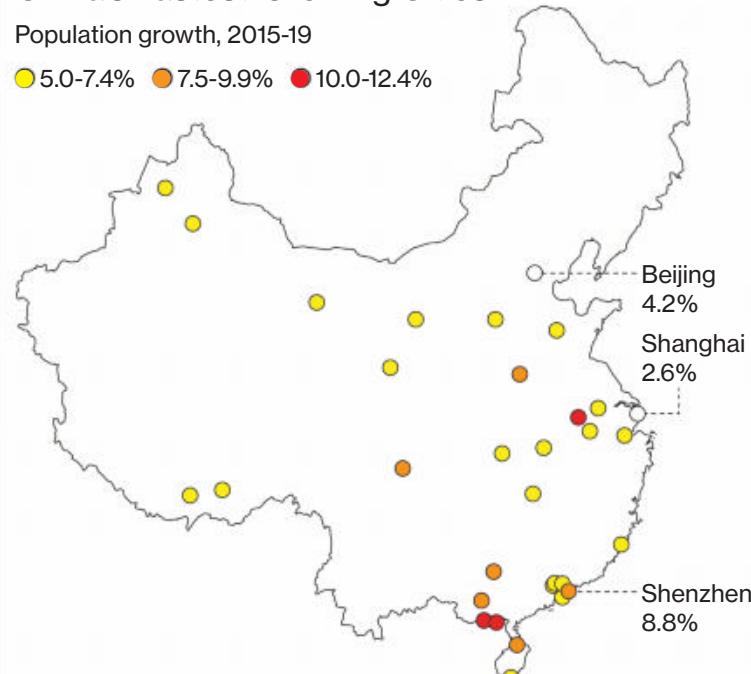
chances of landing one of the hukous. The benefits they confer are priceless, including possible admission into one of Beijing's most highly regarded public schools and improved odds of gaining entry into a top university.

The prize eluded Chen Shicai, who arrived in Beijing in 2005 at the age of 17 to attend university and stayed after graduation, finding a job and

### China's Fastest-Growing Cities

Population growth, 2015-19

● 5.0-7.4% ● 7.5-9.9% ● 10.0-12.4%



eventually a wife. In 2015 the couple decided to move to Suzhou, a city just north of Shanghai, where Chen qualified for a hukou because he had a college degree. Their daughter was also granted a residency permit. "I don't want to live in a city that doesn't welcome me," says Chen. "I no longer have to worry about my kid's education opportunities, and the whole family just feels more secure."

Changes to hukou laws in smaller cities—coupled with sky-high property prices and more intense competition for jobs in larger ones—are starting to reverse a decades-long migration of Chinese to boomtowns along the country's eastern coast, according to a report by the National Health Commission in December 2018. The trend won't diminish inequality within China as much as redistribute it, says Wang Dan, an analyst at the Economist Intelligence Unit. "The current round of hukou reform will accelerate urbanization, especially for central and western China," she says. "The overall inequality in China will drop with faster urbanization, but within cities inequality will increase since new migrants are mostly low-income." —Bloomberg News

**"I don't want to live in a city that doesn't welcome me"**

**THE BOTTOM LINE** There is a growing consensus that China's household registration may prove damaging to the economy over the long haul—which is why Xi's government is promoting reforms.

# The Hazy Future Of Dutch Pot

● Despite a thriving marijuana culture, the Netherlands risks falling behind the U.S.

Since the Netherlands decriminalized marijuana in 1976, Amsterdam's "coffee shops"—which are much more about joints than java—have become a destination for weed lovers from around the globe. But pot has never been fully legalized there: You won't get busted for smoking or selling small quantities, but producing or selling it in bulk remains a legal gray zone. And that's hobbling the Dutch marijuana industry as full legalization speeds ahead elsewhere.

Dutch seeds are considered the gold standard worldwide, and people with ties to the Netherlands are a big part of the global business. But many of the country's growers say the future lies across the Atlantic, where Canada and 11 U.S. states now allow recreational pot use. "We've lost our head start," says Jair Velleman, a Dutchman who dropped out of high school in 1990 to grow pot for Amsterdam's coffee shops. He now runs Lbs. Distribution, a California growing operation that he expects to double in size this year, to sales of \$50 million. "In the U.S. I can make money," he says. "In the Netherlands I'm just considered a nutty cannabis activist."

Legal cannabis sales in Europe could grow a hundredfold by 2024, to \$39 billion a year, making the region the world's largest legal market, predicts Prohibition Partners, a consulting firm based in the U.K. The Netherlands will likely remain the biggest producer for the next few years, but with countries in Europe and beyond poised to open up and allow recreational use, it risks falling behind, says Stephen Murphy, executive director of Prohibition Partners. "The government should take more action if it wants to stay on top of the game."

Those with ties to the Netherlands who've moved away aren't shy about trumpeting a pedigree from the country—it has, after all, immense expertise in growing marijuana and the strongest national "brand" in the industry. "A Dutch connection gives legitimacy to a product, a kind of sexiness," says Esther Brans, a Netherlands native who's creative director at Tumbleweed Dispensaries, a chain of pot shops in Colorado that sells seeds and edibles under the Dutch Girl brand. "People think fashion from Italy, cars from Germany, and weed from Holland."

Amsterdam-based Dutch Passion, a pot seed

retailer founded three decades ago, started exporting to Canada in 2018 and aims to sell to the U.S. once weed is legalized nationwide. The Bulldog, an Amsterdam coffee shop that's grown into an empire of restaurants, hotels, and souvenir shops pitching T-shirts and tchotchkes bearing its logo, is looking to expand to the U.S. as well. Chuck Blackton, an American who moved to the city as a teen and developed a powerful strain called Lemon Skunk, left for Colorado a decade ago. Today he runs Verde Natural, a company with two weed stores and more than 6,000 plants in a warehouse on the east side of Denver. "You would have thought Holland was the place where pot would really flourish," Blackton says, "but we've totally eclipsed them."

To recapture some momentum—and clarify the status of the business—the Dutch government plans to offer permits to grow in bulk for coffee shops in 10 cities. It may also issue further licenses to growers of medicinal marijuana, up from the single company that has permission today. Given the Netherlands' agricultural knowledge and coffee shop culture, the efforts could rejuvenate the industry, says Dutch Passion Chief Executive Officer Eric Siereveld. "State-regulated weed will be so good that it will make Dutch marijuana leading again," he says.

The legal limbo of the business, though, means there are big hurdles to participation, say some would-be growers. Project C, a company formed to produce licensed pot, couldn't get a bank account because of compliance risks until a judge ordered the bank to work with the company. Then in December the town where the company had planned to grow barred Project C from taking over a greenhouse, saying the operation would tarnish the area's reputation and might attract unwanted criminal elements. "We need to reduce the stigma attached to cannabis production," says co-founder Joep van Meel.

David Duclos, marketing chief at Sensi Seeds, an Amsterdam company that's maintained a cannabis seed bank since the 1980s—it has the world's largest collection, with more than 500 varieties—says the government's shift comes too late. Over the past decade, he says, too many in the business have decamped for the U.S. or Canada. There's scant possibility that the newly licensed operations in the Netherlands will grow pot that can compete with the best strains from North America—or what illegal Dutch producers are cultivating. "We missed a major chance," he says. "And in the long run this isn't just about a few million dollars, but about billions." —*Ruben Munsterman*

**THE BOTTOM LINE** Dutch marijuana seeds are among the world's best, but so many growers have left for North America that the country could miss out on billions of dollars in profits.



▲ A seed packet from Amsterdam's Sensi Seeds

# Modi's Economic Mess

- Growth is stagnating, and the people are protesting. What happened?

Just two years ago, Prime Minister Narendra Modi was helming an economy expanding 8%, spurring optimism that India was on a path to become a major driver of global growth.

Now stagflation looms as the economy grinds toward its slowest expansion in more than a decade. At the same time, inflation has spiked above the central bank's targets, reaching a five-year high of 7.4% in December, led by higher food prices. With revenue dwindling and the budget stretched, Modi's government has little scope to intervene with fiscal support and the

economy threatens to become a political liability.

What went wrong? Policy missteps—including the banning of high-value cash notes at the end of 2016 and the chaotic implementation of a unified goods-and-services tax the following year—were followed by a drop in domestic consumption and a credit crunch. The decline in lending in turn triggered a crisis among shadow lenders, key providers of small loans to consumers and businesses.

"We are really extremely close to a point where we could be dipping into a major recession," Abhijit Banerjee, winner of the 2019 Nobel Prize for economics, said this month to a newspaper in Mumbai. He urged authorities to abandon inflation and deficit caps. "You definitely want to stimulate demand," he said.

The steps the government has taken to revive the economy have mostly focused on encouraging



investment rather than whetting demand. In late summer and early fall, Finance Minister Nirmala Sitharaman approved \$20 billion in tax cuts for businesses, merged weak state-run banks with stronger ones, and eased foreign investment rules. The government also plans to sell stakes in three state-owned companies, representing its biggest privatization drive in more than a decade.

Making matters worse for Modi's administration, a wave of protests gripped the country at the end of last year. Farmers came out in force against a ban on the export of onions, which was meant to alleviate a domestic shortage that had sent prices shooting beyond the reach of ordinary Indians. Student unions and neighborhood associations have joined together to demonstrate against reforms aimed at limiting the number of Muslim immigrants and ejecting residents of largely Muslim regions on the borders with Myanmar and Bangladesh.

The government says the new citizenship law was put in place to protect religious minorities coming into India from its Muslim-majority neighbors, but opponents see it as discriminatory and a breach of India's benchmark secularism. "I think it's just bad," Microsoft Chief Executive Officer Satya Nadella said at a technology conference in New York on Jan. 13. "If anything, I would love to see a Bangladeshi immigrant who comes to India and creates the next unicorn," he added. "That should be the inspiration."

Combined, the developments may have pushed the prime minister into a political corner. "Modi's political secret was that he was that rare populist who could unite both the hopeful cities and the resentful countryside," wrote Bloomberg Opinion columnist Mihir Sharma. "Yet this once magic formula seems to have become ineffective."

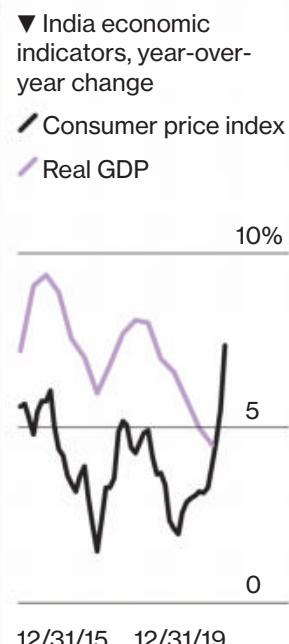
Even though Modi's Bharatiya Janata Party secured an unshakable parliamentary majority in last year's national elections, the economy remains a source of vulnerability for him. Sitharaman may outline more measures to boost growth in the annual budget to be announced on Feb. 1. Just a week later, state elections in Delhi will provide a referendum of sorts on Modi's recent moves. It isn't clear whether his BJP will be able to retain its hold on the state, despite winning all its parliamentary seats in 2019. With U.S. President Trump, amid his own political crisis at home, planning a trip to India in February, according to an Indian government official, the international spotlight will continue to shine on Modi as foreign investors grow worried.

There are some signs the economy may be bottoming out. Industrial production and capital expenditure improved late last year, and economists are forecasting a rebound in gross domestic

product growth to 6.2% in the fiscal year through March 2021, from 5% in the current fiscal year, the slowest pace in more than a decade. Still, much will depend on how quickly global demand and domestic spending bounce back. "The recovery is likely to be very gradual, and a stagflation scenario is likely," says Teresa John, an economist at Nirmal Bang Equities Pvt in Mumbai.

Nouriel Roubini, a New York University professor and well-known economic doomsayer, told delegates at a Mumbai conference in January he doesn't see evidence yet that the "slowdown is going to give way to a significant pickup in growth in this financial year." He added that policymakers' attention "should have been concentrated on the economy and is instead distracted by political things." —Anirban Nag, with Jeanette Rodrigues

**THE BOTTOM LINE** While Modi can govern unchecked, the economy has exacerbated tensions between his administration and those who want to preserve India's secularism.



## The Pollution-Busting Drones Of Krakow

● Poland's historic capital is taking action for cleaner air

Marek Witkowski's patrol car comes to a halt in a cloud of dust. Within minutes, he's powered up his four-rotor drone and sent it into battle against the scourge of his country.

The Krakow officer is on the front line of a clean-air revolution in one of the most polluted cities in the most polluted country in the European Union. The cameras check chimneys from above for signs that household furnaces are illegally burning coal or trash. "That smoke is white, so they're using gas—it's OK," Witkowski says as he steers his drone into a plume emanating from a smokestack 50 meters (164 feet) away. "Let's move on."

Tackling climate change has become a top political priority in Europe. Green parties are now part of Austria's governing coalition and inching up the power ladder in Germany. Poland, though, has a mountain to climb. It's home to more than ▶



◀ Witkowski's drone checks chimneys for signs that furnaces are illegally burning coal or trash

32

◀ 30 of the EU's 50 most polluted cities, a legacy of communist-era industry. Almost 80% of its electricity is generated by coal, which is also the primary fuel for household heating. Preserving jobs for miners is government policy.

Krakow, the country's historic capital and its most popular tourist destination, took a radical approach to fighting the smog. Buses are all-electric, but more remarkably the city is the first in Poland to issue a ban on burning coal and is policing its air with drones. The law went into effect on Sept. 1.

Depending on household income, the local government subsidizes at least 50% of the cost of new gas-burning furnaces and contributes to paying for energy bills, part of the city's broader 1.2 billion-zloty (\$315 million) antipollution effort funded by money from the EU, local taxation, and government programs.

Four months into the purge, the residents of Poland's second-largest city have fallen in line, according to the local police. On an outing with Witkowski on a recent day in December, there were no illegal sources of home heating detected.

"The most drastic cases of burning toxic materials have become pretty rare," says Marek Aniol,

a spokesman for the Municipal Police Department, which employs 30 air inspectors. "People have noticed the difference in the air quality and want more—more green areas, more efficient recycling, more electric public transport, more healthy solutions."

Located in a valley near the country's still-fuming coal and steel industries, Krakow has a population of almost 800,000, with an additional 700,000 or so living in the metropolitan area. The city made headlines during communism for the acid rain that literally washed away the faces of statues lining its old town.

Poland's economic transformation, along with the implementation of EU environmental rules, has helped clean up the rain, though Krakow has for decades remained one of the continent's worst cities for air quality.

The Polish government, which has been at odds with the EU over many things, wants to protect mining jobs and insists it will reach emission targets at its own pace regardless of more stringent regulations. (The EU introduced its so-called green deal in December.) So Krakow decided to turn into a pioneer of cleaner air, an oasis within the fumes

● Of the European Union's 50 most polluted cities, Poland is home to more than

**30**

near Poland's southern border with the Czech Republic and Slovakia.

The result was a drive led by municipal authorities and activists to replace all archaic home furnaces used to burn wood, tires, plastic, shoes, trash, and other debris to stay warm in the winter. A decade ago, the department investigated about 30 cases of pollution from heating. After acquiring its first drone in 2018, Krakow cited 13,000 households for illegal burning.

"The air knows no borders," says Jacek Majchrowski, mayor of the city since 2002. "It appeared to many as an insurmountable problem."

The effort was a reboot of a program from the 1980s, when the city was blighted by emissions from coal burned for heating and for electricity generation. There was also a Soviet-era steel plant in Nowa Huta, a utopian socialist suburb for the workers who would industrialize Krakow, the traditional center of the Polish bourgeois intelligentsia. It's now owned by ArcelorMittal, the world's biggest steel producer, and must comply with EU regulations.

Local activists enjoyed a rare success during communist times, prompting the city to put up an information board laying bare the details on air quality for the public and forcing the closure of some coal-heating plants, say Rafal Serafin, president of Krakow-based Polish Environmental Partnership Foundation, and former Mayor Krzysztof Gorlich, who's worked since 1980 to clean up the city. But over the decades, as the population assumed the fight was over, interest waned.

This time the cleanup effort is paying off, says Paweł Scigalski, the mayor's point man for environmental controls. His office is littered with the graphics, statistics, and news stories on air pollution that fill his typical workday. "We've shown that it can be done," he says, bringing up a computer graphic showing Krakow, highlighted in green, nestled in an angry, blood-red swath of high pollution. "Other regions want to follow us, learn from our experience, and use our know-how. So we've paved the way."

