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Bloomberg Businessweek

May 20, 2019

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CEO Adam Neumann

WeWork has grand ambitions.

Will it ever make money? 38


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◀ In the rainforest of northern Guyana, the Aruka River beckons

FEATURES

PHOTOGRAPH BY LUCAS FOGLIA FOR BLOOMBERG BUSINESSWEEK

CORRECTION

"Trump's Dangerous Trust in Tariffs" (Economics, May 13) incorrectly stated that Bloomberg economists calculate that a 25% tariff on all U.S. imports from China would shave 1.5 percentage points off U.S. growth. The hit would be to China's gross domestic product growth.

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By Benedikt Kammel

● The trade war between the U.S. and China escalated.

The Trump administration slapped higher duties on $200 billion of imports from China, which retaliated by raising duties on about $60 billion in U.S. goods, defying a call from Trump for restraint. The presidents of the world's two largest economies are likely to meet at a G-20 summit at the end of June.

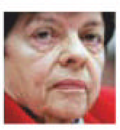
● A jury ordered Bayer to pay more than

$2b

in damages to a California couple who claimed they got cancer as a result of using the company's Roundup weedkiller for three decades. Bayer vowed to challenge the ruling.

● Pro-choice activists protest at the Alabama State House in Montgomery as the state's Senate approved the strictest anti-abortion bill in the U.S.

● Alice Rivlin, the first



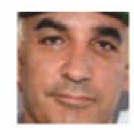
woman to lead the White House Office of Management and Budget, under Bill Clinton, died. A master of pragmatic economic policy, she was a Fed vice chair and the founding director of the Congressional Budget Office. She also helped save Washington, D.C., from fiscal insolvency at the end of the 20th century. She was 88.

● Beijing's Daxing International Airport, a sprawling starfish-shaped facility that will become north China's air hub when it opens later this year, welcomed its first test flights from domestic airlines.

● Iran-backed Houthi rebels in Yemen attacked a Saudi pipeline with drones on May 14.

The day before, Riyadh said two Saudi Arabian oil tankers had been sabotaged near the Strait of Hormuz. No one has claimed responsibility. The waterway is a global chokepoint for oil shipments and a focus of the Saudi rivalry with Iran.

● Alkiviades "Alki" David,

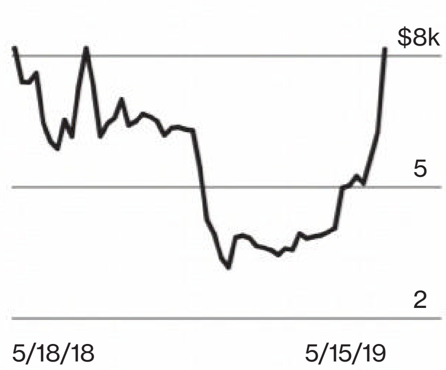


scion of a Greek soda-bottling dynasty, was arrested in St. Kitts and Nevis after landing in the Caribbean nation on a private jet loaded with cannabis seeds and seedlings. David said the cargo was legal hemp and that he was planning to start a cannabis business.

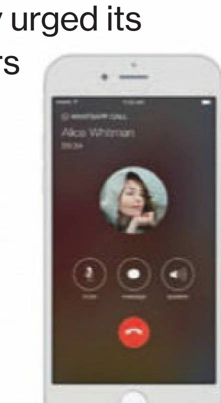
● "Until unemployment is halved, we'll spend everything we have to spend. If someone in Brussels complains, that's not our problem."

On the campaign trail for this month's elections for the European Parliament, Italian Deputy Prime Minister Matteo Salvini said his government could be prepared to break EU fiscal rules to lift economic growth.

● Continuing its rise from the cryptocurrency grave, Bitcoin topped $8,000 on May 14 for the first time in about 10 months and scored its longest winning streak since 2013.



● WhatsApp said it discovered a vulnerability earlier this month that could enable hackers to inject spy software into mobile devices via the call function. The company urged its 1.5 billion users to update the messaging app to erase the bug.



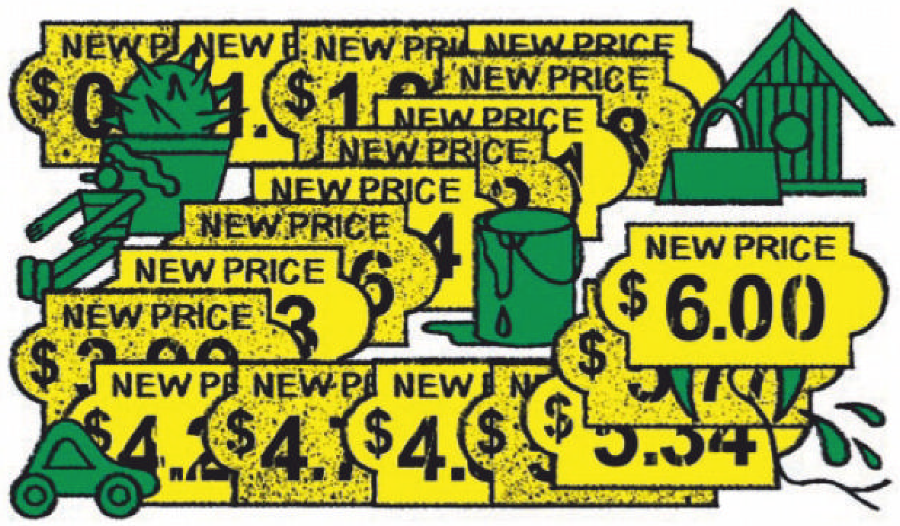
● Swedish prosecutors reopened an investigation into rape allegations against WikiLeaks co-founder Julian Assange.

● Disney is stepping up competition with Netflix by taking full control of Hulu, home of *The Handmaid's Tale* and other hits.

● A rare Rolex watch from the 1950s, nicknamed the Stelline for its star-shaped markers, sold for $975,000 at Christie's.

● Singer and actress Doris Day, the Hollywood legend who starred in *Pillow Talk* and *Calamity Jane*, died at 97.

ALABAMA: CHRIS ALUKA BERRY/REUTERS. RIVLIN: HARAZ N. GHANBARI/AP PHOTO. DAVID: VIVIEN KILLILEA/GETTY IMAGES. WHATSAPP: COURTESY WHATSAPP



▶ Shopping in the Time of Trade Wars

This quarter's earnings season wraps up with three retail heavyweights: Home Depot reports on May 21, followed the next day by Target and Lowe's. With the trade war between the U.S. and China flaring up again, consumers are likely to feel the pain as tariffs raise the price of goods.

▶ The Federal Open Market Committee releases the minutes from the April 30-May 1 meeting, when the Fed decided to keep interest rates unchanged.

▶ European parliamentary elections take place on May 23-26. The U.K. is participating in the polls because Brexit was delayed by six months.

▶ Deutsche Bank's annual general meeting on May 23 promises to be tumultuous after the failure of merger talks with Commerzbank last month.

▶ More than a half-dozen parents accused of participating in the U.S. college-admissions scam are set to plead guilty before a judge starting on May 21.

▶ Berlin hosts the first Greentech Festival, on May 23-25. The showcase for sustainable and clean technologies is expected to draw 50,000 visitors.

▶ From May 21, the Chelsea Flower Show presents the latest in plant trends and garden designs, including one the Duchess of Cambridge co-created.

■ BLOOMBERG OPINION

Trump's Recklessness

● Even if he "wins" on trade, America and the world have lost—and that's unforgivable

The U.S. and China inched closer to an outright trade war on May 13, when Beijing announced plans to raise duties on selected American imports. The announcement was pointedly timed, less than two hours after President Trump tweeted, "China should not retaliate–will only get worse!" At this rate, things might indeed get worse, a lot worse. That's what makes Trump's approach so unforgivably reckless.

China plans to raise tariffs to as much as 25% on about $60 billion of U.S. goods, including small aircraft, computers, agricultural products, and liquefied natural gas. The measures are in response to the Trump administration's announcement that tariffs of 10% recently applied to some $200 billion of Chinese goods would be increased to 25%. The U.S. is now threatening to retaliate against the retaliation. China is doubtlessly preparing to follow suit.

China's latest move wiped about $1 trillion from global share prices on May 13, and this is only a mild foretaste of what might happen if the two sides keep digging in. Even now, investors still seem inclined to bet that Trump's trade war is a fuss about nothing–that he's bluffing and in the end will step back from an all-out fight. But this calculation is questionable. Trump may be overestimating the willingness of China's leaders to let him humiliate them, and investors may be overestimating the U.S. president's willingness to lose face if China refuses to give way. This apparent complacency means if things turn out badly, the markets have a long way to fall. Panics of this sort can be hard to contain.