That seems a long shot in the area around Krakow. The surrounding districts still cough out fumes from what the EU calls obsolete furnaces. They're to blame for almost three-quarters of particulate-matter pollution in the area. The bitter scent of burning coal is noticeable in many smaller towns and villages. It means Krakow's success is limited by the dirty air surrounding it, Scigalski says.

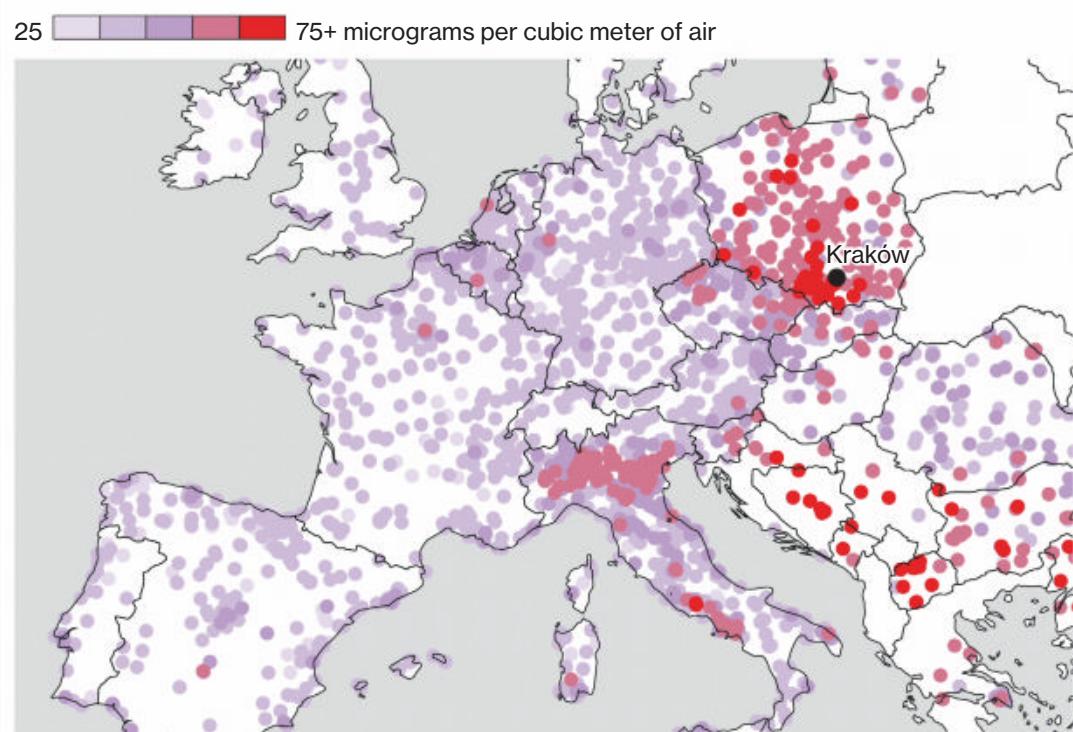
Twenty kilometers outside Krakow, Zbigniew Lustyk's sprawling villa sits in the middle of a tree-lined estate. He was drawn to the property a

decade ago because of the fresh air. That turned out to be a mistake. Now, in a living room with views of a wide garden terrace, he runs an air purifier to reduce the respiratory suffering of his family. Like others in the neighborhood, he's not eligible for the subsidies offered to residents within Krakow's city limits, and the central government still appears unwilling to throw much money at the problem, he says.

Sociologist Anna Kapusta, who works in Krakow but lives 30 minutes away in the village of Wolowiec, is taking the financial plunge to swap out her coal furnace for a gas-fired boiler, a rarity among villagers. Completion of that project will be too late for this winter, though, when it would be needed the most. Until the work is done, she has to make regular trips down to her cramped

#### Poland's Polluted Air

2018 air quality in Europe, measured in PM<sub>10</sub>



DATA: EUROPEAN ENVIRONMENTAL AGENCY

and soot-stained basement to feed fist-size coal pieces into the furnace with an old hand shovel. She hopes the constant smell of burning coal that permeates Wolowiec will be a thing of the past as locals become more aware and as more financial aid is made available. "The process is unstoppable and will gain speed," she says. "Once those old furnaces are in a minority, people will give in under the pressure. I can't wait to have my village as it should be: a healthy breath." —James M. Gomez and Dorota Bartyzel

**THE BOTTOM LINE** While Krakow has made major strides toward cutting pollution, Poland is still one of Europe's main polluters and is unlikely to reverse coal-friendly policies.

# Davos

## A Sense of Climate Urgency in The Alps

The World Economic Forum can make a difference by galvanizing influential participants to do better when they get home



Davos is cloaked in white, but its agenda is green. Environmentalism—fighting climate change in particular—has emerged as one of the biggest priorities of the World Economic Forum annual meeting, which is held every January in the Swiss ski village.

It's easy to poke fun at Davos. In years past, about 1,500 private jet flights have delivered some of the world's wealthiest and most powerful people to the event, where they pay \$70,000 a ticket to talk about how the world should shrink its carbon footprint. There's a risk that the forum's spotlight on climate change could backfire by strengthening the impression that keeping the planet from overheating is something that only the elites hanging out at the Davos Congress Centre and the Steigenberger Grandhotel Belvedere care about.

But don't underrate the power of talk, something at which Davos Woman and Davos Man excel. The biggest obstacle to fixing the planet's climate is free-riding—shirking efforts to fight climate change while benefiting from the efforts others make. The repeated interaction with fellow delegates in climate sessions at Davos can fight the free-rider problem by creating a sense of urgency around the need for collective action on climate change. The unofficial motto of Switzerland, after all, is *unus pro omnibus, omnes pro uno*: One for all, all for one.

Galvanizing the determination of Davos delegates to do better when they get back home can have lasting consequences because the attendees are influential: prime ministers and presidents, chief executive officers from around the world, heads of nongovernmental organizations, big-name journalists, and a dollop of artists and performers.

The first-listed of six priorities for this year's conference is "Ecology: How to mobilize business to respond to the risks of climate change and ensure that measures to protect biodiversity reach forest floors and ocean beds." There are sessions with titles such as The Big Picture on Climate Risk, Solving the Green Growth Equation, Calling for Climate Justice, and Responsible Tourism in the Age of Climate Change. Even some of the featured artists are green: Futuristic artist Daan Roosegaarde of the Netherlands is presenting at a session called Can We Live in True Harmony With Our Environment?

About 18% of the sessions at Davos this year are devoted to climate change, along with other environmental topics and sustainability, vs. about 13% in 2010, when recovery from the financial crisis was more top of mind. The forum will publish a universal ESG (environmental/social/governance) scorecard devised by its International Business Council, which is chaired by Bank of America Chief Executive Officer Brian Moynihan. "Climate change has shot up the agenda over the last year," says Adair Turner, a Davos regular who was chairman of the U.K.'s since-disbanded Financial Services Authority.

On Jan. 14, occasional Davos attendee Larry Fink, the

Thunberg outside the Davos Congress Centre in 2019; the poster reads, "School strike for the climate"

SKOLSTREJK  
FÖR  
KLIMATET



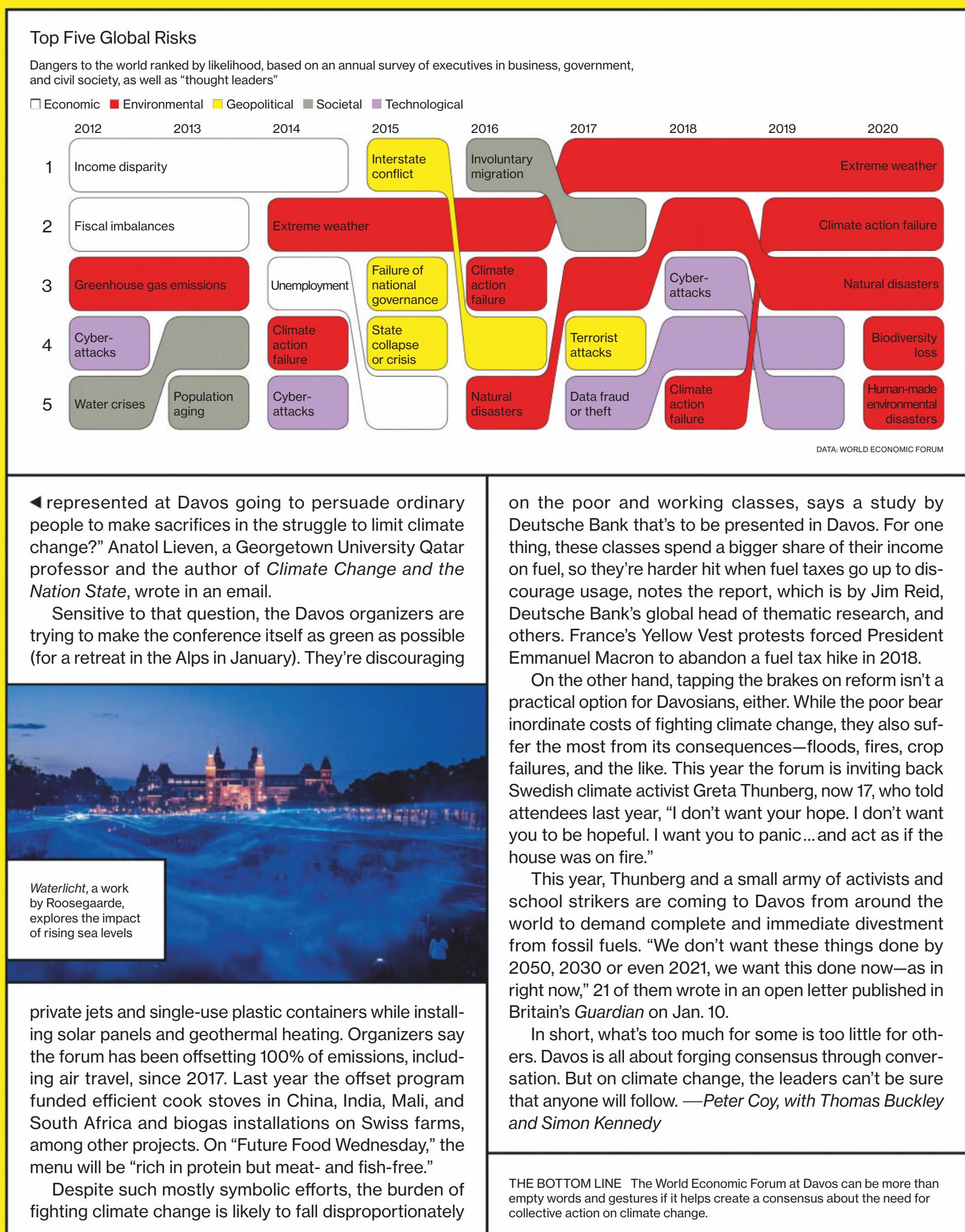
CEO of BlackRock Inc., the world's largest asset manager, issued a letter to CEOs saying that "climate change has become a defining factor in companies' long-term prospects." The next day the World Economic Forum released its annual Global Risks Report, in which climate change and related environmental issues, for the first time, swept all five of the top spots, ranked by likelihood.

Why now? One reason is that the issue has become more urgent. Despite progress on electric cars and renewable energy, the planet continues to grow hotter. In December the World Meteorologic Organization said Earth could heat up by 3C to 5C (5.4F to 9F) from its pre-industrial level by the end of the century. That would be triple the 1.5C that scientists say is the most the biosphere can handle without serious problems, such as inundation of coastal cities and desertification of rainforests.

Another reason is that the organizers of the World Economic Forum seem to have concluded that bringing an end to climate change free-riding is going to require business, government, and civil society to work together. It's been 2½ years since President Trump pulled the U.S. out of the 2015 Paris Agreement on climate change mitigation. The withdrawal made clear that business as usual in climate diplomacy wasn't cutting it, says Nathan Sheets, chief economist of PGIM Fixed Income, who worked on climate issues as the U.S. Treasury Dept.'s under secretary for international affairs in the Obama administration.

That's where the Davos talking cure comes in. "Davos Man doesn't do humility well, but on climate change there's a feeling that there needs to be a more symbiotic relation between business and policymakers," says the U.K.'s Turner.

It's not easy for Davos attendees to dodge accusations of hypocrisy. Most are prosperous by any standard, and wealth is strongly correlated with the production of greenhouse gases. According to Oxfam, the richest tenth of the world produces 60 times as much in greenhouse gases as the poorest tenth. "How are the elites ►



# The Gospel According to Unilever



The consumer-goods giant was an ESG evangelist when it wasn't cool. Can the new believers make a real difference?

At the World Economic Forum in Davos three years ago, Paul Polman, then the chief executive officer of consumer-goods giant Unilever, was a standard bearer of the enviro-capitalist elite. Before leading a standing-room-only session on gender inequality, he'd given a separate talk on the United Nations' sustainable development goals and later in the week appeared alongside the prime minister of Norway and an indigenous-rights activist from Chad to discuss the threats of deforestation.

At the time, despite the forum's mission that dates to the 1970s to improve the state of the world, Polman may have been considered something of an outlier addressing an audience of financial and business leaders whose focus was on creating greater shareholder value. His benevolent message certainly didn't resonate with Kraft Heinz Co., the ketchup giant backed by frugal private equity firm 3G Capital that made an unsolicited \$143 billion takeover bid the following month. Unilever emphatically fended that off.

This year's forum, however, will seek to pick up where Polman left off and to give concrete meaning to "stakeholder capitalism"—a blueprint for a more inclusive and sustainable model of increasing earnings—at a time when "people are revolting against the economic elites they believe have betrayed them," Klaus Schwab, the event's founder and chairman, said late last year.

A key issue is that the corporate pursuit of purpose—such as French yogurt maker Danone SA's focus on improving global nutritional standards, or American clothier's Patagonia Inc.'s goal of highlighting environmental fragility—has come to seem hackneyed. Alan Jope, who took over as Unilever's CEO a year ago and will be at this year's forum, is trying to combat what he calls "woke-washing" in the consumer-goods industry. The term applies to companies seeking to score points from hollow initiatives. For example, last spring, U.K. grocer Marks & Spencer introduced an LGBT (lettuce, guacamole, bacon, and tomato) sandwich in rainbow-colored cardboard packaging.

At Unilever, Jope sees Ben & Jerry's ice cream's work

in raising awareness about climate change and the use of Vaseline in healing sores at refugee camps and HIV clinics in the developing world as benchmarks for aligning revenue growth with societal benefit. It's unquestionably what a majority of shoppers want—Unilever has said the 28 brands it counts as "purposeful" contribute about two-thirds of revenue and drive 75% of sales growth. Jope has said he might begin selling off brands that can't find a higher calling than earning cash in the coming years.

"The new model is that companies have to increase profit and improve society—three-quarters of people say that," says Richard Edelman, who runs the communications company Edelman, quoting figures from surveys in the 2020 Edelman Trust Barometer report. Only 13% of participants ranked shareholders as the business community's most important group, Edelman says, while a majority believe capitalism is doing more harm than good.

Companies responsible for the lion's share of climate change, such as those engaged in oil drilling and animal husbandry, have sought to be seen as stepping up to the challenge. Some have shifted their takeover strategy to focus on sustainable growth by acquiring their more wholesome rivals—for example, Royal Dutch Shell Plc bought U.K. battery storage network Limejump.

But the majority of "reforms" depend largely on the internal controls set by each company—which can be tweaked or scrapped at the whim of management. The same is true of several products marketed in the Environmental and Social Governance (ESG) bracket, such as investment funds focused on social concerns. Some of these have no clear criteria for inclusion, and everyday investors may not know that several ESG funds in fact back tobacco and oil and gas companies. This has led to accusations of greenwashing. The European Union addressed the issue in December by creating a labeling system for what counts as a sustainable financial product, the first time a global regulator had done so. The agreement is expected to galvanize demand for green bonds, a form of debt linked to sustainability initiatives, which is estimated to have totaled \$250 billion in 2019, according to credit rating company Moody's Investors Service.

In the meantime, established mass-market brands remain at the mercy of increasingly woke shoppers. Even the most medaled large advocates for an egalitarian growth model, such as Unilever, could see their ambitions hampered by consumer rejection: Last month, the company said it was facing the slowest growth in a decade—an unwelcome setback in Jope's goal of doing well by doing good, at a time when society and the planet can't afford to be doing worse. —Thomas Buckley

**THE BOTTOM LINE** Once an outlier, Unilever is now at the head of a host of "woke" global corporations. But the road of good intentions may still be a bumpy ride.



# NOBODY MAKES MONEY LIKE

Michael Milken's protégé is at the top  
of the private equity food chain

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# LEON BLACK

BY CALEB MELBY AND HEATHER PERLBERG  
PHOTOGRAPHS BY MICHAEL AVEDON

# Leon Black, the most feared man in the most aggressive realm of finance, wants you to know he's misunderstood. Not about the feared part—that much is indisputable.

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Black built his company, Apollo Global Management Inc., by buying struggling businesses with huge piles of debt at bargain-basement prices, imposing austerity measures on the staff, and extracting huge dividend payments and management fees. Many of Apollo's most lucrative deals have been from companies other firms wouldn't go near, and Black is concerned this has left him with a reputation for taking on inordinate risk. "We've actually made our most money during recessions," he says, growing agitated. As his face reddens over his blue Hermès tie, his incongruously soft voice rises by an octave, and he stabs a pile of printed-out emails with an eraserless No. 2 pencil. "Everybody else is running for the doors, and we're backing up the trucks."

The most recent recession, triggered by the 2008 financial crisis, created an unprecedented opportunity for private equity firms, and few have taken better advantage than Apollo, Wall Street's apex predator. During the past 10 years, its assets grew sixfold, to more than \$320 billion. Black has amassed a personal fortune of \$9.5 billion. Now 68, he became chairman of New York's Museum of Modern Art in 2018, a coronation of sorts among the wealthiest of the wealthy. His office, which is guarded by a display of antique French long guns and has spectacular views of Central Park, is just above that of Henry Kravis, the most infamous corporate raider of the 1980s.

Who bears the risk in situations where Black is involved is an interesting question. A private equity takeover can involve deep payroll cuts, massive asset sell-offs, and taking

on dangerous levels of debt. The process can mortally wound a company and trigger zero-sum fights over the corpse. Even if you don't know Apollo, you know its targets: Caesars casinos, Claire's jewelry stores, Linens 'n Things, all purchased just before the financial crisis and driven to bankruptcy under Black's watch. That's not always the outcome, but when it is, creditors are on the hook. Apollo, known for guarding its hoard, usually manages to walk away richer.

In this way, yes, Apollo is one of the least risky bets out there. But widen the lens, and you'll find that Apollo and Black have spent decades skating on the edges of other people's catastrophes. Those with money in Apollo funds were given a disturbing reminder of this in July when Jeffrey Epstein, who'd served on the board of Black's family foundation and been known to visit Apollo's offices pitching personal tax strategies, was arrested on federal sex-trafficking charges. Black's deputies at Apollo scrambled to distance themselves. (Via a spokesman, Black and his co-founders deny this.) Some of the firm's biggest investors quietly wondered whether their money was still in good hands. Lawyers combed through internal emails and other documents to ensure that Epstein hadn't invested in Apollo funds. (The firm maintains he didn't.)

After Epstein was found dead in his Manhattan jail cell a month later, former Apollo employees joked darkly that his death had made Black's life easier. A fellow billionaire in his social circle, one of dozens of people interviewed by

*Bloomberg Businessweek*, said the business community would have been far more apprehensive about doing deals with Black if Epstein were still alive. Black, who's succeeded in shielding himself from the press for years but gave a rare interview to *Businessweek*, declined to comment for this article about his relationship with Epstein. He's said in the past, however, that he occasionally turned to Epstein on financial matters such as taxes, estate planning, and philanthropy.

If anything has made Apollo seemingly risk-immune, it's this ability of Black's to emerge clean from a quagmire. It's a pattern that's defined his career: One way or another, Black always wins. That's not what he's talking about when he says he's been misunderstood, of course. But if you're an investor deciding where to put your money, it's good to know. "From a risk/reward point of view," he says, "we have the best game in town."

**BLACK** didn't plan to go into finance. As a child he helped his mother, a painter, assess which of her watercolors were worth framing. At Dartmouth College, from which he graduated in 1973, he was a Shakespeare devotee and philosophy major. It was only at the behest of his father, Eli, chief executive officer of United Brands Co., that he attended Harvard Business School.

One morning during Black's second year there, his father arrived at work, used his briefcase to smash the window of his 44th floor office, and jumped to his death. A front-page *New York Times* story described him hurtling toward Park Avenue in a blue suit, horrifying drivers, and his briefcase bouncing toward a nearby post office loading ramp. Following an investigation, United Brands said Black had authorized a payment to a Honduran official as the company sought to reduce export taxes on its Chiquita bananas.

"My father was God to me. And then he committed suicide. Suicides, you know, aren't usually committed by gods," Black says. "It took me years of therapy to get over that and to figure out where he ended and I began."

Black had once entertained becoming a writer or filmmaker, but found himself working at accounting firm Peat Marwick (the future KPMG) and with the publisher of *Boardroom Reports*. He interviewed at Lehman Brothers, only to be told he didn't have the brains or personality to succeed on Wall Street.

Then a family friend introduced him to Fred Joseph, a rising star at Drexel Burnham Lambert Inc., who recruited Black in 1977 to join what was emerging as the most exciting and lucrative investment bank on Wall Street. Many of his Drexel colleagues from that time remember Black as a floppy-haired, intemperate kid who was prone to outbursts and frequently played hooky. (Black contests this characterization, saying he was shy and didn't like getting up early.) But he was a hit with the people who mattered: Joseph, who became a father figure, and the firm's driving force, Michael Milken. Within four years, Black made partner.

Milken's bankers helped clients find ripe takeover targets and sold packages of debt to finance the deals. The bonds had

to have sky-high interest rates to entice Wall Street buyers, but the corporate raiders didn't mind: It was the targets, not them, who'd have to make good on the debt. Milken's shop became the envy of Wall Street's more conservative firms, whose denizens dubbed these bonds "junk." Black still bristles at the word. "We were never accepted by the Goldmans and the Morgans and the Kidder Peabodys and the First Bostons," he says. "What Fred wanted to do was to put together a team who had that desire to prove themselves—us against the world."

Black was canny at building relationships with clients, who trusted him to go to the mat for them, even within the firm. "He'd be calling me at 10 o'clock at night New York time, 7 in California," recalls Peter Ackerman, who worked with Black from Drexel's office in Beverly Hills. "I had two little boys, we'd be sitting down to dinner. Eventually my wife had to tell him not to call between 7 and 8." Yelling was common, but Ackerman says he didn't hold it against Black. "To me it's not about how hot you get, it's about how quickly you cool down," he says. In difficult transactions, Black "could easily envision the endgame," Ackerman says. "That's a rare skill."

Black's night-owl tendencies made him well-suited to handling one of Drexel's most important clients, Carl Icahn, who preferred doing business past midnight. When, in 1986, a Drexel client pleaded guilty to insider trading and agreed to aid investigators looking into Milken, it threw the firm into a yearslong legal battle that culminated in Drexel pleading guilty to six felony counts and agreeing to pay more than \$650 million in penalties and fines. As the tumult unfolded, many employees saw their bonuses slashed. But Black, keeper of its most important clients, including the cantankerous Icahn, was now invaluable. In the months before Drexel declared bankruptcy in 1990, Black received the biggest bonus at the firm that year: \$16.6 million. Joseph was banned for life from serving as the head of an investment company, and Milken served 22 months in prison. Black was never accused of wrongdoing.

Now worth \$60 million, Black weighed taking a break, recalls Icahn, who'd become a mentor. "He was disheartened about Milken and all the problems," Icahn says. "I told him he was making a big mistake."

Soon after, executives of the French bank Crédit Lyonnais reached out to Black about teaming up on a venture that would try to replicate Drexel's success. The Drexel bankruptcy coincided almost perfectly with a credit crunch, and Black was frank with his potential backers: There was no mergers-and-acquisitions market anymore. Instead, he said, they should go into the business of buying the loans ►



Black during his Drexel days. He's now worth more than any of the investment bank's other former employees.



◀ that had been piled on now-troubled companies. Drexel had put together some of the debt packages, and Black knew which companies were worth owning a piece of.

He and Crédit Lyonnais went big, buying up more than \$6 billion of bonds held by insurer Executive Life, which had been among Milken's biggest clients. After prices tanked, California's insurance regulator was forced to seize the company to protect policyholders at risk of losing their coverage. California saw a pile of undifferentiated junk, but Black knew where the treasures were. He offered to make it easy for the state: He'd buy the entire debt portfolio for \$3.25 billion.

The deal sparked at least a decade of litigation, after it was later revealed that Crédit Lyonnais, owned by the French government, also bought Executive Life through a series of entities, a violation of California law preventing foreign governments from investing in domestic insurers. In 2006 the bank's former CEO pleaded guilty to lying to U.S. regulators, and California collected more than \$900 million from lawsuits. No evidence surfaced that Black had done anything illegal.

The market quickly recovered, and within two years of when Black bought up the debt, his investment was worth more than \$5 billion. Says Gary Fontana, a trial lawyer hired to win back funds for Executive Life policyholders, "That's the thing that really got Apollo rocketing off."

**BLACK** founded Apollo in 1990 with five partners from Drexel. "We were sort of comrades in arms, having been through all of that," he recalls. They were still the same guys who'd thrived in Drexel's cutthroat culture. But this time they wanted to do the deals, not just finance them.

Looking to avoid screwing up their second chance, Black and his compatriots began buying up distressed assets at a deep discount, which they hoped would limit their downside and eventually deliver outsize returns. There were Midtown Manhattan office buildings, the luggage maker Samsonite, the owner of Vail resorts—they even took a trip to Moscow with Donald Trump in the depths of his mid-1990s bankruptcy doldrums.

Aided by the Executive Life deal and other well-timed investments, Apollo's business soared, but it wasn't enough to keep Black's founding partners around, and by the early 2000s only one of them remained. Black was preparing to sell shares to two major investors—the California Public Employees' Retirement System, known as CalPERS, and the Abu Dhabi Investment Authority—as a way to raise money without having to go through an initial public offering. Black at that point owned most of the business, and the transactions

and subsequent payouts, totaling more than \$2 billion, would put him into a whole new stratosphere of wealth.

Among his many deputies were two who'd proved themselves particularly valuable: Josh Harris, an aggressive deal-maker who impressed Black with big profit margins, and Marc Rowan, a brilliant financial engineer who had a knack for creative problem-solving. A dominant personality, Black has never been keen on sharing power, and for years he'd batted away many of those who came to him asking for a slice of the company. But not Rowan and Harris. Not only did he cut them in on the deal, but when Apollo finally went public in 2011, he listed Rowan and Harris as co-founders.

The arrangement has vexed Black ever since, say several people who've worked with him over the years. Black concedes that it took him more than a decade to start sharing decision-making authority. "He wasn't going to be able to do it by himself, so Leon shared the pot with the other guys," says Gary Winnick, who worked with Black at Drexel and sits with him on MoMA's board. "That's how it works. Give me equity, pay me enough money, you get loyalty."

At Apollo, loyalty is a credo. Some current and former employees compare their early days there to pledging a fraternity. At the top is Uncle Leon, whose hot temper is leavened by an avuncular awkwardness—several employees recall watching him grab food with his hands from lavish buffets ordered for the office—that engenders an almost familial devotion. Problems are kept in-house, and Black and his lieutenants always know who owes them a favor. Get close enough to the patriarch, and you're almost as unlikely to wind up in trouble as he is.

For instance, when Roger Orf, who leads Apollo's European real estate business and is well-connected in U.K. political circles, was discovered using company resources and assets to run his personal real estate deals, he was asked only to return some of the money, according to people with knowledge of the matter. (An Apollo spokesman says the firm conducted an internal review and found that Orf hadn't intentionally done anything wrong.)

Separately, in September, a Bloomberg News investigation found that Apollo had quietly settled a 2015 harassment case against James Belardi, CEO of Apollo's prized asset, the insurance company Athene, which had become a crucial part of the firm's empire. According to the complaint, filed with a California state agency, Belardi would go off on profane tirades, lob sexist and racist insults, intimidate staff, and rant about homosexuals. He refused to work with women he deemed unattractive and inquired about the sex life of a female subordinate. In a statement to Bloomberg, Apollo and Athene ►

# "That's how it works. Give me equity, pay me enough money, you get loyalty"

# “We invest in companies whose official ideology is they want to destroy us”

◀ said the matter was discussed, and an investigation found no evidence of harassment. Belardi is still CEO of Athene.

Ali Rashid is the rare Apollo employee whose wrongdoings were punished, but only after years of largely getting away with them. In 2010, Rashid’s assistant questioned one of his expenses, triggering an internal review that uncovered Realtor fees and a salon visit had been charged to the company and its clients, a violation of securities laws. About two years later, Rashid was promoted to senior partner, and executives were alerted to more instances of the same behavior. This time he’d also submitted a forged receipt so his suit shopping would look like bulk necktie purchases, which might have been a legitimate business expense if they were meant as gifts for clients.

Black, apparently unconcerned, was heard telling executives he would have paid for Rashid’s suits himself. He didn’t want the talented dealmaker to torch his career. It would have been hard for Apollo’s rainmakers to feign outrage anyway. Many used their company credit card as if it were their own, ordering extravagant steak dinners delivered to the office or scheduling Monday morning meetings in Europe to justify weekend trips with their wives aboard the corporate jet. (Apollo says its expense policies are “clear and strictly enforced.”)

Apollo was by no means the only private equity firm to take advantage of the 2008 financial crisis. Banks were burdened with onerous regulations to prevent another system-wide disaster, but alternative asset managers were under no such restrictions and treated the wreckage as a buffet. In 2012 the U.S. Securities and Exchange Commission, realizing that private equity, once a marginal sliver of the finance industry, had come to dominate Wall Street, launched a broad enforcement crackdown. Only then did Apollo take decisive action with regard to Rashid, flagging his misdeeds to the regulator and firing him in 2014. In announcing a \$52.7 million settlement, the SEC said Apollo had “failed to take appropriate action to protect its clients,” resulting in “repeated misconduct.” The spokesman for Apollo, which neither admitted nor denied wrongdoing in the matter, said “no wrongdoing was identified except with respect to Mr. Rashid, who was a clear outlier.” Rashid is fighting the SEC’s allegations.

Meanwhile, Apollo was busy building Athene, the insurer that would become its main source of cash. Apollo helped fuel its own growth by funneling Athene’s money into Apollo funds and collecting management fees on the investments. The arrangement drew the two companies even closer together. As Athene assets swelled at the end of 2013, it became clear to Apollo executives they were sitting on a gold mine. Rowan pushed a measure through the insurer’s board to double the

fees it paid Apollo, raising them to more than triple what a typical manager would get, according to people familiar with the matter. (Apollo says it has delivered significant value to Athene and that the insurer benefits from its support, including tax, legal, and financial services.)

The insurer has made Apollo the envy of Wall Street. Athene now generates a quarter of Apollo’s fee-related income, but it’s also drawn scrutiny from officials. The relationship between the companies is so intricate, says one former employee, that it would take regulators a year to understand it.

In theory, conflicts of interest are prevented and dealt with by a company’s board. But Rowan, who masterminded the relationship with Athene, stacked the insurer’s board with directors loyal to Apollo. (An Apollo spokesman says Athene’s board is diverse and accomplished.) The current 15-member group includes four Apollo executives, CEO Belardi—who also receives a portion of the fees paid to Apollo—and directors deemed independent even though they sit on other Apollo-related entities, drawing annual salaries of hundreds of thousands from the private equity firm. Being on the Athene board came with at least one sweet perk for former state pension fund executive Bob Borden: Rowan would occasionally send his private jet to Columbia, S.C., to ferry Borden to meetings.

Apollo’s own board is similarly simpatico. Black, Rowan, and Harris hold seats on a seven-member board that also includes New England Patriots owner Robert Kraft, who was charged last year with soliciting prostitution, and former executive director of the CIA Buzzy Krongard, who managed the agency’s relationship with the private security company once known as Blackwater, which was acquired by Apollo as part of a 2016 transaction. (The Apollo spokesman says independent directors chair Apollo’s audit and conflict committees.) This group isn’t “going to jump in and challenge” in the same way as other companies’ directors might, says one person familiar with the dynamics.