Doesn't the U.S. have a point? Possibly: The charge that China has reneged on commitments it made earlier in these talks, which the administration blames for the latest breakdown, is difficult to judge. Such backsliding wouldn't be unheard of. On the other hand, who in their right mind would take the word of this White House on anything? All that's certain is that raising tariffs and threatening to raise them further doesn't advance U.S. interests.

It isn't just the risk of further escalation. And it isn't just that higher U.S. tariffs are first and foremost a growth-retarding tax on American consumers and businesses. The crucial thing is that the endless threat of unbounded disruption to international trade produces chronic economic uncertainty–which in turn deters investment, the key to long-term advances in output and living standards. There's little doubt this factor has already been weighing on global growth.

Let's suppose that in the end, with or without meaningful Chinese concessions, Trump chooses to cool the rhetoric, declare victory, and move on. Don't imagine the past two years of phony war will have done no harm. The Trump trade-policy burden on U.S. enterprise and the global economy has been real, even if the worst is avoided. Right now, confidence that the worst will be avoided ought to be waning. Ⓑ

Written by the Bloomberg Opinion editorial board

ILLUSTRATION BY LARISSA HOFF

▲ Queuing to vote in the Sirohi district, Rajasthan state, on April 29

India Is Running Out of Time

● The world's largest democracy faces huge pressures from its expectant but underserved youth

● By Nisid Hajari

Tough elections are ugly and get uglier the longer they drag on. In India, so massive that the voting process has taken nearly six weeks, Prime Minister Narendra Modi's ruling Bharatiya Janata Party has dispensed with the relative subtlety of dog whistles. It launched into polls last month blasting Modi's political rivals as sympathizers of archrival Pakistan and vowing to boot supposed Muslim "infiltrators" out of the country. It continues to mock opposition leader Rahul Gandhi for standing in two constituencies—in one of which, it's darkly noted, Hindus are a minority. One BJP candidate has been charged in a terror attack that killed six Muslims.

Some Modi defenders will dismiss all this as political theater. They say reforms instituted by his government have benefited Indians regardless of creed: programs to build toilets, open bank accounts, and provide cooking-gas cylinders for the poor. They argue that Modi presents the best chance India has of reaching Chinese-style growth rates, which could lift tens of millions out of poverty. They point out, not unreasonably, that Gandhi has hardly dazzled with the force of his personality or the credibility of his economic plans.

Even so, divisiveness is a deeply unwise course for Modi to steer. Most observers see the prime minister and his party returning to power for another five years. If they don't swiftly pivot back to the more inclusive message of opportunity and growth that underpinned Modi's impressive victory in 2014, the world's biggest democracy could fall prey to nativist furies far more destructive than anything yet seen in Donald Trump's U.S. or Brexiting Britain.

The tinder is plentiful. India's huge, young population—58% are younger than 30—should in theory be an asset, boosting growth to a degree that aging societies such as Japan, Singapore, and even China can only envy. But this demographic dividend won't last forever: By some estimates its positive effects could begin to wane as early as 2030. If India doesn't start creating vast numbers of new jobs—8 million are needed annually, according to the World Bank—the nation's young will quickly become a burden on the state and a threat to social stability.

Some argue this is already happening. "You see the same aspirations and the same frustrations from Kanpur to Coimbatore," says Snigdha Poonam, who traveled the country to research an acclaimed recent book, *Dreamers: How Young Indians Are Changing the World*. Many of these youthful citizens expect their nation to be recognized imminently as a superpower and their wildest economic ambitions to be fulfilled as Modi promised in 2014. Poonam recalls meeting young men in three separate rural areas, each of whom confidently informed her that his life goal was to own an Audi, a car none had ever seen in person.

For these young men—and in India, which because of a preference for sons has 36 million more males than females, they are mostly men—reality cannot possibly match such vaulting expectations. Most Indian youth are atrociously educated and underemployed. The government disputes a recent report that pegged unemployment at a 45-year high. Yet India accounts for barely 1.7% of global exports: There's no evidence that the economy is creating the kind of blue-collar jobs that could offer livable wages, chances for advancement, or incentives for workers to train and improve their skills.

Especially in the poorer and more populous north, many of these young men don't appear to blame Modi for this failure. The son of a tea seller, he's successfully cast himself as one of them, battling against Delhi elites whose policies have ostensibly favored minorities and thus blocked their rise. They accuse Muslims and lower-caste Indians of stealing jobs through affirmative-action quotas. They blame women for doing the same by leaving the home for the office. (In fact, rates for female labor participation in India are shockingly low and declining rather than rising.)

The BJP has actively promoted this belligerent majoritarianism, claiming simply to be restoring pride in India's Hindu heritage. While Modi himself has been more restrained in his language than many feared he might be, at least until ▶

AMIT DAVE/REUTERS

◀ the current campaign, he's promoted Hindu nationalists throughout his administration and beyond. He's looked the other way as gangs of Hindus have lynched Muslims—at least three dozen and counting, according to Human Rights Watch—and been embraced by BJP luminaries. Since Modi's election, anti-Muslim bigotry has become normalized to a virtually unprecedented degree in India, an officially secular country with the world's second-largest Muslim population.

Although certainly a subtext to his 2014 victory, this wasn't what got Modi elected originally. The prime minister triumphed because he convinced many Indians that he could push the economy into the higher gear that had propelled China and other East Asian economic powerhouses out of poverty. He wanted India to project newfound strength, certainly. But that assertiveness would grow out of the economic vibrancy and an expanding domestic market—not religion—that would attract foreign investment.

His accomplishments on that front haven't been negligible. Most laudably, during his first term, Modi ushered in two broad reforms—a nationwide goods-and-services tax and a new bankruptcy code—which, despite teething problems, should ultimately make the economy much more efficient. Thousands of kilometers of new roads and improved rail lines, especially in rural areas, will do the same. While it's easy to dismiss those toilets and bank accounts, they have directly improved the lives of some of India's most vulnerable citizens.

Yet there's no sign Modi is prepared to take the steps that would be required to shift India onto an accelerated development trajectory. Barely a year into his term, after being accused by Gandhi and the opposition Indian National Congress party of running a "suit-boot" government for the rich, he essentially abandoned any effort to rework the politically sacrosanct laws that discourage Indian companies from expanding: in particular, rules that make it difficult to acquire land for factories or to fire workers.

Worse, Modi's most dramatic initiative—abruptly withdrawing almost 90% of the currency in circulation in late 2016, supposedly to combat corruption and money laundering—was a massively disruptive failure whose costs are still being felt. More recently, the government has reversed years of steady liberalization in trade policy. It's competed with the Congress party in issuing promises of wasteful handouts to ailing farmers, rather than addressing the bottlenecks that are cutting into their incomes. It appears to have fudged or withheld data to mask a weak record on growth and jobs, and it has undermined the independence of institutions such as the Reserve Bank of India.

That helps explain why Modi has focused on an almost purely nationalistic message throughout the campaign, one that borders on Trump-scale hubris. The prime minister and his supporters have added the title *chowkidar* (watchman) to their Twitter handles and boasted that only he can keep India safe. Modi repeated that line more recently after the Sri Lanka church bombings, warning of similar attacks in India should Gandhi's Congress come to power. BJP partisans go one step further, baldly arguing that critics are not just deluded but also deliberately treasonous.

Tactically, Modi may be right that voters, including those young men who thrill to his message that India can no longer be pushed around, will respond. But what Indians really need isn't for their resentments to be nursed: They need jobs. And, even with the advent of automation, all evidence suggests that those jobs can come in sufficient numbers only from a thriving manufacturing sector.

This shouldn't be a partisan issue. As a former Indian planning official once put it, across the political spectrum there's a "strong consensus on weak reform." What India needs from its next leader is the drive and ability to build a consensus in New Delhi for stronger, more difficult reforms.

These will have to include changes to land and labor laws, a much more open trading regime, and a host of other reforms that would encourage foreign multinationals to integrate India into their global supply chains. Businesses need better access to power and improved infrastructure. They need to be freed from unnecessary and arbitrarily enforced regulations. Corporate tax rates need to be brought down much closer to Southeast Asian standards.

Equally vital is improving access to capital. Private investment remains subdued, in large part because the state-owned banks that account for 70% of India's banking sector aren't lending. Efforts to recapitalize those banks and improve their management are welcome but insufficient; as long as state banks remain beholden to politicians, they'll never be as efficient at allocating credit as the economy needs. Smaller ones will have to be shut down, sold, or merged into better-run peers. The government also has to increase the scope for private banks to grow in number as well as in size, while taking steps to develop the corporate bond market.

This points to a larger issue: The Indian government has to get out of the business of business. It shouldn't be running failing companies such as Air India Ltd. or dictating prices in agricultural markets. It needs to prune the thickets of regulations that exist largely so bureaucrats can extort bribes.

Instead, more staff and resources need to be dedicated to areas where the government has traditionally shirked its responsibilities—delivering basic services, including health and education, improving the judiciary, and modernizing the military, among others. Leaders must dedicate special attention to increasing women's participation in the labor force.

What India doesn't need should be equally clear. A country this diverse and politically volatile cannot afford the kind of incitement, minority-bashing, and demonizing of legitimate dissent that's become far too prevalent under the BJP. India's enemies aren't Muslims or multinationals or Pakistanis or leftist academics. They are, and have been for far too long, poverty and joblessness and inequality and state neglect. Indians deserve a leader who'll remember that. B

Mental Health

BUSINESS

Federal law requires insurers to cover **mental health** and addiction treatment at the **same level** they cover medical and surgical care

DENIED

◀ DeeDee Tillitt and her son Max, who died of a drug overdose 10 weeks after leaving a treatment center when his insurer declined to cover a longer stay

FROM LEFT: COURTESY DEEDEE TILLITT. PHOTOGRAPH BY CHRISTOPHER LEAMAN FOR BLOOMBERG BUSINESSWEEK

Edited by Eric Gelman

The U.S. is in the midst of a mental health crisis. In 2017, 47,000 Americans died by suicide and 70,000 from drug overdoses. And 17.3 million adults suffered at least one major depressive episode. The Mental Health Parity and Addiction Equity Act, a landmark law passed more than a decade ago, requires insurers to provide comparable coverage for mental health and medical treatments. Even so, insurers are denying claims, limiting coverage, and finding other ways to avoid complying with the law.

Americans are taking to the courts to address what they see as an intrinsic unfairness. DeeDee Tillitt joined one lawsuit in 2016, months after she lost her son Max. He'd been an inpatient for three weeks at a treatment center to recover from a heroin addiction and seemed to be making progress. His addiction specialist wanted him to stay. United Behavioral Health, a unit of UnitedHealth Group, the nation's largest insurer, declined to cover a longer stay for Max. Reluctantly, his family brought him home. Ten weeks later, Max was dead of an overdose. He was 21.

Tillitt soon discovered that Max's death wasn't an isolated tragedy. Across the country, people who need mental health and addiction treatment encounter roadblocks to care that could save their lives. United Behavioral Health was already the target of a class action alleging that it improperly denied coverage for such treatment. UnitedHealth's headquarters is in the Minneapolis suburbs, not far from where Tillitt lived. She says she spent hours on the phone getting passed from one rep to another in her quest to find Max care the insurer would cover. "I felt like, God, could I just drive down to the lobby and scream at them?' " she says.

Tillitt became part of the suit against the company in February 2016. In March of this year, a judge found United Behavioral Health liable for breaching fiduciary duty and denying benefits, saying the insurer considered its bottom line "as much or more" than the well-being of its members in developing coverage guidelines. United Behavioral Health says it's changed its guidelines and that "our policies have and will continue to meet all regulations." In May the company asked the court to decertify the class, which would mean only the named plaintiffs would be eligible for remedies.

Failures of the mental health system contributed to trends that have lowered U.S. life expectancy over the past three years. From 2008, when Congress passed the parity act, to 2016, the rate at which Americans died by suicide increased 16%. The rate of fatal overdoses jumped 66% in the same period. "The health insurers are not following the federal law requiring parity in the reimbursement for mental health and addiction," President Trump's commission on the opioid crisis wrote in its report in November 2017. "They must be held responsible."

● The number of Americans who died from drug overdoses in 2017

70k

● The Lawmaker

Patrick Kennedy, a former Rhode Island congressman, was the force behind the parity law. In the early hours of May 4, 2006, he crashed his car on Capitol Hill. In a press conference the next day, Kennedy disclosed lifelong trouble with depression and addiction and announced he was going to rehab.

▲ Kennedy helped push the parity act through Congress in 2008, two years after pleading guilty to a DUI

Two years later he helped push through legislation to strengthen access to mental health care.

The law was problematic from the start. Passed in the midst of the 2008 financial crisis, the parity act was tacked onto the emergency bill that bailed out the U.S.'s failing banks. "We didn't pass the mental health parity legislation because there was this big public outcry, because we had this great march on the mall and we had 100,000 people show up," Kennedy says. "The good news is that we got it passed. The bad news is no one knew that we got it passed because the underlying bill was secondary to the fact that we were facing a potential Great ▶

◀ Depression." Kennedy now works on several initiatives to improve compliance with the law.

In 2010 the Affordable Care Act became law, mandating that commercial health insurance plans offer mental health benefits. Combined with the parity act, federal law appeared to guarantee that Americans would have access to mental health services like never before. And there are signs the laws have helped. A federal report published in February 2019 concluded that the law increased the use of outpatient addiction treatment services and, for those already getting mental health care, the frequency of their visits.

● Ghost Networks

Insurers fought the requirements from the start. The industry formed a group called the Coalition for Parity that sued to block the regulations to implement the law, saying they would be unduly burdensome. A judge dismissed the challenge.

In the years since, health insurance companies have eliminated many of the explicit policies that violate the law. Benefit plans can no longer set higher out-of-pocket limits on mental health care than on medical care, for example. But patients and their families say insurers use more subtle methods to stint on treatment. Their directories of providers are padded with clinicians who don't take new patients or are no longer in an insurer's coverage network. They request piles of paperwork before approving treatment. They pay mental health clinicians less than other medical professionals for similar services.

Patients frequently complain of "ghost networks"—insurance directories full of clinicians listed as in-network who aren't contracted with the plan. Brian Dixon, a Fort Worth child psychiatrist, no longer accepts insurance. But Blue Cross and Blue Shield of Texas' directory indicates he's still part of the network. He says he regularly has to tell patients who call his office that he won't take their coverage. "It'll look like they have all these psychiatrists," Dixon says of the network, "but they actually don't." The insurer says it updates its directory based on information received from physicians.

Some practitioners who want to join networks are turned away. Melissa Davies, a psychologist in Defiance County, Ohio, was part of Anthem's network for years when she worked in a larger medical group. But the insurer refused to contract with her after she started a solo practice in 2012, saying the area was saturated, even though Davies is one of only three psychologists in the county. When Davies examined Anthem's directory, "I found a great number of their providers were no longer practicing, or were dead," she says. Anthem says it works to ensure its network can meet members' needs and is dedicated to adding behavioral health providers.

▲ Bendat's legal practice is dedicated to fighting claims denials for mental health care

It all adds up to a wall between people and the help they need, the kind of barrier that would never be tolerated if the illness were diabetes or leukemia. "You have parity coverage on paper," says Angela Kimball, acting chief executive officer of the National Alliance on Mental Illness. "But if you can't find an in-network provider in your coverage, it can become meaningless for you if you can't afford care or find it."

"I found a great number of their providers were no longer practicing, or were dead"

● The Advocate

People like Meiram Bendat are trying to hold insurers accountable where government authorities haven't. Bendat, an attorney who originally specialized in child welfare law, decided in the early 2000s to change tack and pursue a doctorate in psychoanalytic science and a master's in clinical psychology. He started seeing patients a few years before the parity law passed. It didn't take long for him to recognize that insurers were denying coverage for patients with persistent mental health conditions and they might not be in compliance with the parity law.

PHOTOGRAPH BY YE RIN MOK FOR BLOOMBERG BUSINESSWEEK

Bendat returned to the legal profession and opened his practice, Psych-Appeal, in Los Angeles. It's dedicated solely to fighting denials of mental health coverage. Because his office is "inundated" with calls, he says, he tries to build class action suits. Bendat was one of the lead attorneys in the case against United Behavioral Health in which Tillitt participated.

Still, winning legal cases does only so much to change industry practices. The United Behavioral Health suit, for example, won't result in punitive damages for the insurer, because it was brought under a labor law, ERISA, which doesn't allow them. "Basically, there's an incentive for managed-care companies to do the wrong thing, because they know that at the end of the day they don't stand to be punished monetarily," Bendat says.

A 2017 report from Milliman Inc., a consulting firm, found that patients were going out-of-network for behavioral health care significantly more often than for medical and surgical care, which typically means they're paying more. It also found behavioral health providers got lower reimbursements than medical providers—primary care medical doctors made 20% more for a basic office visit, for example, than psychiatrists did.

Higher reimbursements would lead to better access for patients, says Sam Salganik, executive director of the Rhode Island Parent Information Network, which fields parity complaints on behalf of the state. Because patients can't find providers who take their insurance, many believe they must pay privately for mental health care. That would be unacceptable if that were the case with other health-care services, Salganik says. "Consumers on average are reluctant to go to an out-of-network cardiologist," he says, "and I think that's largely because there's a robust network of in-network cardiologists."