So who does hold Black accountable? “Well, first, the law does,” he says, laughing.

THERE are a few instances where the law’s come uncomfortably close to leaving its mark on Black and Apollo. Starting in 2009, the firm became embroiled in a scandal involving CalPERS, one of its earliest investors. At the center of the storm was Alfred Villalobos, a Los Angeles political fixture whose past was full of financial questions. Villalobos was an old friend of Apollo’s. As a CalPERS director in the 1990s, he pushed the pension fund to become one of the firm’s biggest backers. Apollo paid \$14 million to the former board member, now acting as a

so-called placement agent, in exchange for persuading the fund to invest an additional \$3 billion from 2007 to 2008.

The fees were puzzling, because Apollo had a long history with CalPERS. Why would it need an intermediary? As it turned out, it didn't: The money was part of a kickback scheme. In the end, CalPERS CEO Federico Buenrostro admitted to taking bribes and gifts from Villalobos, as well as falsifying documents given to Apollo that indicated CalPERS had approved payments to the middleman. Buenrostro was sentenced to four and a half years in prison by a federal judge, who called the crime a "dagger in the heart of public trust." Villalobos died by suicide; he shot himself at a gun club in Nevada before his case went to trial. The SEC determined Apollo had been tricked, and the company wasn't charged with wrongdoing. A spokesman said that when the firm initially retained Villalobos, its marketing department was small and placement agents often helped develop and expand relationships, even with existing investors.

Public pensions such as CalPERS are some of Apollo's best customers. States have underfunded and borrowed from their pensions for years. To make up for it, fund managers have looked for juicier returns from alternative assets such as private equity. Black's aggressive approach—involving layoffs and slashing benefits—is also among the most profitable. Apollo's flagship private equity fund, which it opened to investors in 2001, has delivered annual returns of 44%. Pensions have become Apollo's largest investor base.

Black has often tried to ease the cognitive dissonance by reminding pension fund managers that he comes from a family of teachers. He says he's proud that his firm is helping to ensure the retirement incomes of public employees. "They're going to have their full pensions," he says. "I am incredibly proud that we can perform for them and give them great returns."

Not everyone sees it that way. In 2016, Apollo moved to cut retirement and health benefits for workers at a

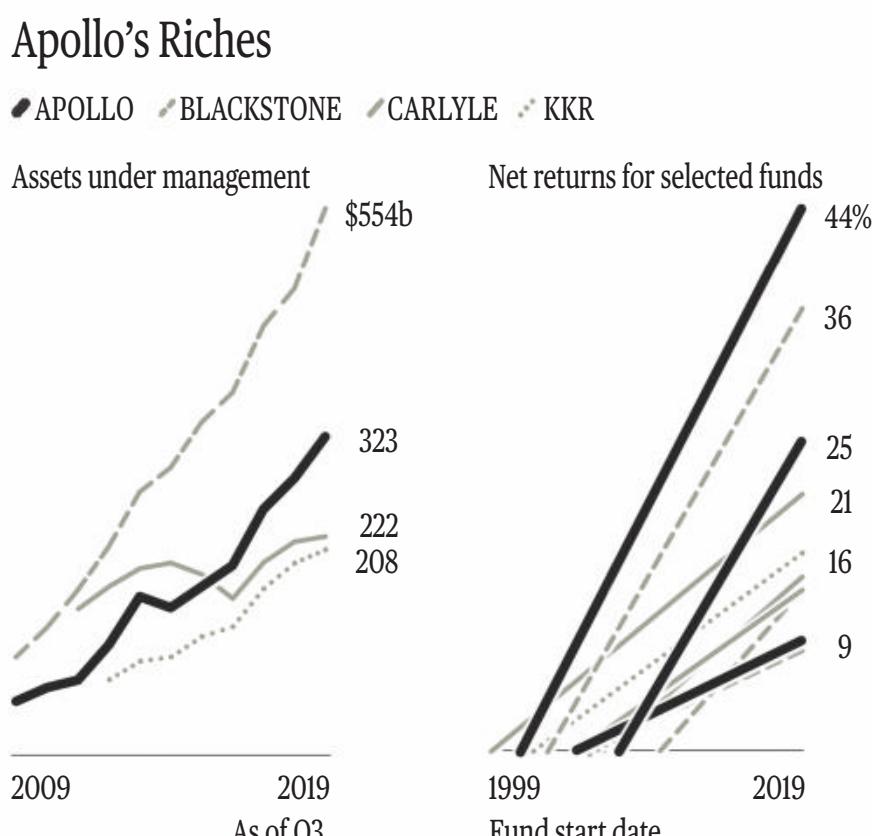
chemical plant it owned in upstate New York. The workers, who sometimes developed cancer from handling hazardous materials, felt they had no choice but to strike. New York State Comptroller Thomas DiNapoli joined the picket line, but it was a little awkward—New York's pension system invested \$350 million in the fund Apollo had used to buy the chemical plant. The strike lasted an impressive 105 days through the dead of winter, but in the end, Apollo, which had been paying itself millions of dollars to oversee the ailing company, held all the cards. "It's assisted suicide," says Stephen Lerner, a former strategist for the Service Employees International Union who also tracks asset managers' involvement in labor disputes. "We invest in companies whose official ideology is they want to destroy us."

Then there's Jeffrey Epstein. While Black and Apollo representatives say Epstein never invested in Apollo funds, the extent of Black's financial ties with him may not be fully known. In one instance, Black persuaded Epstein to invest in a struggling muffler manufacturer run by Black's Boston roommate Bengt Odner. Shares in the company tanked in 2000 after a major shareholder paid for a purportedly independent research report that called the product "revolutionary," then sold his entire holding. Odner was in need of a cash infusion. He insisted to Black that the muffler was so technically advanced you could safely inhale straight from the tailpipe, and Black, in turn, took the deal to the science-obsessed Epstein. By 2011, Black's two sons and two executives from Apollo were on the muffler maker's board and one of Epstein's companies was among its biggest shareholders.

AT BLACK's company, the motto has always been: The best idea wins. Associating with Epstein was a bad idea, and even if the predator's death has quieted the chatter, questions about the relationship remain. On top of everything else, Black gave \$10 million to Epstein's charity, and according to someone familiar with his thinking, would sometimes take Epstein's tax ideas to his own lawyers, asking them why they hadn't come up with the strategies Epstein produced.

But memories are short on Wall Street, and with enough zeros, almost anything can be forgiven. In total, Black and his wife, Debra, have given approximately \$300 million to philanthropic causes such as endowing a Shakespeare studies chair at Dartmouth and funding melanoma research. Two months after Epstein died, Black celebrated MoMA's reopening after a substantial renovation, an effort to which he personally gave \$40 million. A month later he was in front of investors at Manhattan's Plaza Hotel, predicting that Apollo would double its assets, to \$600 billion, in the next five years. The massive figure "does not represent the endgame," he intoned.

When asked later on at his office what he has left to accomplish, it's this race for assets that he says is on his mind. "I'm not retiring," he adds. The billionaire, those who know him say, will never truly let go. "Leon is Apollo," says one. "Apollo is Leon." **B** —With Max Abelson, Sonali Basak, Katya Kazakina, Gillian Tan, and Neil Weinberg



# Isa Fore lao

The singular practices and  
spectacular flameout of Forever 21

# ever eggTime

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FOREVER 21  
FOREVER21.COM

By Susan Berfield, Eliza Ronalds-Hannon,  
and Lauren Coleman-Lochner  
Photographs by Ryan Duffin



**L**arry Meyer stood not-at-all-still near the entrance of Forever 21's new store on Fifth Avenue. Twenty-four hours until the grand opening, and no one had slept much. Tomorrow there would be a DJ and carnival games and velvet ropes on the Manhattan sidewalk. There would be giddy teenagers and older tourists wondering what happened to the Japanese department store that used to be in the space. It was November 2010. Businesses of all kinds were closing, but Forever 21 Inc., the most exciting name in fast fashion, was expanding, and Meyer was in charge of finding the biggest spaces in the best locations.

So he stood, and he chatted, and he looked around. He was scanning for someone, and that someone came into view: Do Won Chang, who, with his wife, Jin Sook, had founded the retailer in Los Angeles in 1984, just a few years after they'd arrived from South Korea. Everyone, including Meyer—a senior executive at the company for almost a decade—called them Mr. and Mrs. Chang. "Mr. Chang needs you," someone rushed over to tell him. "Oh, I have to go," Meyer told a *Bloomberg Businessweek* reporter. Would he be in Los Angeles next week? "We never know where we're going to be."

Over the next two years, Meyer was everywhere, including Hong Kong, where he opened Forever 21's most expensive store, in Causeway Bay. The rent was \$1.4 million a month, he announced proudly on Bloomberg TV. And it wasn't even the company's biggest store. That was a 150,000-square-foot emporium in Fresno, Calif.

By the end of 2012, Meyer had gone for good, or so it seemed: He became president of Uniqlo Co.'s U.S. operations. If anything, though, the pace of store openings at Forever 21 sped up. There were more parties, more ribbon-cuttings, more happy landlords in London, Prague, Warsaw, Bucharest, Beirut, Jiddah, Tokyo, Shanghai, Beijing, Manila, Rio de Janeiro, Santiago, Cape Town, Sydney. At its peak in 2014 the company brought in some \$4 billion in revenue. Forever 21 was secretive and hierarchical and 99% owned by the Changs. And it had become a crucial tenant for mall owners.

Now we know that as far back as 2016—when the Changs operated 522 stores in the U.S. and more than 200 in 43 other countries—there was trouble. Sales were flat that year, and the company quietly closed a few stores and gave up some space in others. Mr. Chang had already lent the company \$10 million, and his daughters, Linda and Esther—executives in their 30s who were expected to take over one day—had each lent it \$5 million. Forever 21 had borrowed an additional \$18 million from a Philippine company that no one knows much about. The retailer's high-profile international outlets weren't profitable, and their publicity value had worn off. Linda and Esther were preparing to start Riley Rose, a beauty and lifestyle emporium that featured South Korean products. The stores were millennial pink and Instagram-pretty, but competition was tough, and those would lose money, too. In early 2019, Forever 21 sold its Los Angeles headquarters and distribution center for a reported \$166 million—it's renting back the office space

and moving the warehouse to cheaper real estate inland. By summer, it was almost out of cash.

Bankruptcy, when it came in September, was the result of years of bad decisions and a fundamental misunderstanding—not just of how retail was changing but of its very conventions. Forever 21 has shut down in Canada and Europe, and it's shrinking in Asia and Latin America. In the U.S., 111 stores will close. But mall owners, particularly Brookfield Properties and Simon Property Group LP, the biggest in the U.S., don't want it to go out of business altogether. If Forever 21 survives, it will be with fewer stores, fewer employees, and more manageable ambitions. But that more modest future likely depends on the Changs giving up control. If they don't, Forever 21 may not have much of a future at all.

**F**or now, Mr. Chang remains in his office, Mrs. Chang in hers. They're rarely seen together—rumors of their estrangement have been circling through the company and its suppliers for years. He oversaw operations, and she selected the merchandise, each assisted by half of another Korean American couple, Alex and SeongEun Kim Ok.

They, too, prefer to be called Mr. and Mrs. In the 1990s, Forever 21 became one of the biggest customers of their clothing manufacturing business. The Changs invited Alex to join their company in 2002, giving him the title of president and a 1% stake; SeongEun came to work with Jin Sook in 2008. The Changs also encouraged the Oks to move closer to where they lived. Real estate records show that the Oks bought a \$3.4 million house in Beverly Hills a six-minute drive from the Changs' home.

By 2009 there were two new members of the inner circle: the Changs' daughters. Linda, who studied business at the University of Pennsylvania, worked as an analyst at Merrill Lynch and a buyer at Pottery Barn Inc. before taking over marketing at Forever 21. She is now executive vice president. Esther, the younger daughter and a graduate of Cornell, is vice president for merchandising.

Forever 21 declined to allow any of its executives to be interviewed for this story. The bankruptcy filing, though, is revealing in a way the Changs never were, and more than a dozen people shared their accounts of working at or with the company. None wanted to be identified; most had signed nondisclosure agreements.

The Changs' brand of fashion depends on being fast, trendy, and cheap. It's rare for any piece of clothing at Forever 21 to cost more than \$60—and most sell for much less. See something on the runway, in a fashion blog, or, more recently, on Instagram, and then find a version of it in Forever 21. Wear it a few times, or just once, and then buy something else. The stores displayed new clothes almost daily, which drew in customers, which was good for Forever 21 and for malls. Forever 21 didn't make it that easy or fun to shop online, which was bad for the company but, again, good for malls.

There's a trick to fast fashion, though: The clothes are supposed to be of the moment, an inexpensive reflection of a





current style but not an exact replica. Over the past 20 years, designers—including Diane von Furstenberg, Anna Sui, and Gucci—have filed at least 250 cases in federal court accusing Forever 21 of intellectual-property theft. In 2019 alone the company was sued a dozen times, according to Susan Scafidi, who runs the Fashion Law Institute. She'll be an expert witness in a copyright infringement suit brought against the retailer by Adidas AG. Forever 21 usually settles. Meyer put it this way in 2010: "All claims are reviewed and, where appropriate, resolved after careful analysis."

As the Changs expanded from one store to 10 to 100 to almost eight times that, they created a culture in which authority rested in just a few hands. Mr. Chang reviewed every expense; Mrs. Chang looked over every piece of clothing. Information was siloed, and interactions between departments were limited. Some executives who worked with Mr. Chang for



## Flamin' Hot Cheetos eyeshadow palette

years don't recall him ever stopping by their office or sending an email. Mrs. Chang's section of the building was off-limits to anyone who didn't report to her. Former executives say she wouldn't even let visiting bankers walk down the hallways. One recalls a procurement meeting at which someone took a photo of any supplier who spoke up.

In general, Mr. and Mrs. Chang seemed unapproachable. Employees rarely saw them or heard from them directly. The Changs trusted a small group of people, most of them Korean American or members of their evangelical church: the heads of the distribution center and information technology department; Mr. Chang's executive assistant, Jay Kim; and the Oks. But being close to the Changs didn't confer automatic protection. Senior people were fired or demoted, sometimes, it seemed, on a whim, often without much notice. One says it was like being on a Korean reality TV show.

"It was a business that frankly I don't think was ever particularly well-managed. But they got away with it for a pretty long period of time," says Neil Stern, a senior partner at retail consulting firm McMillanDoolittle. Like many in the industry, he noted the experienced executives stepping in and out of the company. "It's tough to walk into a family business, because,

at the end of the day, how much control are you ever really going to have?"

The Changs considered taking their company public early in the 2000s but decided against it. They wanted to continue to do what they wanted when they wanted, Meyer said in 2010. Some outside the company have a different impression. "They've had many banks in there trying to make it happen," says Ilse Metcalf, longtime president of the California Fashion Association. But, she and others say, the bankers turned up too many questions about the company's ability to operate transparently.

The Changs dreamed of turning Forever 21 into a department store at a time when department stores were failing. The company eagerly moved into the vacant spaces—in Chicago, Houston, Las Vegas, Philadelphia, and dozens of other cities in the U.S. "Its financing was murky, and its appetite for space was undisciplined," says Jim Sullivan, a managing director at financial firm BTIG. The mall owners made deals anyway. "When they want big boxes, you give 'em big boxes," Sullivan says.

**F**illing those big boxes proved much more difficult than the Changs anticipated. And operating in dozens of countries on six continents required expertise they didn't have. At the company's peak, 20 people in Los Angeles oversaw the empire. Annual sales projections weren't based on how much merchandise sold the previous year but on how much was shipped. Several former executives say Mrs. Chang and Mrs. Ok would call meetings, listen to presentations on sales data and trends, and then appear to ignore what they heard. They trusted their instincts instead.

They ordered too much one year, too little the next—in the bankruptcy filing, this was called the pendulum effect. In 2018 they ordered too much. Store managers complained that their stockrooms couldn't accommodate the daily shipments. Some resorted to stacking boxes of clothes in dressing rooms. Eventually they had to ship them back to the distribution center, where the company sometimes lost track of them.

At times, according to multiple former executives and industry sources, Mrs. Chang and Mrs. Ok held off on paying for orders they received or returned them without paying at all, bad-faith practices that did little to endear them to suppliers. For small operators, these methods could bring financial distress; for at least one South Korean vendor, they meant collapse. Kwang Lim Trading Co. filed for bankruptcy in Seoul in 2018 after a delay in payments from Forever 21 caused it to default on its debt, according to local government records and media reports.