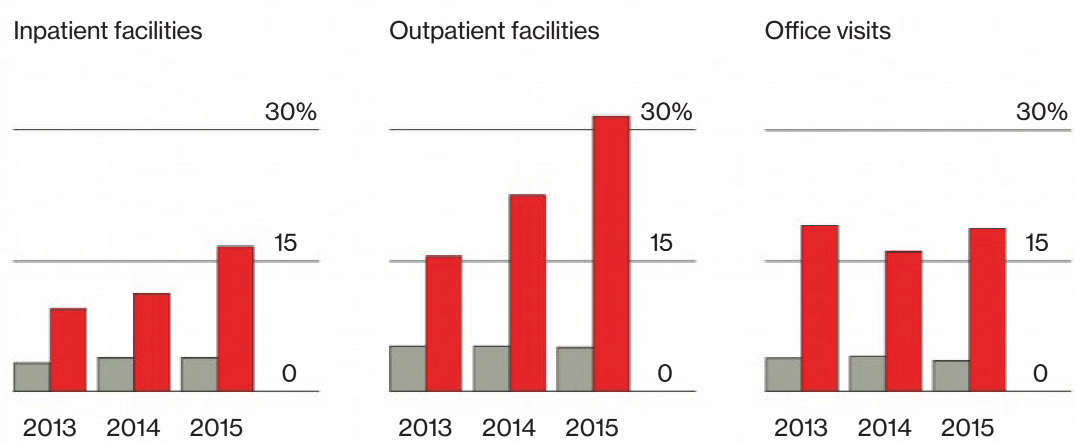
Kate Berry, senior vice president of clinical affairs at America's Health Insurance Plans, a trade group, says a shortage of mental health clinicians and lack of reliable ways to measure quality contribute to the problem. "Our members work very hard day in and day out to ensure there is parity between mental health care and physical health care," she says.

Absent Enforcers

How can insurers continue to violate the letter and spirit of the law? Partly because the parity act sets ambiguous standards, advocates say, and doesn't have teeth. The federal rules don't say how to measure whether a health plan's network of mental health providers is sufficient, for example, so ▶

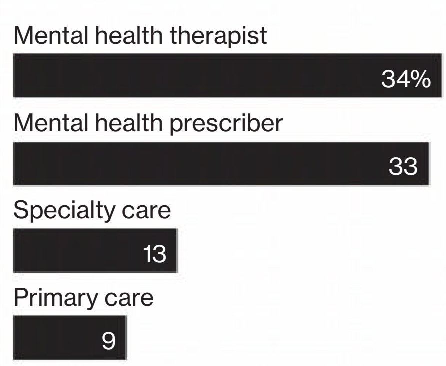
Out of Network, Out of Reach

People seeking treatment for **behavioral health problems** are far more likely to see clinicians who aren't in their insurance network than people seeking **medical treatment**, according to research by Milliman.

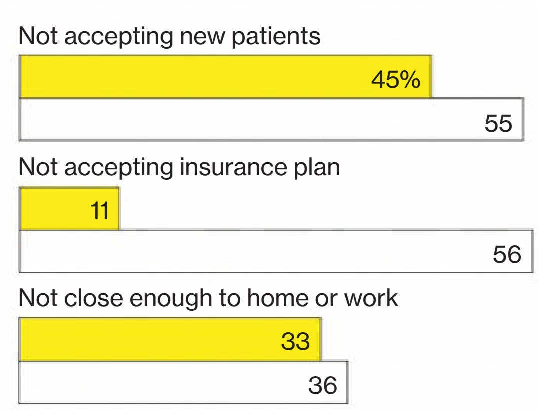


DATA: MILLIMAN

Percentage reporting difficulties finding a specific type of provider who **accepts their insurance**

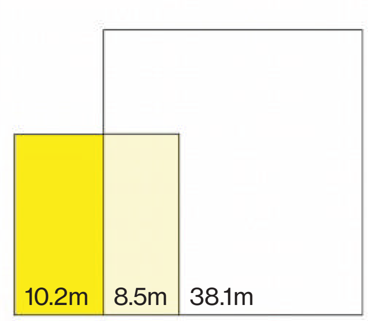


Barriers to finding a mental health provider encountered by people seeking **therapists** or **psychiatrists**

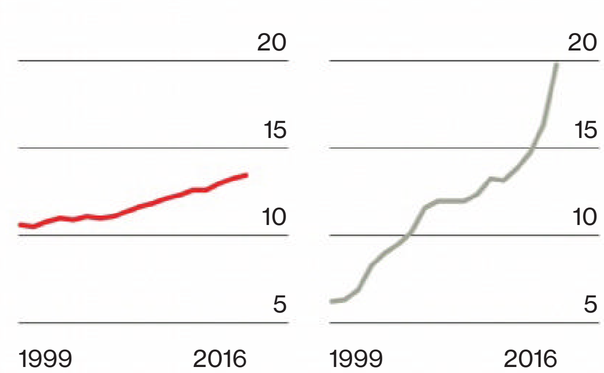


DATA: NATIONAL ALLIANCE ON MENTAL ILLNESS

Adults with **mental health conditions** and **substance abuse conditions** in 2017



Deaths per 100,000 people resulting from **suicide** and **drug overdose**



DATA: U.S. GOVERNMENT ACCOUNTABILITY OFFICE, CENTERS FOR DISEASE CONTROL AND PREVENTION

◀ insurers have discretion over what they deem is an adequate network.

More important, there's no one agency or office responsible for enforcing the rules. The relevant authority may be the U.S. Department of Labor, or the U.S. Department of Health and Human Services, or a state insurance regulator, depending on the health plan. "It's hard to define who owns this problem when there's so many different entities and people responsible for enforcement," says Lindsey Vuolo, associate director of health law and policy at the nonprofit Center on Addiction.

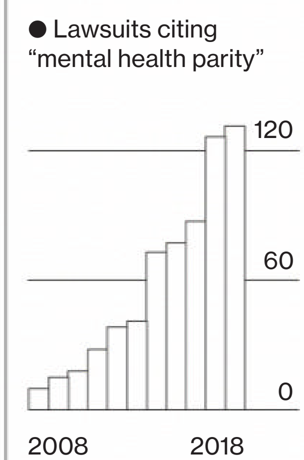
The Labor Department oversees health plans sponsored by employers, which cover 156 million people. But it's authorized to act only against specific plans sponsored by particular employers, not against a health insurer that may provide similar benefit plans for hundreds or thousands of companies. Secretary of Labor Alex Acosta told the opioid commission that "he needs the ability to fine violators and to individually investigate insurers, not just employers," according to the commission's report. When the department does punish companies for violating the parity law, it doesn't publicly disclose which companies or insurers aren't providing adequate coverage. The department didn't respond to requests for comment.

At the state level, enforcement varies widely, and rarely leads to large financial penalties. In California, with relatively active regulators, the biggest fine over access to mental health care was a $4 million penalty for Kaiser Permanente in 2013. A Kaiser spokesman said the citations didn't constitute parity violations and the plan wasn't limiting mental health visits inappropriately.

Aetna, now a unit of CVS Health Corp., settled with the Massachusetts attorney general in December over allegations of inaccurate network directories and agreed to improve information for consumers. An Aetna spokesman says the company had already fixed one of the issues raised by the attorney general and is moving to "give our members better access to the correct contact information" of in-network clinicians.

In 2015, New York's attorney general settled with Beacon Health Options over allegations of wrongful denials of mental health and substance abuse claims. The company neither admitted nor denied wrongdoing. A spokeswoman says Beacon relies on evidence-based criteria to determine coverage "regardless of cost."

Insurance regulators in Florida, Indiana, and Nevada haven't taken any enforcement actions against insurers over federal parity laws, according to spokespeople.



● The Determined Patient

Courtney Bergan first entered the mental health system when she was in high school after her primary care physician discovered she was cutting herself. She's been through an array of institutions, from a wilderness high school to psychiatric wards and specialist rehab in the quest to find adequate treatment for issues including complex trauma, an eating disorder, and suicidal thoughts.

Bergan studied neuroscience, behavior, and biostatistics in college and landed a job at Massachusetts General Hospital doing neuroimaging research for chronic pain disorders. Her insurance was sufficient to cover therapists and hospital stays as needed. She moved to Baltimore in January, in part because she learned that Maryland had better treatment options for her and in part to pursue a dual degree in social work and law at the University of Maryland.

As a student she was eligible to enroll in an insurance plan run by CareFirst. In preparation for the move, she started calling mental health providers. She contacted more than 50, both in and out of the CareFirst network, before finding one who would agree to see her–and to apply for what's known as a "single-case agreement" to cover

Obstacles to Care

The parity law bars insurers from imposing limits on mental health treatment that don't also apply to medical care. Here are some examples of restrictions some patients encounter.

Prior authorization
Requiring patients to seek approval before getting mental health treatment

Fail-first
Demanding that patients attempt a less intensive form of treatment, such as outpatient detox, before approving more-expensive care

Probability of improvement
Requiring residential treatment facilities to show that patients are getting better—which means patients who are stabilized but not improving can be denied further coverage

Written treatment plans
Asking mental health clinicians to draft, submit, and regularly review treatment plans for each patient

Patient noncompliance rules
Denying coverage to a person recovering from addiction who relapses or doesn't comply with the treatment plan

Geographical limitations
Restricting out-of-state behavioral health treatment

DATA: U.S. DEPARTMENT OF LABOR

PHOTOGRAPH BY CHRISTOPHER LEAMAN FOR BLOOMBERG BUSINESSWEEK. DATA: BLOOMBERG LAW RESEARCH

◀ Bergan struggled to find a provider who would see her at rates she could afford

her out-of-network at in-network rates. CareFirst denied the single-case agreement the same day Bergan's provider requested it.

Under a Maryland network adequacy law that went into effect at the start of the year, if an insurer can't offer a patient a provider within 10 days and within 10 miles of his or her home in an urban area, it's required to cover an out-of-network provider at an in-network price—but the provider can bill the patient for the difference. In Bergan's case, that meant she was going to have to pay $92 a session out-of-pocket, and she needed to be seen twice a week.

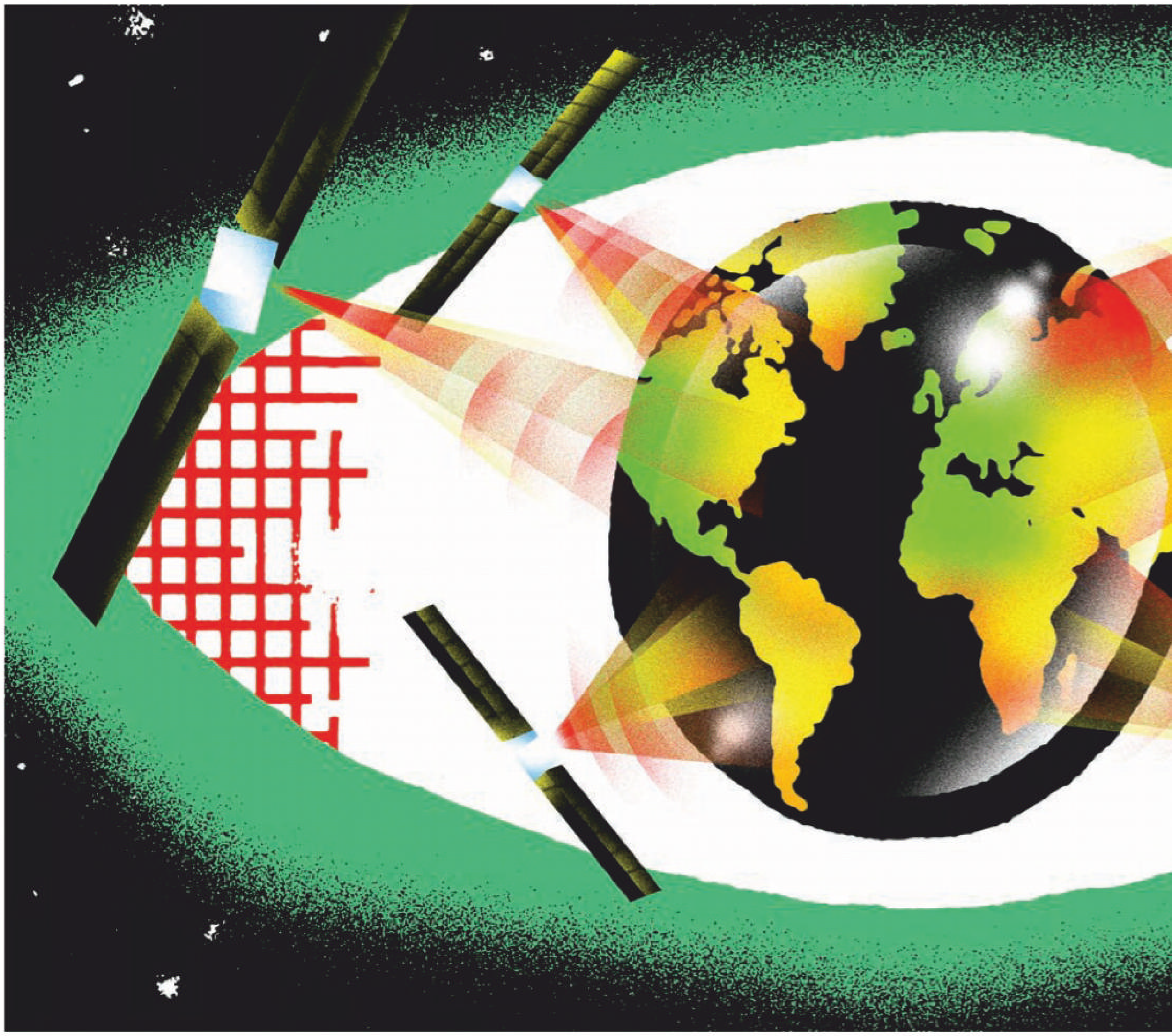
That was still more than she could afford. She reached out to the Mental Health Association of Maryland, which asked her if she'd be willing to testify at a state senate hearing on legislation to lower the out-of-pocket burden for patients like herself. She said she was. The day after her appearance at the state capitol, she was notified that CareFirst had approved her single-case agreement, under which she'll pay $25 a session, for three months. It's just been renewed for six months. CareFirst doesn't dispute her account, but says her testimony didn't influence its decision.

"I'm so tired of staying silent about this stuff and not speaking out because of the stigma that exists around mental illness," Bergan says. "At every point on the way, I've done what my providers have told me to do, I've followed through on treatments, I've sacrificed. When I go to file my taxes, I realize that 50% of my income is spent on medical expenses. I haven't taken a vacation in my adult life because all of my income is going to my treatment. I shouldn't be ashamed of that. I'm doing what I'm supposed to be doing. It needs to change." —*Cynthia Koons and John Tozzi*

"I'm so tired of staying silent about this stuff and not speaking out because of the stigma that exists around mental illness"

THE BOTTOM LINE Amid a growing mental health crisis in the U.S., people seeking care often find that insurers put up obstacles to coverage they're required by law to provide.

● If you or someone you know is having suicidal thoughts, the National Suicide Prevention Lifeline is: **800 273-8255**



Interrogating the

● Orbital Insight's software can measure economic activity from crop yields to oil use

Google's long-running quest has been "to organize the world's information and make it universally accessible and useful." This corporate mantra focuses, for the most part, on arranging and analyzing data produced by humans, be it websites, books, calendar appointments, or the location of businesses around a city. But what if instead of gathering the world's information from the ground up, you could begin organizing all of that data from above by looking down at Planet Earth itself? This has been the mission of Orbital Insight.

Founded in 2013, Orbital pulls in images snapped by satellites and uses them to watch and analyze human activity. It can monitor the number of cars in Walmart parking lots across the U.S. to see how busy the back-to-school shopping season is, the number of new homes going up in Houston, the amount of oil in China's storage tanks, or the production activity at Tesla's auto factory. Traditional economic data also measure these types of things, but Orbital says its images are more accurate indicators of what's happening on Earth. "What we are selling is truths about the world," says James Crawford, its founder and chief executive officer.

Edited by
Dimitra Kessenides

ILLUSTRATION BY DANIEL ZENDER

Planet

To pull useful information out of thousands upon thousands of images, Orbital built a complex software system infused with artificial intelligence. It's spent years holding the hands of hedge funds, government agencies, and other customers to teach them how the software works and how to customize analysis, acting almost like a consultant. On May 15 the company released Orbital Go, a product it's billing as more of a self-service application that lets customers hunt for fresh insights on their own. It's part of a mission to make the technology widely available to businesses, governments, and other organizations, allowing anyone to interrogate the planet.

Crawford, 56, is tall and thin and carries himself with a self-confidence that makes it seem he was predestined to bring this technology to market. His career began in the 1990s at Bell Labs, where he worked on artificial intelligence systems—back when it was anything but cool to do so. From there he moved between business software companies, did a tour at NASA adding AI to the Mars rovers, then ran the Google Books project.

As he bounced around Silicon Valley, Crawford began to catch wind of a revolution in the aerospace world. A couple of startups, SkyBox and Planet Labs Inc., were making tiny satellites designed to surround the Earth and photograph every square inch of it, every day. Crawford quickly recognized there would be an opportunity for a startup to buy access to these images, combine them with free government image sets, and do something useful with all of it.