When Forever 21 closed a regional distribution center in Memphis to save money, all the merchandise held there came to Los Angeles—where it remained, piled up inside the crammed facility, until one of the Changs or Oks could have a look at it. That could delay delivery to the stores by weeks. In fast fashion, that's like months. Then, to compensate, headquarters sometimes sent out boxes overnight, an expensive way to do business.



◀ Owing to haste or parsimony or both, Forever 21 hired import agents who seemed to overlook some important details. Former executives say shipments to Brazil were held up at customs because the company didn't have a license to import footwear. Staff had to sort through the containers to find the illicit slippers, then destroy them. Forever 21 had to do the same with cosmetics on their way into Brazil and Mexico.

Mrs. Chang and Mrs. Ok didn't adjust their merchandising strategy, either. They placed orders for down coats for every store, though if it was winter in North America it was summer in South America. They bought clothes that were too revealing for the Middle East and Latin America and sized too big for Asia. "Tailoring the product for the specific market was maybe a detail of refined merchandising that they didn't have," is how Sullivan describes the problem.

When Forever 21 started out, it was a fresh, cheap alternative to the Gap. Then H&M and Zara spread to the U.S. Topshop and Primark were already well-established in Europe when Forever 21 entered that market. Fashion Nova, Asos, and other online-only companies are now faster and fresher. To an Asos customer, Forever 21 might as well be the Gap.

In recent years the Changs faced another fundamental problem: the waning of fast fashion. Fewer people want to buy disposable clothing. The quality is too low, and the cost to the environment too high. "Why did Forever 21 think the old practices made sense for the future? They should have copied a few business strategies from their competitors," says Scafidi of the Fashion Law Institute. "Forever 21 doesn't appear to have embraced the new consciousness of fashion's contribution to global warming and pollution." Although it started a recycling program in 2019, the company, unlike some competitors, doesn't produce an eco-conscious line. It does, however, sell a collection made in collaboration with Flamin' Hot Cheetos.

**S**o, Forever 21 expands beyond its managerial capacity at a time when some customers are losing interest in fast fashion and others are down on shopping at malls. It ends up with an awful lot of clothing it can't sell at full price. Most retailers—actually every other retailer—would mark down prices until the clothes sell and take a loss on what doesn't. Inventory is like milk; it has a short shelf life.

Mr. Chang approached the predicament differently. Retailers use their inventory—often the only tangible asset they have—as collateral for loans. If he allowed the clothes to be marked down, their value would be reduced, as would the amount of money the company could borrow. So he didn't discount them; he warehoused them. His strategy might have helped in the short term, but eventually Forever 21 would pay.

Eventually arrived last spring. Forever 21 hired a new chief financial officer, Brad Sell, in March, just as Mr. Chang was receiving alarming reports: Sales were down about 20% from the year before. Remarkably, he'd been planning to open more stores. Instead, following the advice of his new CFO, he decided to close 100. He laid off some of the company's buyers.

Mrs. Chang evidently thought employees were using too many Band-Aids, so to save a few dollars she took away all the first-aid kits in the office but one.

Mr. Chang and Mr. Ok managed to cut deals with some vendors. Then the company appealed to its landlords. Jatin Malhotra, who took over Forever 21's real estate after Meyer left, had persuaded Mr. Chang to close the most unprofitable stores in Europe and Asia. Next, Malhotra negotiated an unusual arrangement for some of the remaining outlets there. Forever 21's rent wouldn't be fixed; instead, a portion would be calculated as a percentage of sales. If the company recovered, that could have been an expensive proposition. But the company didn't recover. Its Canadian, European, and Asian operations together lost about \$10 million a month from the autumn of 2018 to the autumn of 2019.

Negotiations in the U.S. didn't proceed as smoothly. Forever 21 pays about \$450 million a year in rent, half of that



Chang and his daughter Linda at a store opening in 2010

to mall owners Simon and Brookfield. In a year of record store closings, it wasn't crazy to think Forever 21 had some leverage. According to people with knowledge of the discussions, Malhotra talked with the two landlords about how they could help stabilize the company, maybe by even taking a stake as they had with the failing teen retailer Aeropostale. It had worked in that case, and it seemed Simon and Brookfield were willing to consider the possibility of doing the same with Forever 21. But Malhotra told them the Changs would need to remain in charge as part of any deal.

Malhotra flew with Mr. Chang to New York midyear to meet with the two companies. They couldn't come to any agreement. In July, Forever 21 requested last-minute rent relief for the next two months. The landlords insisted on first seeing a

# The Changs are in a high-stakes staredown with their creditors

plan to revive the company, and when none was forthcoming they declined to help.

Malhotra played an important role at Forever 21. He was young and enthusiastic and comfortable at all those ribbon-cuttings. Mr. Chang treated him like a son. As the seriousness of the situation became obvious, say people involved, Mr. Chang became withdrawn and distrustful. He had lost faith in his would-be son, so he turned to his daughter Linda. She brought in the asset management firm Lazard Ltd. and other advisers and lawyers to figure out how to restructure the company and keep it in the family's control. Malhotra left. When company executives approached Mr. Chang, he told them he didn't want to talk about the business. It was too depressing.

Bankruptcy loomed, but the new advisers hoped they could work out a deal with lenders that they could announce as the company filed for Chapter 11. That task was complicated by the Changs' business practices. Former executives say the company hadn't updated its software in years, and the systems for accounting and shipments were a mess. When Mrs. Chang haggled with vendors or canceled orders after they arrived, it could take months to straighten out the records. Stores sometimes transferred merchandise on their own; warehouses contained clothes that were years old; other merchandise simply couldn't be accounted for.

Forever 21 denies that its operations were substandard and that it turned to landlords for assistance. Whatever was going on still might have been manageable if the Changs would agree to step aside. But they wouldn't.

When Forever 21 filed for bankruptcy on Sept. 29, there was no deal. Just a few days earlier, Simon had changed the locks on the Forever 21 store in the Houston Galleria. The retailer owed almost \$148,000 in back rent. So far during bankruptcy negotiations, Forever 21 has secured more than \$100 million in rent reductions for stores in the U.S. and has reopened in the Galleria. The break in rent has also allowed it to keep open 60 stores it initially expected to close. Riley Rose is giving up its leases and has shut down its independent website. Its operations will be folded into Forever 21. No one knows what, if anything, laid-off employees will receive. "We just hope they're doing the best for everybody and not just securing their own bag," says Andrew Upton, who works at a Forever 21 store in

Bakersfield, Calif. In the meantime, he's joined labor activists United for Respect and a group called Flamin' Hot Cheetos Against Billionaires.

Shipments continue to arrive, including new collaborations with *Overwatch*, the video game, and CNCO, the boy band. The markdowns are getting bigger. A \$10 million lawsuit brought by Ariana Grande—she alleges the company used her likeness in its advertising—is on hold. So is the claim by Adidas.

In 2010, Linda told *Businessweek* her parents hoped she and her sister would hurry up and learn the business so they could retire and devote more time to their church missions. Now preserving some, if not all, of their stake in Forever 21 remains the Changs' priority, even as their day-to-day authority is receding. There's a new chief operating officer. The advisers added a chief restructuring officer. The board of directors has three additions. One knows about mergers, another about e-commerce. The third is Meyer—still trusted by the family and landlords. He was also named chief strategy officer. In late December, too late to make a difference in what turned out to be a disappointing holiday shopping season, Forever 21 announced it had brought on a marketing expert, known for her work at Taco Bell, to figure out how to quickly transform the brand.

The purpose of Chapter 11 bankruptcy is to give a company protection from creditors while it devises a restructuring plan. Of course, the plan has to offer to repay creditors at least some of their money or give them a stake in the reorganized business. If creditors don't approve the plan, they can force a company to liquidate, as happened with Toys "R" Us Inc. If the owner is reluctant to give up equity, that can create an impasse, as is happening with Forever 21. The Changs are in a high-stakes staredown with their creditors.

Forever 21 stores have disappeared from Peoria, Ill., and Peoria, Ariz.; from Beavercreek, Ohio, and Blackwood, N.J.; and from 17 other cities. That was the count for November. There were more closures in December. And by the end of January, when the reckoning comes every year for retailers, there will likely be at least a dozen more in California alone. The company intends to emerge from bankruptcy in February. But so far no one has offered to finance it or buy it, and, with the Changs still in their offices, it's quite possible no one will. B

# THE TOKYO JOB



# HOW AN INTERNATIONAL TEAM OF MERCENARIES SMUGGLED CARLOS GHOSN OUT OF JAPAN

BY MATTHEW CAMPBELL

ILLUSTRATIONS BY WOSHIBAI

**SOMETIME LAST FALL, A SECURITY CONTRACTOR BASED IN** Asia took a call that he found curious. The man on the other end of the line, a longtime acquaintance and, like him, an expert in protecting VIPs and valuable cargoes in challenging environments, was looking to hire for a job in Japan. He offered few specifics. The assignment would involve escorting someone out of the country, he said. It would pay well. And he was looking for operatives with military or police experience and, ideally, fair-skinned East Asian faces—the kind that wouldn’t stand out in Tokyo.

The contractor wanted to know more. Who would the operatives be protecting? What was the specific threat? Would the client be carrying cash or gold or something else of value? The caller wouldn’t say. The contractor was noncommittal but said he would get in touch if anyone else came to mind. They hung up, and the contractor didn’t really think about the job again—until he and the rest of the world saw the news about Carlos Ghosn.

Just before New Year’s, Ghosn, the ousted leader of Nissan Motor Co. and Renault SA, completed a daring escape from Tokyo, where he was facing criminal charges that could have put him in prison for more than a decade. Despite being under intense surveillance while out on bail, with a camera trained on his front door and undercover agents tailing him when he left his house, Ghosn somehow made it to Lebanon, where he lived for most of his adolescence and is a citizen.

For Ghosn, who’d spent more than 100 days in solitary confinement in a Tokyo jail and was contemplating trial in a country where prosecutors virtually never lose, it was a stunning coup. Lebanon has a policy against extraditing its citizens, and as one of the most successful members of the country’s diaspora, he’s a national hero, with friends who include some of the biggest names in local business and politics. His face is on a postage stamp. Safely in Beirut, he could finally attempt to rebut the allegations against him, which he argues were the result of a conspiracy between nationalist factions, both within Nissan and the Japanese government, that were determined to take him out of play. And, most important for someone who spent the better part of two decades building and cultivating his public image, he could set to work restoring his reputation as a great man of business, maybe even preparing a comeback.

A few weeks after Ghosn’s escape, it’s not at all clear that he’ll be successful. While he is, for the foreseeable future, beyond the reach of Japanese law enforcement, his legal problems are nowhere near being resolved. Ghosn is still under

investigation in France, where Renault is based, while the government of Japan has issued a so-called Red Notice in his name through Interpol, exposing him to possible arrest the moment he enters a country less hospitable than Lebanon. Japanese prosecutors have also obtained an arrest warrant for his wife, Carole, claiming she gave false testimony in their investigation. And the task of restoring his stature as one of the leading lights of global capitalism is enormous. Even some of his closest former colleagues remain unsure what to make of the allegations against him. It’s hard to imagine major corporations, banks, or investors agreeing to work alongside a man who’s officially a fugitive.

Gathered with his family in the country of his youth, Ghosn has undoubtedly upgraded his personal circumstances. What remains to be seen, though, is whether he’s simply traded one form of confinement for another.

**WHILE OUT ON BAIL, GHOSN SPENT MUCH OF HIS TIME AT** his lawyers’ office in central Tokyo, in an anonymous mid-rise building near the Imperial Palace. Forbidden under the terms of his release from accessing the internet anywhere else, he’d been given the use of a cramped meeting room with a bare table, a whiteboard, and a laptop. It was also the sole location where Ghosn was allowed to call Carole, and even then only with the approval of a Tokyo judge. From April, when he’d last seen her, to the end of the year, he received this permission twice: once in November, and again, for one hour, on Christmas Eve.

Being unable to see his wife was the hardest part of his ordeal, Ghosn would say later, an absence that “put me on my knees.” His mood only darkened on Christmas Day, after a pre-trial hearing during which he learned that prosecutors wanted to delay the second of his two trials until 2021. In all, his lawyers told him, it might take five years to fully resolve his cases.

Ghosn was indicted four times, all for financial misconduct. The first two charges accuse him of underreporting his compensation in official filings, leaving out tens of millions of dollars that investigators say he intended eventually to get. In the third and fourth indictments, for breach of trust, prosecutors accused him of improperly benefiting from Nissan’s relationships with partners in the Arab world, and in one case of diverting \$5 million of company money to his own ends via a car dealer group in Oman. Ghosn has denied wrongdoing, arguing that the compensation prosecutors claim was misrepresented was only hypothetical, and that he never misused ►

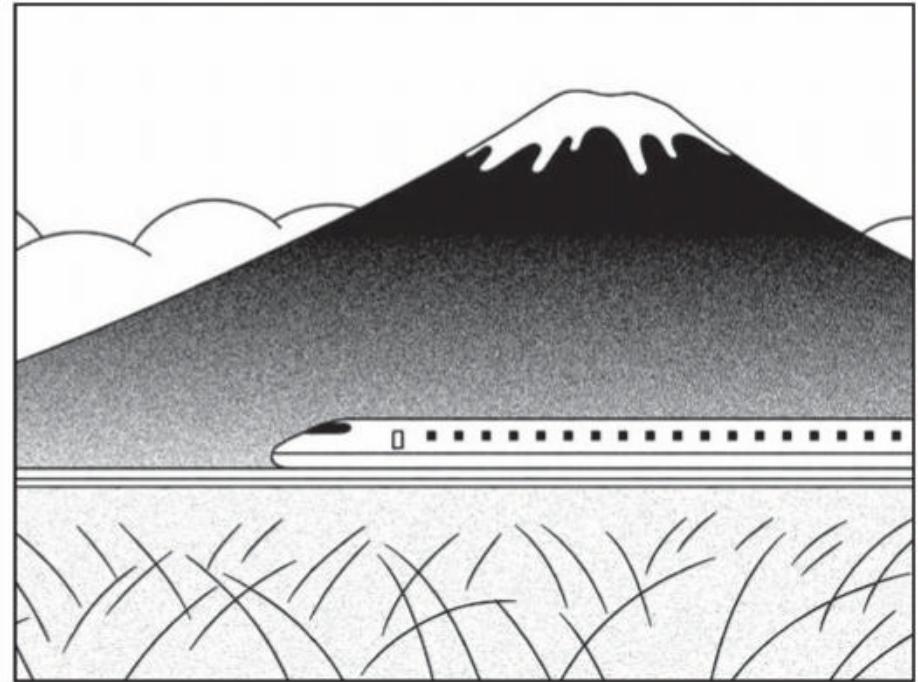
◀ Nissan funds. (He also settled a civil complaint from the U.S. Securities and Exchange Commission, which claimed he failed to adequately disclose his compensation, agreeing to a \$1 million penalty without admitting the agency's allegations.)

Most criminal defendants, in Japan or elsewhere, don't have the option to simply exit their proceedings if they believe they can't win. Ghosn—with ample financial resources and passports from Lebanon, France, and Brazil—did. For months, a team of more than a dozen security operatives, led by a U.S. Army Special Forces veteran, had been designing a plan to get him to Lebanon, the country where Ghosn has the most extensive connections. The secrecy was intense: Some of the participants, according to a person familiar with the operation, didn't know the identity of the person they were going to extract, even after they'd accepted the job.

The team's leader had a career that couldn't have been more different from Ghosn's. Born in Staten Island, N.Y., Michael Taylor joined the U.S. Army after high school and was accepted into the Green Berets, accumulating skills that included HALO jumps: the delicate art of leaping from a plane at 30,000 feet or more and free-falling as long as possible before opening the parachute. He was deployed to Lebanon during the country's brutal, 15-year civil war, which ended in 1990, and there met his future wife, Lamia—like Ghosn, a member of the country's Maronite Christian minority. After leaving the Army, Taylor put his abilities to work in the private sector, setting up a Boston-area company, American International Security Corp., that protected executives in dangerous places, prepared vulnerability assessments for critical infrastructure, and even planned operations to rescue kidnap victims. He also collaborated with agencies like the Drug Enforcement Administration and Bureau of Alcohol, Tobacco, Firearms and Explosives, on one occasion working undercover to investigate Lebanese drug traffickers, and developed a relationship with Duane Clarridge, a legendary CIA officer who oversaw a private espionage network in his retirement.