To test whether its technology could work, Orbital set out to predict the corn yield of U.S. farms. The company relied on public data to determine the location of the farms and got pictures matching those locations, which it used to gauge the health of crops—some satellite images are detailed enough to show their condition. When the actual yields came in as forecast, Orbital knew its technology was working and moved to Wall Street. The hedge funds wanted counts of cars in retailer parking lots and a measure of how much oil sat in tanks around the world.

In the case of the cars, Orbital had to look at four years of data for about 250,000 parking lots to find useful correlations between the number of shoppers and sales. To do this, it trained a computer-vision algorithm to spot cars and tabulate their activity. "We kept iterating and then started to see patterns," Crawford says. "You could see Black Friday, Christmas, back to school."

As is the case with many modern AI projects, humans must train their computer-based overlords. Orbital, which has about 130 employees, has spent years recruiting and teaching some 50 contract workers to look at images, tag useful things in the pictures, and feed those observations into a computer. These people will, for example, look at pictures of Houston and label images of freshly poured home foundations, halfway-finished houses, and newly built ones. Eventually the computers learn to do this on their own. Where it used to take months to refine a data set, Orbital can now create one in a few weeks, which has enabled it to count more and more things.

In the past, customers looking to create a data set would work individually with Orbital on custom coding to get things to work. With Orbital Go, ▶

"What we are selling is truths about the world"

◀ they can tap into the startup's data feeds with a few clicks of a mouse. Someone can, for example, select what to analyze—vehicles, ships, residential housing, planes, land use, infrastructure changes, foot traffic—and then specify the period they want to examine. Next they can pick from an existing database of places—countries, states, cities, ports, even specific stores—or create their own area of interest by drawing on Google Maps. For example, a customer could analyze the auto and foot traffic at all of Brooklyn's gas stations over a year to find out where to put a new station.

The foot traffic information is derived from anonymized location data Orbital pulls from services that track smartphone use and then pairs with satellite images to estimate how many people work in a factory and how much stuff each worker produces. Orbital's quest is to build a mathematical model of how the global economy operates. "It often sounds like the sage people in the world actually understand it," Crawford says. "But there is an awful lot of mystery."

Jeff Meyers, CEO of Hanley Wood, has spent the last year working with Orbital to refine data on the U.S. housing market. His company sells information detailing the state of millions of construction projects and, historically, much of that data has been gathered slowly by people on the ground. The satellite images, by contrast, provide a weekly—and sometimes daily—look at the market. "It gives us clarity that has never been available before," Meyers says. "If this system had been in place in 2008, you would have known there was an abundance of inventory very quickly." He expects Go will coax more customers to give the technology a try.

To date, Orbital has raised more than $80 million from Sequoia Capital, Lux Capital, and other investors. (Bloomberg Beta, the venture capital arm of Bloomberg LP, is an investor in Orbital. Bloomberg also offers Orbital data via the Bloomberg Terminal and the Bloomberg Enterprise Access Point.) Crawford declines to provide a revenue figure but says sales are doubling every year. The company's major issues have been making businesses aware that this type of data even exists and finding customers interested in more than a one-off job. "You may find valuable insights that people will pay for, but it's challenging to repeat that success," says Tim Farrar, a satellite and aerospace consultant at TMF Associates Inc. "I don't think we know how big this market is yet." —*Ashlee Vance*

THE BOTTOM LINE Orbital Insight is pulling useful information out of thousands of satellite images in a quest to build a mathematical model of how the global economy operates.

Electric Cars Are Quiet. Too Quiet

● Nissan has worked with composers at Man Made Music to change that

By their nature, electric vehicles are quiet—and that's a problem. If pedestrians, especially the visually impaired, can't hear a car approaching, they don't know to step out of its way. New federal safety regulations requiring all 2020 EV and hybrid models to make noise while driving at slow speeds should address the issue. But what should they sound like?

Nissan Motor Co., maker of the world's best-selling EV, the Leaf, has been working on an answer. Its artificial-engine vroom, designed with New York studio Man Made Music, not only meets the National Highway Traffic Safety Administration's stringent requirements for volume and frequency but also doesn't create more noxious noise. "We wanted to make sure that we weren't adding to what I call sonic trash—unnecessary, unwarranted sound," says Man Made founder Joel Beckerman, whose compositions include the themes for the *CBS Evening News* and Imax's countdown video.

There isn't a lot of guidance for what the sound should be. The federal standard, finalized in April 2018, requires new EVs to emit an audible sound when traveling at less than 18.6 mph. (Traveling faster than that, a car produces enough tire-on-road noise to let people know it's coming.) "If you want to exactly match the regulation, you just project white noise across the whole frequency spectrum," says Nicholas Thomas, Nissan's EV director, referring to the minimum volume, from 49 decibels when a car is idle to 66 decibels when it's moving at 18.6 mph. "That was clearly not something we wanted to do, because that wasn't going to make the world a more pleasant place." According to BloombergNEF researchers, 55% of all new car sales could be electric by 2040, so EVs will transform the din of cities in the future.

Arriving at Nissan's distinctive whir was a nine-month design process starting with a branding exercise to pinpoint the Japanese automaker's "core values," which Thomas describes as optimism, confidence, and warmth. "We picked up a few pens and started to sketch out what we wanted, and more specifically what we didn't ▶

● The subconscious emotional appeal of a range of sounds, according to the Sonic Humanism Spectrum

▼ Least appealing
- Scream of pain
- Nails on a chalkboard
- Microwave beeping
- Credit card reader
- Potato chip bag opening
- Squeaky brakes
- Orchestra tuning (off key)
- Rain
- Wind chimes
- Orchestra tuning (in key)
- Applause
- Birdsong
- Baby laugh

▲ Most appealing

DATA: MAN MADE MUSIC

For more on the future of transportation, go to Bloomberg.com /hyperdrive

JESSICA ROBINSON

Executive Director, Michigan Mobility Institute

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◀ want," he says. "We didn't want to forcibly create a sound of a petrol engine." In addition, the team wanted something futuristic, but not like a toy spaceship.

Nissan ultimately settled on a two-second loop of carefully layered guitar plucks, wind instruments, and some synthesized tones, which Man Made Music mixed together using two popular software programs, Ableton Live and Max MSP. "The use of all these elements stacked together allowed us to craft sound in the overtone series–the higher pitches–which produces a very unique vocal-like quality that Nissan owns," Beckerman says. The higher pitches are nearly imperceptible to the ear, but "they affect the color of the note. It becomes part of their product and brand."

Called Canto (Latin for "I sing"), the Leaf sound is projected from speakers in the car's bumper to signal to pedestrians whether the vehicle is accelerating, decelerating, or moving at a constant speed. (The pitch rises 1% with each additional kilometer per hour.)

According to Man Made and its research partner, consulting firm Sentient Decision Science, acoustics can have a huge impact on how a brand is perceived–if a listener likes the sound associated with an experience, she's 86% more likely to want to repeat the experience. Man Made and Sentient have mapped commonly heard manmade and naturally occurring sounds along what they call the Sonic Humanism Spectrum. At the negative end is the pain scream, followed by the piercing weather alert your phone emits and nails on a chalkboard. The most positively received is baby laughter, followed by birdsong and applause.

Nissan declines to say when it expects Canto to make its street debut. Arriving at the unique sonic recipe took only a few weeks of iterations and prototypes, making sound design a relatively inexpensive way to establish a brand's identity, Beckerman says. Whereas visual branding, hardware and software design, and retail architecture can cost millions of dollars "to make a real difference," he says, "the cost of an audio branding project starts at $40,000." That's a tiny fraction of the cost of other design efforts that affect experience, design, or safety. —*Belinda Lanks*

THE BOTTOM LINE Audio design could prove to be a powerful way to brand EVs such as the Nissan Leaf; it also promises to change the soundscape of cities.

South Korea ♥ Robots

● 5G networks will let robots play a larger role in elder care, medicine, and logistics

In South Korea, the country with the world's fastest internet speeds, the transition to 5G networks is also leading to an era of interactive robots. South Korea switched on 5G networks nationwide in April, with data speeds of about 1.5 gigabits per second. Businesses are counting on 5G to deliver artificial-intelligence-based robots, 3D content, and holograms that they say will someday be a part of people's daily lives.

The higher speeds will enable companies including automakers and wireless carriers to connect devices with vehicles, home appliances, and buildings. And because the country also boasts the world's highest robot density, some of these same companies, such as Hyundai, LG, and Samsung, are trying to develop bots that will provide some fixes for problems like a rapidly aging population and rising labor costs.

The global market for service robots is projected to expand to $20.2 billion by 2021, from $8.6 billion in 2017, according to the Frankfurt-based International Federation of Robotics. South Korea's government recently announced that it expects its robot industry to grow to 15 trillion won ($12.6 billion) by 2023, from 5.7 trillion won in 2018. On March 21 it said supporting that industry is a key national goal.

Some of the growth will come from the use of robots in elder care, medicine, and logistics, as well as in entertainment and other service industries. The challenge isn't simply to build the bots, though; companies are now largely focused on communication and on enabling interactive relationships between humans and machines. "Having empathy is useful for efficient and natural communications when robots interact with humans," says Dennis Hong, an aerospace and engineering professor at the University of California at Los Angeles and founding director of robot lab RoMeLa (the name stands for

◀ You won't have to pay your robo-sitter, but it will need extra bandwidth

Robotics and Mechanisms Laboratory). "It's much easier to receive information and sense emotions," he says. Hong has worked with Korean companies to develop his native country's service robotics industry, including a project with Hyundai Motor Co. on cars for people with visual impairments.

Hyundai Mobis Co., a South Korean parts and service company, is building a car assistant that can drive the vehicle and will interact with passengers, telling jokes or expressing sympathy if a rider shares details of a rough day. The "driving mate," as the company calls it, uses a natural voice recognition system. Mobis is aiming to supply these features to Hyundai Motor, Kia Motors, and other global automakers over the next few years. The assistant will be visible to passengers via 3D avatars on a front dashboard display or windshield.

Mobis says communication will go beyond routine yes/no questions and answers. "Your car is not a machine that is simply reacting when you press buttons or push pedals," says Carsten Weiss, vice president and head of IVI (in-vehicle infotainment) at Mobis's System Development Center. "It will have a personality, it will have the ability to solve tasks by itself, and it will connect to your personality." The faster networks will be used so the robots can identify drivers' emotions through voice and facial recognition software. For example, if the AI-based system detects the driver dozing off, it will guide the vehicle to the nearest convenience store or turn up the volume on the music.

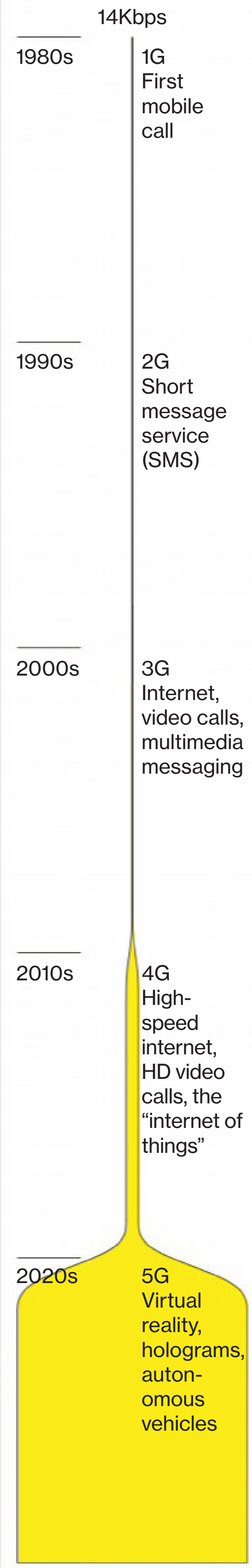
South Korean mobile phone carriers are designing AI-powered speakers that can communicate with users, with bots appearing as holograms. Technology giants LG Electronics Inc. and Samsung Electronics Co. have started touting their own personal-assistant robots: They can serve as shopping assistants or manage the health of an elderly person at home.

There's some skepticism that such sci-fi technology will be available in the early years of 5G adoption. Companies need to further develop the technology of their high-quality LCD panels and introduce more advanced computing power to accommodate the holograms. Deep learning and machine learning technology is expected to keep evolving, says Kim Seung-cheol, a principal research engineer at telecommunications company KT Corp. "People want to experience the same thing through displays that they feel in the real world," says Kim, who's developing a hologram that could have various uses. "It's a matter of how far and fast the technology can catch up."

Still, for many companies, 5G is a tipping point. SK Telecom Co. is making an AI speaker that will project holograms of K-pop stars and other celebrities. The technology is being developed for use in concerts and other performances. "AI would become like friends that could be accessible anywhere and anytime," says Cho Ikhwan, a leader of the augmented-reality and virtual-reality development team at SK Telecom. "It's a totally new experience to feel AI robots come alive." —*Sohee Kim*

THE BOTTOM LINE South Korea's robot industry is expected to grow to $12.6 billion by 2023; supporting the industry is a key goal of the national government.

● Maximum mobile network bandwidths



GETTY IMAGES. DATA: SK TELECOM, DELOITTE

3 FINANCE

About That IP

● Maybe Uber Technologies waited a little too long to go public

Edited by Pat Regnier

Uber Technologies Inc.'s stock market debut on May 10 was the biggest, most eagerly anticipated U.S. initial public offering in years. The ride-hailing company raised $8.1 billion through the share sale and at the moment of going public was valued at more than $75 billion. After years of watching from the sidelines as Uber grew, ordinary investors finally had a chance to buy in.

Just not at the price Uber and its bankers thought it was worth. On the stock's first days of trading, it fell as much as 19% before narrowing the loss to about 8% as of May 15. Now, across Wall Street, questions are flying. When they were vying to lead the IPO last year, banks including Morgan Stanley had privately told Uber that it could be worth as much as $120 billion. Why did they set expectations so high? When it came time to finally determine the IPO's price, was the syndicate led by Morgan Stanley too aggressive? And did it steer too much stock to big investors that made hollow pledges to hold it for the long term?

"In retrospect, the underwriters should have done a better job at figuring how strong the true demand was," says Jay Ritter, a professor at the University of Florida's Warrington College of Business who specializes in IPOs. "But underwriters in general have a hard time finding out how much buy-and-hold demand there is, vs. flippers."

For long-term investors, a few days of trading won't matter if Uber grows from there. But when companies go public, they and their bankers generally hope to see the stock pop. Although that would mean the company left a little money on the table when it sold the shares, it shows investors are excited about its prospects. It's also good news for investors who got to buy at the IPO price. But with Uber at about $41 a share, none of those who bought at $45 will feel like they got a deal.

The debate over how well Morgan Stanley and other banks handled the marquee offering is complicated by a lot of bad luck, including an abrupt flareup in U.S.-China trade negotiations that drove markets down around the globe, as well as the dismal performance lately of Uber's rival, Lyft Inc. There's also a broad, gnawing concern about Silicon Valley's penchant for delaying public listings until startups are already multibillion-dollar companies.

In recent years, the line between public and private has blurred. Long before a company is listed on an exchange, it may already have raised a lot of money selling private shares to investors including hedge funds, mutual funds, and the family offices of rich individuals. Many top-tier investors owned shares of Uber before the IPO, potentially curbing demand. ▶

● Change in share price since IPO through May 14 of notable 2019 offerings

Bar width indicates amount raised in offering

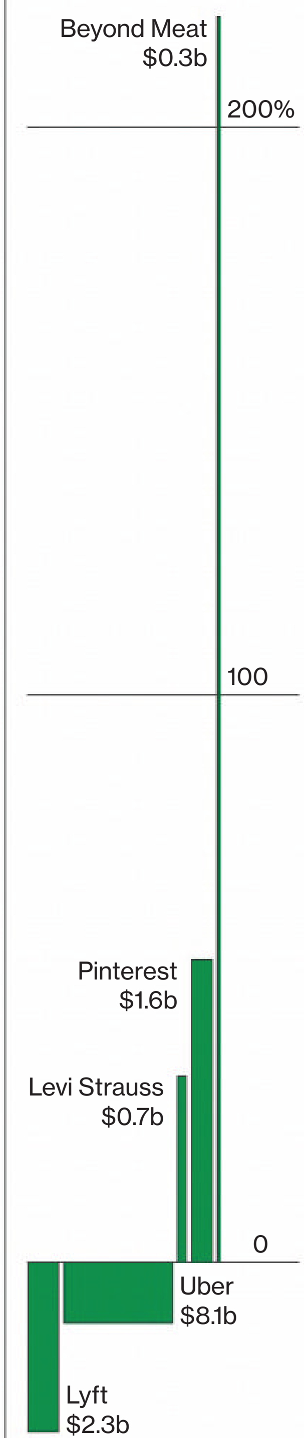


PHOTO: SHUTTERSTOCK. DATA COMPILED BY BLOOMBERG

◀ Still, people with knowledge of the situation have said the order book for Uber was at least three times oversubscribed. Morgan Stanley, which is slated to get about $41 million in fees from the deal, led the offering with Goldman Sachs Group Inc. and Bank of America Corp., which are sharing a total of about $32 million. A spokeswoman for Morgan Stanley declined to comment.