Taylor, 59, also had a habit of operating in gray areas. In the 1990s he was indicted in Massachusetts for charges including illegal wiretapping and pleaded guilty to misdemeanor offenses. Later, the *New York Times* reported that he was connected to an "off-the-books" espionage network in Afghanistan, which was operating in apparent defiance of military rules against using private contractors as spies. (Taylor wasn't accused of wrongdoing.) And in 2012 federal prosecutors charged him with bribing an Army officer to win \$54 million in contracts and conspiring with an FBI agent in an attempt to kill an investigation into the matter. Taylor pleaded guilty to wire fraud and violating federal procurement law and was sentenced to two years in prison. AISC's business collapsed.

It's not clear how Taylor was connected to Ghosn, although Lebanon is small enough that there would be only a couple of degrees of separation between their extended families. Even for Taylor, getting the executive out of Japan would be an extreme assignment. After almost 20 years at the top of one of Japan's largest companies, Ghosn was perhaps the



Ghosn left Tokyo by bullet train

best-known foreigner in Tokyo, hardly someone who could slip onto an airplane or ship without being noticed. And he wasn't a hostage of a militant group or an abducted child; he was a criminal defendant, under prosecution by the government of a bedrock U.S. ally. Taylor and everyone he hired might face charges if their identities were discovered, at the very least restricting their future travel and employment, and at worst landing them in prison. The security contractor who was approached about an operation in Japan said he would never accept an assignment as perilous as the Ghosn job; those who might, he said, would need extremely generous compensation for the risks involved, perhaps pushing the total cost to \$15 million or more.

Yet according to the person familiar with the operation, Taylor was eager to help, and not only because of the potential payoff. Despite their drastically different backgrounds, Taylor sympathized with Ghosn, the person said. Taylor had been denied bail in the runup to his own trial, confined to Utah jails half a country away from his home in Massachusetts. In Ghosn he saw someone in a similar situation, a man he felt had been treated unfairly. Whether Ghosn was guilty seemed beside the point.

On the ground in Japan, Taylor would be assisted by an old friend from Lebanon, George-Antoine Zayek. A gemologist by training, Zayek had joined a Christian militia during the civil war, sustaining a severe leg wound during the fighting. Doctors in Beirut wanted to amputate; instead, Taylor helped arrange for more sophisticated treatment in Boston. Zayek kept his leg, but acquired a limp—and a lifelong loyalty to Taylor. He became a U.S. citizen and was involved with Taylor's companies in the 1990s, later working for him in Iraq. Taylor declined to comment on Ghosn's escape; Zayek could not be reached for comment.

The final phase of the Ghosn operation began just before Christmas. On Dec. 24 a company called Al Nitaq Al Akhdhar was billed \$175,000 by MNG Jet, a Turkish aviation group, for chartering a Bombardier Global Express jet, which has a range

## THE EXTRACTION TEAM NOTICED SOMETHING: FOR SOME REASON, THE JAPANESE OPERATIVES TYPICALLY DIDN'T FOLLOW THEIR TARGET WHEN HE ENTERED A HOTEL

of more than 11,000 kilometers (6,835 miles). If anyone from MNG had tried to visit this client, they would have found it difficult: There's no company called Al Nitaq Al Akhdhar at the Dubai address it provided on the charter paperwork. Around the same time, MNG has said, a different client arranged to hire another plane, a shorter-range Bombardier, to fly from Istanbul to Beirut.

**ON THE MORNING OF SUNDAY, DEC. 29, TAYLOR AND ZAYEK** landed at Kansai International Airport, near Osaka, on the chartered Global Express. On board were also two pilots and, according to people familiar with the flight who asked not to be identified, a couple of large black cases of the kind concert roadies use to hold audio gear. Later the same day, according to surveillance camera footage reported on by Japanese media, Ghosn left his residence, a rented house in the busy Roppongi neighborhood. He wore a hat and a surgical-style mask. (Used to protect against germs, these aren't unusual in Japan.) Taylor's advance team had chosen Ghosn's next destination carefully. During the months its members spent observing the plainclothes agents following Ghosn around Tokyo, they'd noticed something, according to the person familiar with the operation. For some reason, the Japanese operatives typically didn't follow their target when he entered a hotel.

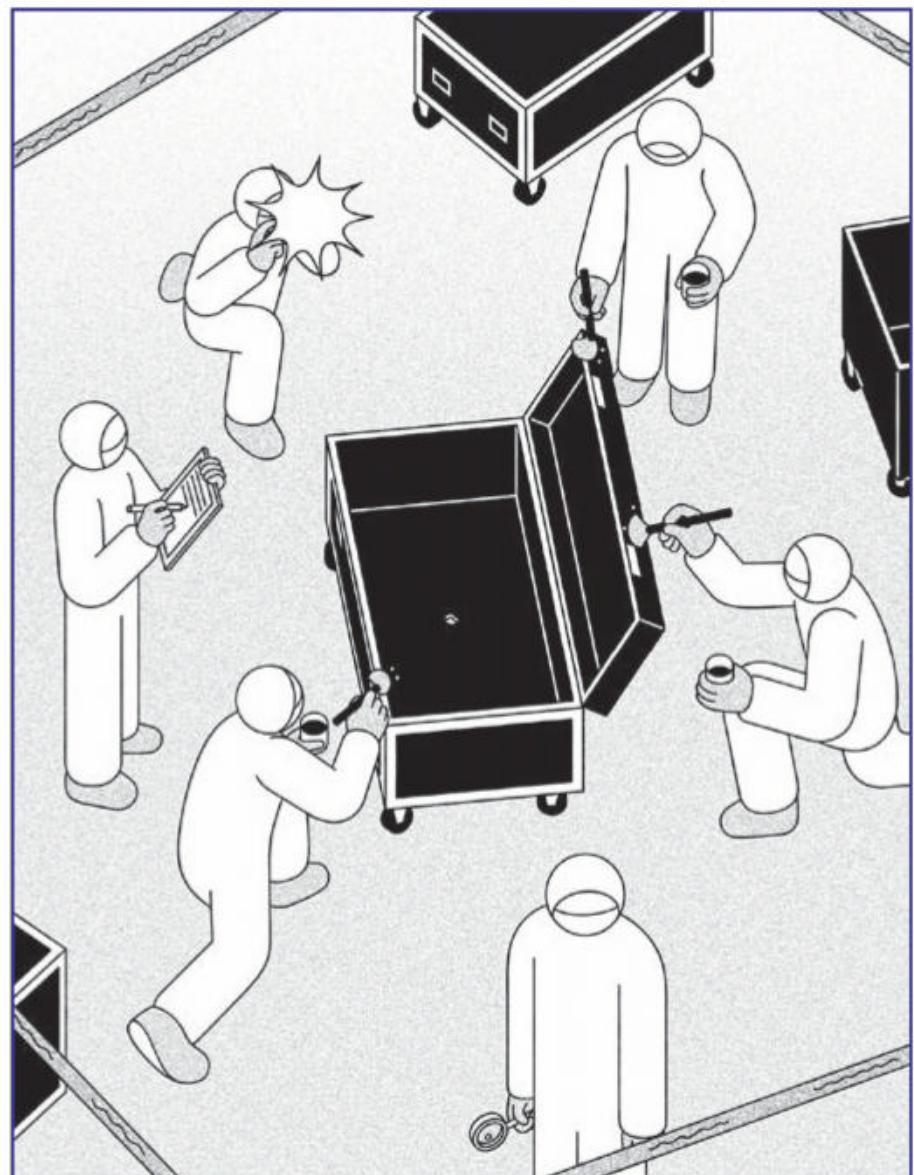
Ghosn soon arrived at the nearby Grand Hyatt Tokyo, which is attached to Roppongi Hills, a giant mall and office complex with a confusing array of entrances and exits on different floors. From there, according to Japanese media, he made his way to Shinagawa station, a major rail hub, and onto a high-speed train to Osaka. Ghosn's presence on public transport wouldn't, in itself, have been suspicious. Under the terms of his bail he was permitted to travel domestically, and he'd previously visited Kyoto, which is on the same bullet-train line, with one of his daughters.

Like everything else about Ghosn's escape, the means of departure from Japan had been chosen with utmost care, with Taylor's team evaluating a wide range of scenarios. Using a fake passport to get Ghosn onto a private jet as a passenger was a gamble: Japanese entry stamps contain QR codes, which if scanned would quickly reveal the subterfuge. Another option, spiriting Ghosn onto a cargo vessel that would be purchased for the operation, was eventually rejected as too complicated.

As part of their reconnaissance, Taylor's people had surveyed airports all over the country, looking for terminals where security was lax. A few months ago, the person familiar with

the operation said, the team observed that the X-ray machines in Kansai's private terminal were much too small to scan a large box—and oversize items were simply waved through. The routine was the same on the night of Dec. 29. Airport officials didn't examine the large black cases that Taylor and Zayek had with them, and they were loaded onto the Bombardier without incident. The plane was bound for Istanbul; filing a flight plan listing Lebanon as the destination would have raised too many red flags, according to a person familiar with the subsequent investigation. A little after 11 p.m., the jet was in the air.

It landed at Istanbul's Ataturk Airport about 12 hours later. An MNG operations manager named Okan Kosemen, who'd helped arrange the charter, was waiting to greet it. In subsequent statements to a Turkish judge, Kosemen recounted that when he came on board, two Americans—presumably Taylor and Zayek—led him to the rear of the cabin. There, waiting ▶



The human-size box used in the escape



Ghosn celebrated New Year's Eve in Lebanon

► in the bathroom cubicle, was Ghosn. Kosemen waited for the crew to leave, shooed away a technician who wanted to work on the aircraft, and bundled Ghosn into a Ford van to take him to the second plane and to Lebanon. (Kosemen says he didn't know he was aiding a fugitive when he arranged the charter and that one of the people involved threatened to harm his family if he didn't cooperate. MNG also says it had no knowledge Ghosn would be on the flights.)

Ghosn's passports had been taken as a condition of his bail—with one exception. He had two French passports, a privilege granted to citizens with particularly demanding travel schedules. He'd received permission to keep the second one; Japanese law requires foreigners to carry their identity documents at all times. The caveat was that it had to be kept in a plastic case, sealed with a lock to which only his lawyers had the combination. But Ghosn got it open and later presented it to an inspector at Beirut's Rafic Hariri International Airport like any other traveler. It was the first legal act he'd performed since leaving Japan.

**FOR THE FIRST FEW DAYS AFTER GHOSN'S DEPARTURE,** official Japan seemed unsure how to react. Prime Minister Shinzo Abe and his deputies made no official statements; at the Ministry of Justice and the Tokyo prosecutor's office, journalists struggled to get a comment from a spokesperson. The near-silence briefly fueled theories that Ghosn might even have

had a subtle green light for his escape—that elements within the government had grown tired of the public-relations headache of prosecuting such a high-profile defendant and decided it would be better to be rid of him.

Those theories were soon discarded. On Jan. 7 prosecutors said they'd obtained an arrest warrant for Carole, citing what they claimed were false statements she made more than eight months earlier. Ghosn's representatives viewed the move, which was soon followed by a report that Japan would seek a Red Notice for her, as a clear attempt to intimidate him before his first public appearance since his escape. That was planned for Jan. 8 in Beirut, in the offices of the national journalists' association, and billed by Ghosn as a chance for him to expose the "injustice and political persecution" behind his predicament. As the appointed time approached, Japanese camera crews thronged the sidewalk outside the venue; most had been denied accreditation to attend, a decision Ghosn said was motivated by what he viewed as unfair treatment by the Tokyo press.

Shielded by bodyguards, he entered the room just before 3 p.m. His hair, previously jet black, was wispy and gray, and deep lines marked his face. But otherwise he was unmistakably Ghosn: confident, unflappable, and in total command of his material. His address lasted more than an hour, illustrated with documents projected onto the wall behind him. Ghosn argued that the allegations against him had effectively been cooked up, the result of a conspiracy to halt his plans to more closely integrate Nissan with its partner Renault. The plot's organizers, he said, included Hiroto Saikawa, his successor as Nissan chief executive officer, Hitoshi Kawaguchi, who was in charge of government relations, and board member Masakazu Toyoda. All have rejected his claims.

Only two topics were off-limits: the particulars of his escape, to protect the people who helped him, and the identities of Japanese officials he believes participated in the conspiracy—a concession, according to a person familiar with Ghosn's planning, to concerns within the Lebanese government about complicating relations with Japan more than he already had. "I am here to clear my name.... These allegations are untrue, and I should have never been arrested," he said. "I was presumed guilty before the eyes of the world and subject to a system whose only objective is to coerce confessions, secure guilty pleas, without regard to the

AS GHOSN'S SPEECH WENT ON, ENTROPY TOOK HOLD.  
AT ONE POINT HE COMMITTED THE NO. 1 FAUX PAS  
FOR FOREIGNERS IN JAPAN, COMPARING HIS ARREST  
TO THE ATTACK ON PEARL HARBOR



Making his case at the Beirut press conference

truth.” His escape, he said, was “a risk one only takes if resigned to the impossibility of a fair trial.”

But as Ghosn’s speech went on, entropy took hold. He jumped rapidly from allegation to allegation at a pace that was difficult to follow even for observers versed in the latest Ghosniana. At one point he committed the No. 1 faux pas for foreigners in Japan, comparing his arrest to the attack on Pearl Harbor. There were flashes of arrogance, with Ghosn describing Nissan as “in the dirt” before he arrived and boasting that “20 books of management were written about me.” He devoted a significant stretch of time to a relatively minor issue—whether his comped use of a room at Versailles for his 2016 wedding celebration constituted a sort of kickback for Renault’s sponsorship of the palace—providing a convoluted explanation that he later summed up with, “If I had thought there had been an ethical problem, I wouldn’t have done it.” He then spent more than an hour gamely answering questions, switching among English, French, Arabic, and, out of deference to a small but enthusiastic crew of Brazilian reporters, Portuguese. He may not have exactly been having fun, but he clearly felt liberated.

That feeling won’t last if his former captors have anything to say about it. The Red Notice initiated by Japan has triggered a legal proceeding in Lebanon, and the day after his press conference Ghosn was summoned by the country’s Ministry of Justice. Prosecutors questioned him on the Japanese allegations as well as a separate issue: whether he committed a crime by visiting Israel as Renault’s CEO. Lebanon considers Israel an enemy, and it’s illegal for citizens to travel there,

with violations punishable by a jail sentence—a reminder that Ghosn’s globalist values may not be fully compatible with those of his new home. And it will, for now, be his home: The government has formally barred him from leaving, taking possession of his French passport. In an interview in Beirut, Justice Minister Albert Sarhan insisted that Lebanon will carefully consider any requests from Japan and that it’s too early to say Ghosn won’t be extradited. But given the political and legal context, that outcome is highly unlikely.

Ghosn says he’s eager to clear his name, something his lawyer has suggested could occur through a trial in Lebanon—a country that ranked 138th in the most recent Corruption Perceptions Index published by Transparency International. At his press conference, Ghosn was more expansive, saying he would welcome being judged “anywhere where I think I can have a fair trial.” When he puts it that way, it’s a reminder that for everything he’s lost, he still has plenty. Among the remarkable things about Ghosn’s situation in Japan, where he stood a very real chance of becoming one of the few corporate leaders of his stature ever to be sent to prison, was the degree to which all his advantages—connections, money, access to the global media—seemed to count for nothing. That turned out to be only half right. Ghosn may not have been able to beat the system, but he didn’t need to. He had the resources to go around it. **B**  
—With Greg Farrell, Zeke Faux, Kae Inoue, Alan Katz, Dana Khraiche, David Kocieniewski, Ania Nussbaum, Neil Weinberg, and David Voreacos

Abu Dhabi Accra Amman Amsterdam  
Athens Bangalore Bangkok Beijing  
Beirut Cairo Calgary Cape Town  
**Caracas** **The** Charlotte Chicago **global**  
Copenhagen Denver Doha Dubai  
Dublin Düsseldorf Edinburgh Frankfurt  
Geneva Hanoi Helsinki **standard** Hong  
Kong Houston Islamabad Istanbul  
Jakarta Jerusalem Johannesburg  
Karachi **for** Kiev London Luxembourg  
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A greenhouse on  
the Cambo estate  
in Fife, Scotland

# PURSUITS

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# The Green Dream

Running your own greenhouse may seem idyllic. The reality is not for the faint of heart

By James Tarmy

Photograph by Jo Metson Scott

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Winter irrigation without the irritation

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The Audi RS 6—a station wagon in name only

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A revolution is afoot in snowshoes

January 20, 2020

Edited by  
Chris Rovzar

Businessweek.com

**W**ith the exception of a few years in the late 1800s when some rowdy servants burned down the manor house by mistake, the Erskine family has peacefully occupied the sprawling Cambo estate in Fife, Scotland, for more than 350 years. Along the way, they've been patrons for generations of agricultural workers who've tended the grounds.

The cost of that support has become increasingly steep, so five years ago the Erskines turned Cambo's gardens into a charitable trust with a mission to educate young adults in the art of rural agriculture. "Scotland is very short of young people going into rural occupations," says Catherine, Lady Erskine. "There is a skills gap."

But first they had to build new greenhouses. The existing ones, dating from the early 19th century, had "become quite shabby" says her husband, Sir Peter Erskine. The wood frames were rotting, glass panes had been patched haphazardly, and maintaining an even temperature was almost impossible. "They'd outlived their natural life span."

The family hired a U.K. company called Alitex Ltd. to build a structure with four sections—one for peaches, one that serves as a year-round space full of flowers and plants, and two to instruct trainees in the art of growing vegetables. "The desire to educate had always been embedded in country estates," Lady Erskine says. "They were the training facility for the local area." The new greenhouse cost roughly £500,000 (\$649,000).

In constructing homes for plants that cost more than homes for people, the Erskines joined the swelling ranks of wealthy individuals willing to spend hundreds of thousands of dollars—occasionally millions—on private greenhouses. In

the Erskines' case the impetus was charitable. For others, it's often in pursuit of a luxury the Cambo estate has enjoyed for centuries: fresh produce year-round. The trend toward homegrown food, produced in expensive personal greenhouses, "has always been there, but it's increasing," says Alex Turkewitsch, founder of the Toronto-based consultant Greenhouse Engineering.

"Each of the last three years, we've had 50% growth year over year," says Neal Bobrick, chief operating officer of Hartley Botanic, whose "Victorian" greenhouses start at \$25,000 and whose "modern horticulture" start at about \$60,000. "The whole farm-to-table concept has been a driver of our additional business."

John Lawson, a sales director at Alitex, says 10 years ago his Hampshire-base company would construct about 15 greenhouses a year that cost more than \$250,000. Now they build close to 50. "People are getting more sensitive," he says. "They don't want mass-produced stuff that's been shipped around the world. They want homegrown, solid stuff. And at the top end of the market, they can afford to have it."

People have wintered plants for thousands of years, most notably in orangeries such as the ones at the palaces of Versailles outside Paris and Schönbrunn in Vienna, where delicate plants would be brought into large, windowed halls to keep them from dying during a frost. These structures, many of which are still around, were principally intended for nurturing exotic plants that would never have survived otherwise. "Can there be anything more agreeable in the Winter," wrote the botanist Richard Bradley in his 1718 book *The Gentleman and Gardener's Kalendar*, "than to have a view from a parlour or study through ranges of orange-trees, and curious plants of foreign countries, blossoming and bearing

fruit, when our gardens without doors are, as it were, in a state of death?"

Modern greenhouses, on the other hand, only came about with the ability to mass-produce thin glass panes and iron structures durable enough to hold everything in place. In Germany an "iron hot house" was built as early as 1789, and by 1824 the Earl of Shrewsbury had created a splendid conservatory on his estate. Its "seven domes still sparkle as new, the centre dome topped with the Earl's coronet, the others with pineapples," wrote May Woods and Arete Warren in their comprehensive 1988 book *Glass Houses*.

Even though greenhouses are a form of agriculture, they're fundamentally an

One of Hartley Botanic's "Victorian" greenhouses in Washington state



industrial phenomenon. “It’s really a machine that you’re building, but the machine happens to produce a product called a plant,” says Dale Rahn, U.S. director for Deforche, a Belgian company that specializes in large-scale projects such as the National Botanic Garden of Wales.

In the 150 years since the greenhouse’s Victorian heyday, the mechanical systems that sustain them have advanced considerably from the stoves and shades once used to control temperature. Somewhat astonishingly, though, their construction has barely evolved. “Many of the things we do today, even the nomenclature, goes back to the 1800s,” says Turkewitsch, the consultant. “The techniques of installing relatively small pieces of glass remain the same.”

The starting point for anyone planning to build a serious greenhouse is deciding what to grow. Many people initially have a romantic idea of what owning a greenhouse entails—strolling amid flowering plants with a watering can during winter months or reading the newspaper in an orchid house with a cup of coffee.

The reality is that an owner’s physical comfort and a greenhouse’s effectiveness are not necessarily compatible. “If it’s a tropical greenhouse, it can get quite steamy,” Turkewitsch says. “An orchid house is not a good place for a library. If your purpose is to grow bedding plants and you want them to thrive when they’re ready to be planted outside, constraints apply.”

For those who do like the idea of sitting in a chair underneath a palm tree in December, a conservatory—the modern version of an orangery, a glass room usually attached to a house—is the obvious answer. “If you’re using it to grow plants it’s really a greenhouse,” Rahn says, “but if you’re putting plant displays in it, or art, then it’s a conservatory.”

If you’re trying to grow actual produce, things can get expensive—fast. In a larger greenhouse, there are partitions and mechanical systems (automated shades and vents, fans, heaters, water pumps) that break the structure into zones. One is usually “frost-free” (40F), the other is temperate (50F), and the other is warm (60F). Virtually any plant can be grown year-round in a greenhouse; the most common are often what you’d expect: tomatoes, lettuces, and peppers.

Rahn says his company does fewer residential projects annually—they average just two or three—but they’re larger in scope. The \$400,000 he quotes is the starting price. “We did one greenhouse in Florida,” he says. “It cost millions of

A greenhouse by Deforche at Hampden Nursery in Massachusetts



dollars and was set on a private island.”

The construction price is just the beginning. Mechanical systems, Lawson says, “double if not triple” the cost depending on the number of zones inside. “A big greenhouse could cost \$10 million, whereas a fair-sized, two-section greenhouse

ends up costing between a quarter to a half a million dollars.” Bobrick, of Hartley Botanic, says that while the price can be lower, mechanical systems can add 50% to 100% to the total. It rises quickly, he says, depending on “how fancy the customer is going to get.”

At Cambo, the greenhouse was comparatively expensive, at \$650,000, because it was built with four separate zones. The Peach House is, unsurprisingly, for peach tree saplings; the wheelchair-accessible Sensory Display House functions exclusively as an indoor, year-round garden; the

other two are for training gardeners and, just as important, cultivating plants for transplanting elsewhere on the estate and selling to the public. “It’s wonderful to have a range of glass houses we can set at different temperatures,” Lady Erskine says. “Some are on cold, but we’ve also got more tender plants” that require more heat.

Greenhouses are ubiquitous in Britain, but their popularity in America is on the rise. “Greenhouses to the U.K. are what garages are to the U.S.,” Bobrick says. “Everyone has one.” Most of Lawson’s American clients are within three hours of New York. “That’s where the money is,” he says. “So that’s where people can live like Victorians did.”

Victorians had access to cheap labor, though, and today’s greenhouse owners,

for the most part, do not. That, Rahn says, is often an unexpected and unwanted additional expense that can prove disastrous for aspiring home growers. “Most people fail, because they don’t know how to grow, and they don’t realize how much time it takes,” he says. “They’re busy people and want to jet off to whatever, but their plants require maintenance.” It’s easy enough to hire someone to trim hedges; hiring a real gardener is something else. “It’s different than pruning trees and mowing lawns. You’re growing plants, not just maintaining them.”

In that respect, the Erskine family’s program to train the gardeners of tomorrow has implications beyond mere backyard gardening. “Our aim was to turn back the clock and provide the opportunities that would have been available 200 years ago,” Lady Erskine says. ■

# Good Hydrations

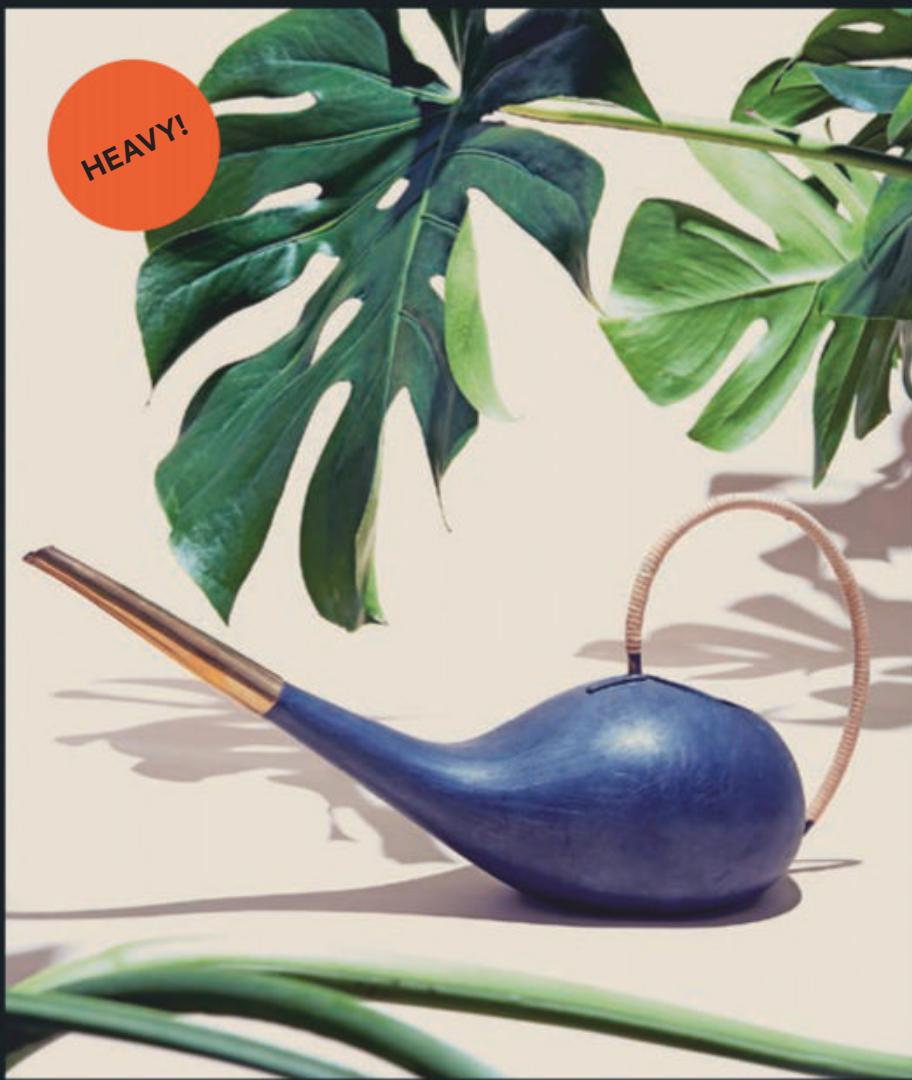
Be a proper #plantdaddy with a sculptural watering can as pretty as your greenery

*By Monica Khemsurov  
Photographs by Janelle Jones*



## THE VALUE PLAY

Made to be held up top near the intake, this 2-liter plastic design from Sweden-based Shane Schneck has no handle. Two intersecting cones make up its uber-functional body, which extends to an elongated spout. \$25; [hay.com](http://hay.com)



## THE INVESTMENT

Tipping the scales at 6 pounds, this 16-inch-wide doorstop feels more like a kettlebell than a can. Continually produced since 1950 in the workshop of Vienna designer Carl Auböck II, it's identifiable by the polished brass spout and cane-wrapped grip. \$2,520; [avenue-road.com](http://avenue-road.com)



## THE MINIMALIST

Under the name OYOY, Danish designer Lotte Fynboe takes a less-is-more approach to the Mizu. The golden, powder-coated can is 13 inches tall, can hold 2 liters, and weighs just over a pound when empty. \$105; [burkedecor.com](http://burkedecor.com)



CLASSY!

#### FOR THE OUTDOORS

Britain's Haws Water Cans Ltd., which started selling this patented "watering pot" in 1886, still makes classic styles in copper and steel. A brass rose on the spout provides a gentle shower; it comes with a mister for terrariums, orchids, and ferns, too. \$88; [shopterrain.com](http://shopterrain.com)



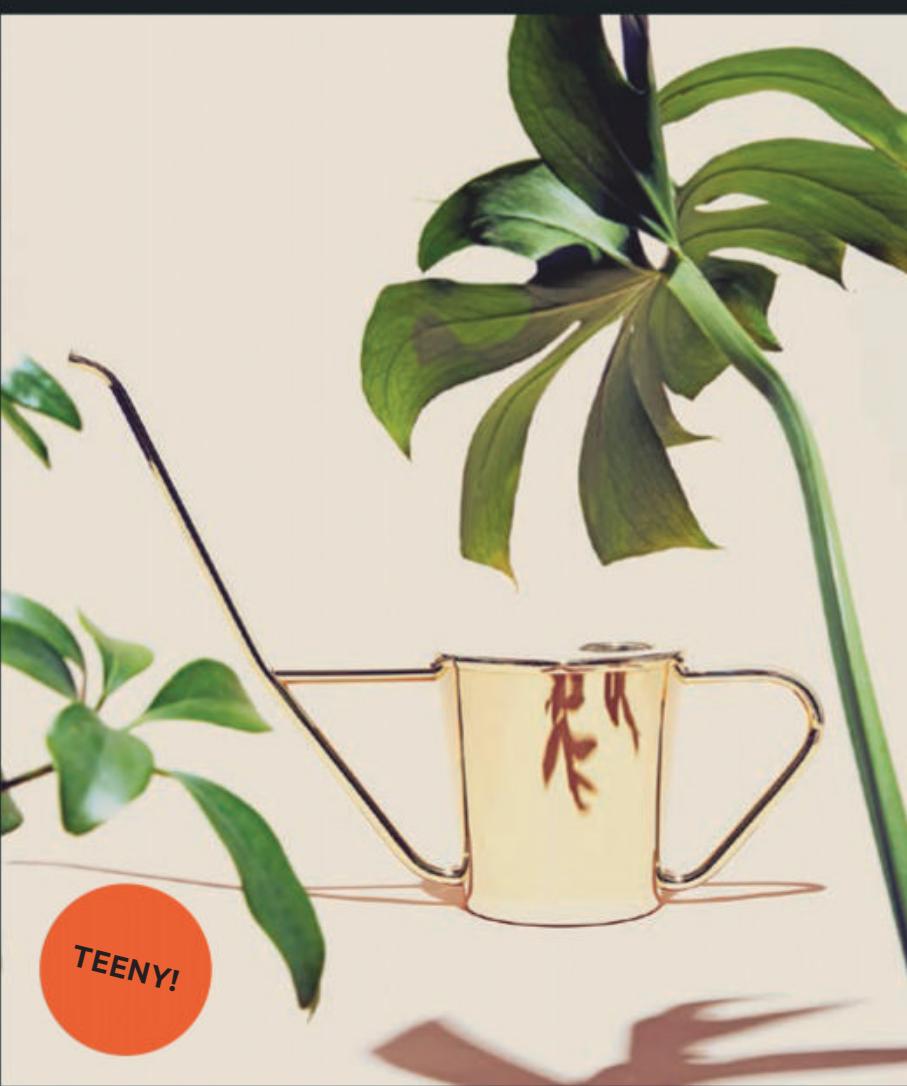
#### A DISPLAY-WORTHY MODEL

Slipcast in two parts that are connected by hand, this 10-inch-tall stoneware option is made in a Vermont studio powered by renewable energy. The matte sand finish accentuates its bold, intersecting geometries. \$210; [lightandladder.com](http://lightandladder.com)



#### ONE OF A KIND

Cut from a heavy, thick-gauge copper, this 1.5-gallon vessel—stamped with the date of its design, 1925—has hand-cut flanges, a riveted swing handle, a wide spout, and an additional back handle for secure two-handed grasping. \$525; [coppermillkitchen.com](http://coppermillkitchen.com)



#### FOR OVERHEAD PLANTS

This tiny dancer holds about 5 cups and has a delicate, armlike spout for irrigating in out-of-reach locations. Finland-based Harri Koskinen designed it out of brass, which darkens to a beautiful patina with use. \$220; [svenskttenn.se](http://svenskttenn.se)

The author sizes up a 2020 Audi RS 6 Avant, which arrives in the U.S. for the first time this summer



# Ready to Rock

The Audi RS 6 is a station wagon, sure, but it doesn't feel like one behind the wheel

By Hannah Elliott  
Photographs by Peter Boehler

It would be wrong to call the Audi RS 6 Avant a supercar.

With seating for five, enough space for a family of Saint Bernards, and that unmistakably long "shooting brake" roofline, it's a bona fide station wagon, offered in 2020 for the first time in the U.S. It joins the Mercedes-Benz AMG E 63 wagon and Porsche Panamera Sport Turismo in the scant group of luxury wagons Americans can buy without performing the bureaucratic gymnastics required to import one of the (many) such models offered in Europe.

But one could be forgiven for choosing Audi AG's roughly \$120,000 grocery-getter instead of something more exotic. Driving it recently up that roller coaster known as Deer Creek Road in Malibu, Calif., I had the distinct impression that I'd somehow switched cars between the time I watched the RS 6 pull up and when I got inside.

I pushed the gas pedal, and the car surged forward so fast that my abs clenched. I turned the steering wheel into hairpin curves, and the wagon dipped and glided around the corner with complete confidence, complete balance, complete contact with the road. Brush singed by wildfires went by in a blur as I whizzed past, the horizon bobbed like a mirage as I climbed higher, and soon the Pacific slid into view. What automotive mischief was this? I wondered. My heart rate had almost tripled.

Here's the thing: The RS 6, with its 59.3 cubic feet of rear space, will dutifully carry your kids—and all their gear—to soccer practice or take everyone for a camping weekend at Yosemite. Its more than 30 driver-safety systems, including lane tracking and lane assist, will protect you from reckless drivers. Its all-wheel steering, torque control, air suspension, and five drive modes, all of which come standard, can smooth out gravel paths and snowy trails.

But it doesn't want to. Trust me. This wagon's made-special-for-America exhaust system growls in a very R-rated way. It wants to go rough.

What the RS 6 really thirsts for is to run that 591-horsepower V-8 engine all the way up to 60 mph in 3.4 seconds and try to scare you silly in the process. It wants to launch-control you into oblivion—to 190 mph if you choose to add the massive ceramic brakes—until you can't see straight and can't take it

anymore. (Yes, you read that right: This station wagon has one of those launch-control buttons that encourages you to rocket from a standstill. I still can't quite fathom it.)

The RS 6 wants to upend your expectation that a station wagon is simply a more practical sedan or smaller SUV. And on that lonely, twisting road in Southern California, eight-speed all-wheel drive was extremely convincing. Dynamic ride control is optional. Get it—you'll want the extra help.

This sleek automobile, with its glowing front fascia and doors sculpted like those of a Lamborghini, can look even more worthy of its power if you elect certain key options. I recommend the Nardo gray paint job, exclusive to the RS 6 Avant; the HD Matrix LED headlights with laser lights and darkened bezel; the Lamborghini Urus-size, 22-inch alloy wheels; and the glorious, perforated Valcona leather with "RS" embossing on the ergonomic seats. Oh, and go for the motion-activated control that opens the tailgate when you swipe your foot underneath it. If you do decide to use this as a grocery-getter, the extra foot will come in, er, handy. Buy it to be a workhorse but also as a reminder that sometimes you like a thoroughbred.

Deliveries start this summer, so you'll want to start clearing a spot in your garage now. **B**



Flared arches accommodate wheels with a diameter as wide as 22 inches; additionally, new ceramic brakes are part of an optional performance package that allows for a top speed of 190 mph



The RS 6 sport seats can be upgraded with honeycomb stitching and a red or gray interior with contrast threading



# Why Is It So Hard To Design a Watch Bracelet?

Swiss innovation makes a complex component look deceptively simple

By David Graver

For their new Streamliner collection of timepieces, leaders at the Swiss watchmaker H. Moser & Cie. wanted to create everything from scratch: the mechanism, the case, the dial, everything. So where did they start?

The bracelet.

The humble wristband might seem like the least glamorous part of a watch, but it can be the most difficult to craft. And it's key to whether the whole thing seems dressy or casual, masculine or feminine, or even well-made.

Early in the Streamliner's five years of development, Moser Chief Executive Officer Edouard Meylan imagined the watch would be the bearer of the brand's first integrated bracelet, a setup in which the case and first link are connected directly rather than using a spring bar and lugs. It's a challenge to engineer, and in an age when personalization goes hand in hand with luxury, it defies the trend of offering interchangeable straps. (Think of how many options are offered with the Apple Watch.) Yet an integrated bracelet completes a timepiece's design instead of simply complementing it.

For inspiration, Meylan looked to the 1970s and the future-forward iconography of designer Gerald Genta—specifically his work on Audemars Piguet's Royal Oak. "I had the opportunity to grow up observing my father [former Audemars Piguet CEO Georges-Henri Meylan] as he took AP to the next level and seeing many beautiful Royal Oaks." The bracelet is considered essential to the success of that watch.

Integrated bracelets feature in several of today's most acclaimed and sought-after timepieces. Genta's Nautilus for Patek Philippe may be the most well-known, but others populate the portfolios of Vacheron Constantin, Rolex, Omega, Bell & Ross, Girard-Perregaux, Zenith, and Tudor. Lower-cost watchmakers such as Tissot have their own versions, too. As

Moser introduced its in-house-designed integrated bracelet during Dubai Watch Week, which ended on Jan. 15, LVMH's Hublot did the same.

The company is "trying to find the tension between vintage and modern-contemporary. That's what we were seeking with this collection," Meylan says. "We didn't want a simple, flat bracelet, so we gave it three-dimensional curves. It looks a little bit like the rear of a Porsche Carrera."

Meylan, the engineers, and the heads of sales and development researched and brainstormed. They analyzed the work of rivals. All of this before settling on a single-link design and translating it into software. Then they searched for technological solutions to fabricate their vision, including 3D-printing prototypes and specialized machinery. Costs soared to the millions of dollars. "The architect will create something amazing, your dream house," Meylan says. "Then you work with people who will actually build it, and they'll say it's impossible."

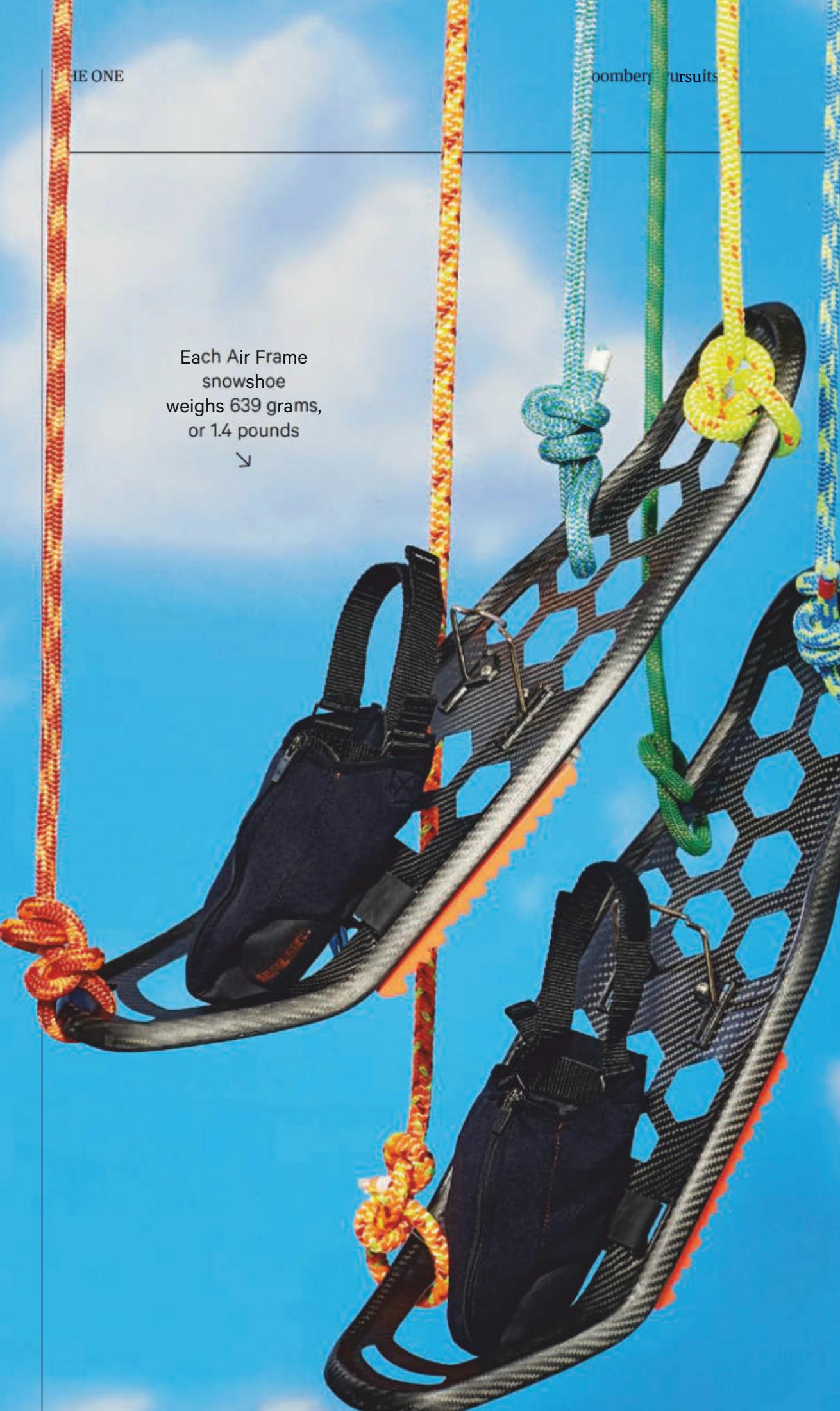
"Many bracelets are still stuck in the '70s," says Moser in-house engineer Arnaud Lévy. "Other integrated bracelets are the combination of circles and straight lines. Our forms have different curvature levels. It made it difficult to develop and more difficult to produce." Moser's engineers went through hundreds of iterations. Meylan had envisioned waves, and that idea guided them from the bracelet into the design of the watch and its cushion-shaped case.

"We're talking about aligning microns to see this continuity," Lévy says. Linking the case and bracelet is the most challenging part; a successful seam conceals sharp edges and avoids abrupt lines. Matching the finish on both sides can aid the union.

Integrated bracelets must also fit various wrists comfortably. Key parameters include lug width and how each link joins together. Ergonomic advances have kept the bracelet from becoming a design relic.

"The bracelet has to be both aesthetically outstanding and also comfortable," Meylan says. "Most watches are round. As a result, a bracelet becomes a very strong element of differentiation for a brand." **B**

Each Air Frame snowshoe weighs 639 grams, or 1.4 pounds



## Light as Snow

Komperdell's carbon fiber snowshoes are the featherweight way to scale those winter hills

*Photograph by Jessica Pettway*

For millennia, snowshoes have been adapted to fit the terrain and the people who use them. Consider these \$350 Carbon Air Frames, from Komperdell Sportartikel GmbH, the peak option for our time. Carbon fiber construction—first used in the Austria-based company's ski poles—replaces aluminum to streamline winter's bulkiest footwear to 639 grams, or 1.4 pounds.

That makes them the lightest pair on the market. The frame and the decking, usually separate, are here combined to form a cohesive one-piece unit that's 25 inches long and rated to support 220 pounds.

### THE COMPETITION

- Crescent Moon Snowshoes Inc. makes its 3.5-pound Evas (\$159) out of foam for a flexible experience that's almost as comfortable as wearing sneakers.
- A favorite among outdoors enthusiasts, MSR's \$220 Lightning Trails feature nylon decking with an aluminum frame. The shoes, which weigh a little more than 3 pounds each, also come in a version specifically designed for women.
- If you want to trade weight for

durability, the Fimbulvetr Tankr X snowshoes (\$319) are extra-long at 38 inches and made of a stiff compound material with stainless-steel crampons for a total weight of 7 pounds.

### THE CASE

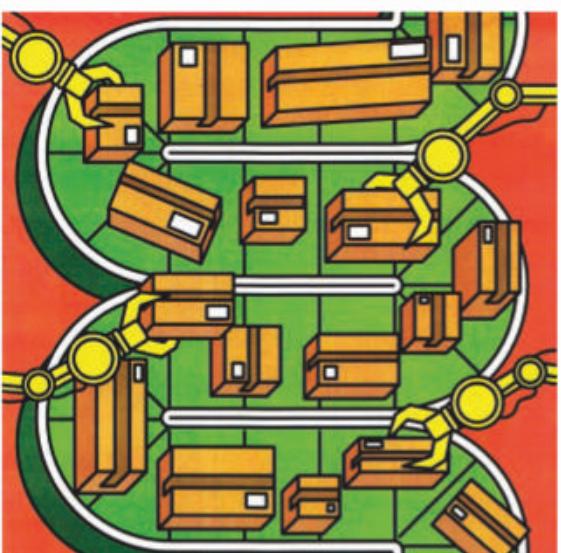
A full 50% lighter than average snowshoes, the Air Frames are next-level powder gear. Their step-in bindings are designed for all types of footwear, and a "live-action hinge" will put a literal spring in your step. A two-point toe crampon and side rail teeth are also integrated, but they're not meant for walking on hard, rocky terrain. Think of them more as the ultimate in snow-trekking pleasure—they're suited for most skill levels, terrain, and conditions. Mundane winter tasks aren't immune from their charms, either: Strap them on for an adventurous walk with the dog, or, if you drive a lot on snowy roads, store them in the trunk of your car next to your flare and your spare. \$350; [komperdell.com](http://komperdell.com)

# 'Twas the Night Before the Expected Package Delivery

By Brooke Sutherland

This holiday season had all the makings of a logistical nightmare. Thanksgiving fell late, shortening the number of days carriers would have to ship an unprecedented number of packages. The last time the season was so short, in 2013, United Parcel Service Inc. failed to deliver orders from Amazon.com Inc. and others by Christmas, forcing the sellers to dole out gift cards and refunds.

In the years since, UPS and rival FedEx Corp. have spent billions of dollars to upgrade their networks. This was a chance to prove it had paid off, but it was also a key test for the internal logistics arm that Amazon has been expanding with gusto since that fateful 2013 holiday season. In a Dec. 19 statement, Amazon said it was on pace to ferry 3.5 billion packages globally in 2019.



For all the hand-wringing, things mostly seemed to go fine. Raymond James Financial Inc. analyst Patrick Tyler Brown notes that web-search volumes for customer service spike to about 2.5 times the annual average when carriers are struggling. Traffic

# 95%

- PERFORMANCE ISSUES  
FedEx's on-time delivery rate this season declined from 97.6% in 2018, according to SJ Consulting Group.

- RIGHT ON SCHEDULE  
Amazon's estimated on-time performance neared 99% in the peak season, but given its focus on last-mile deliveries, that's not comparable to FedEx's.

ILLUSTRATION BY GEORGE WYLE SOL

for UPS and FedEx doesn't appear to have hit that mark this season. Although Amazon Prime customers lit up social media with complaints of delays following Black Friday, the frustration mostly dissipated, and it's not clear which carrier was responsible. Shortly after, Amazon banned third-party merchants from using FedEx for Prime shipments, citing poor performance.

One possible reason complaints didn't rise is that there's really only one deadline that matters during the holiday season, and that's Christmas Eve. On that front, UPS and FedEx appear to have delivered. Considering total volume in the period between Black Friday and New Year's Eve probably topped 2.7 billion packages—up from 2.3 billion in 2018 and multiples of what logistics providers may see in a typical month—UPS and FedEx did pretty well, says Satish Jindel, founder of SJ Consulting Group Inc.

That's likely a reflection of UPS and FedEx getting more disciplined on delivery promises for last-minute orders, but it's also a testament to the investments they've made in increased sorting capabilities, more sophisticated software, and the expansion of services to weekends. It remains to be seen if the relative dearth of customer frustration translates into decent profits, though. And unfortunately for both companies, things also appear to have gone smoothly for Amazon, cementing the company's status as a viable and growing competitor. ■ —Sutherland is a deals columnist for Bloomberg Opinion

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