One investor says he grew suspicious days before the pricing because the syndicate of banks kept seeking reassurances that his firm wouldn't quickly sell the stock—that is, flip it. Yet the bankers also kept suggesting there were ample retail investors hoping to buy in after the debut, which could cause the price to rise at least briefly, offering a chance for a quick and easy profit, the investor says. His firm ended up slashing its final order.

Uber, perhaps the player whose opinion matters most, hasn't faulted the bank. In a letter to employees, Chief Executive Officer Dara Khosrowshahi blamed the poor opening on the overall market mood: "Today is another tough day in the market, and I expect the same as it relates to our stock." The early trading trouble may be temporary: Facebook Inc., which Morgan Stanley also handled, initially fell before embarking on a steep climb. Uber looks "kind of like what happened after Facebook," says David Erickson, a finance professor at the University of Pennsylvania's Wharton School. "The balloon got deflated on the first day." —*Eric Newcomer, Sonali Basak, and Sridhar Natarajan*

THE BOTTOM LINE When a company is already owned by many top investors, it may be hard to build excitement for the day it goes on the market.

A Hedge Fund That Shares the Risk

● A veteran investor says money managers should feel the pain of clients' losses

Steve Diggle got rich by trading other people's money. Now he's trying to upend the very business model that made him wealthy.

Once co-head of a $5 billion hedge fund that was among Asia's largest, Diggle quit the industry eight years ago to manage his own money. From the sidelines, he came to recognize that the $3 trillion industry was rigged: Investors were paying exorbitant fees for subpar returns while managers earned huge sums for amassing assets. As he puts it, there simply wasn't any logic to the classic "2 and 20" hedge fund fee model, in which managers traditionally both charged a 2% annual management fee and took a 20% cut of profits.

"We lost our way because rather than performance machines we just became asset gatherers," Diggle says of hedge funds. To tackle the problem, he gathered colleagues to brainstorm at the offices of his Vulpes Investment Management in Singapore, spending six hours scribbling ideas on a whiteboard. Their solution: Share more of the risk.

He began testing the idea three years ago in a new fund, which now has about $15 million in assets. Under the approach Diggle's team developed, Vulpes and the fund's traders bear the brunt of initial annual losses. It works like this: If investors give $1 million to Diggle's Vulpes Kit Trading Fund and it declines up to an annual 2%, the firm absorbs the $20,000 loss. Investors lose nothing.

Such "first-loss" provisions aren't entirely new, but Diggle's added a twist. With deeper declines, investors who prefer low risk, such as pension plans seeking steady returns, shoulder a smaller loss than investors willing to stomach more volatility. To compensate, the high-risk investors take a greater share of profits above 8%. The fund also charges a management fee of 0.75%, low for a hedge fund. It collects a share of profits on a sliding scale—from 15% on the first 10% of gains to 25% after that.

"We lost our way because rather than performance machines we just became asset gatherers"

In recent years, hedge funds haven't produced the kinds of returns they did in their heyday, forcing managers to rethink their business models. Investors have been racing for the exits—since the start of 2016, they've pulled $116.4 billion from hedge funds, the most since the aftermath of the 2008 financial crisis, according to Hedge Fund Research Inc. The fees charged by hedge fund managers have declined, albeit gradually, with the average annual management fee now at 1.4% and the performance fee at 17%. Meanwhile, asset management behemoths including Fidelity, Vanguard, and BlackRock are slashing fees, in some cases to zero or close to it for index-based products. Hedge fund managers who want to charge a premium price have a lot to prove.

Diggle got his start at Lehman Brothers in the 1980s and co-founded a hedge fund firm, Artradis Fund Management, in 2002. His fund made $2.7 billion in the depths of the global financial crisis; then, after losing money for two consecutive years, he closed it. Vulpes is a family office, meaning it invests the wealth of Diggle and some other high-net-worth clients. It's invested in a wide array of assets, from German real estate to avocado farms.

Why aren't more hedge fund managers cutting costs deeply and sharing risk to attract clients? "The challenge is that if the management fees they charge aren't enough to support the cost structure, they'll need to generate alpha consistently," says Victoria Vodolazschi, investments director at consulting firm Willis Towers Watson in New York. Alpha is Wall Street-speak for market-beating performance. If a hedge fund can earn big gains and get a cut of those profits, it can stay in business even with low management fees. Trouble is, "there aren't many managers who can outperform consistently," says Vodolazschi.

Diggle concedes the trading advantage that hedge funds once enjoyed has declined. He's banking on allocating money to traders who can find profits in esoteric areas, such as arbitrage opportunities in Korea. In its first three years, the Vulpes Kit Trading Fund racked up average annual gains of almost 16% for its investors taking the higher-risk, higher-return option. Diggle says he realizes that it's unlikely much of the industry will join him in his experiment, but he hopes his peers take notice. "I believe that we are right about the future of the hedge fund industry and a lot of other people are wrong," he says. "We need experimentation because the status quo is failing."
—Saijel Kishan and Bei Hu

THE BOTTOM LINE Hedge fund managers can stay in business with lower fees as long they earn high enough returns. But that's easier said than done these days.

ETFs Milestone for an O.G.

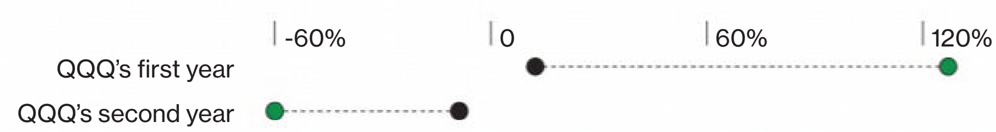
An iconic exchange-traded fund has turned 20. Invesco QQQ, which tracks the Nasdaq 100 index, was created to bolster the brand of the electronic exchange. The Qs, as the fund is sometimes known, quickly became a popular way to trade tech stocks. *—Carolina Wilson*

Tech Heavy From the Start

Top five holdings, March 1999

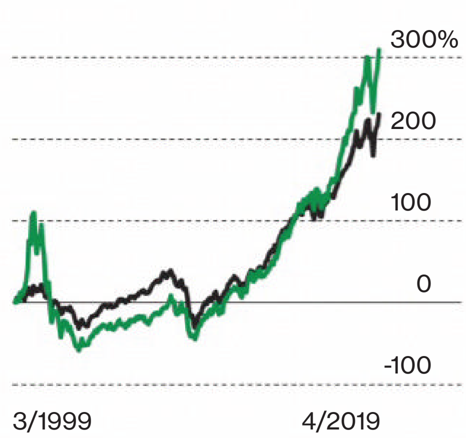
Microsoft	Intel	Cisco	MCI WorldCom	Dell
15.2%	7.7%	6.4%	6.2%	4.4%

The Qs rode the dot-com boom and bust.



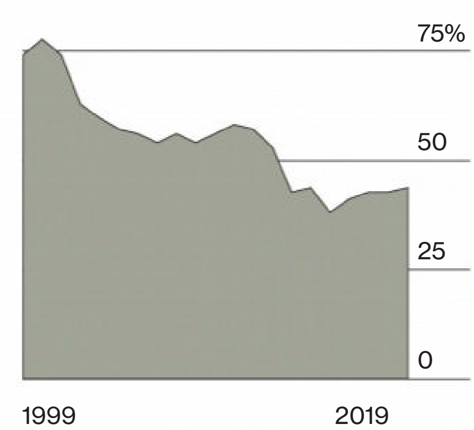
Big Returns

Since the fund's launch, it's beaten the S&P 500. The gap widened in 2017.



Less Tech

QQQ is not as tech-driven as it used to be.



New Names at the Top

The lines of tech have also blurred. Some of the fund's biggest names are still very techy, even if they aren't grouped in the sector

Top five holdings, March 2019

Microsoft	Amazon	Apple	Alphabet	Facebook
Information technology	Consumer discretionary	Information technology	Communications services	Communications services

● For more on QQQ, hear the latest Bloomberg *Trillions* podcast https://bloom.bg/2YD4xvd

*CUMULATIVE RETURN AT MONTH'S END; DATA: BLOOMBERG, INVESCO; ILLUSTRATION BY JACK TAYLOR

Digging Trenches In a Trade War

● Markets had priced in a short skirmish. Now they're bracing for a drawn-out fight

Wall Street's pundit class sprung dutifully into action as the tariff fight between the U.S. and China suddenly escalated this month, dashing off pages upon pages of investment advice peppered with metaphors and anecdotes intended to help clients wrap their heads—and their portfolios—around the new state of play of the global economy.

For three analysts from Jefferies, this meant unleashing the 1970s earworm *Suicide Is Painless* in a note to clients. The theme song for *M*A*S*H*, the movie turned sitcom about wisecracking American doctors in the Korean War, had found its way into the analysts' heads after the *People's Daily* and other Chinese state-run media ran a commentary piece that evoked comparisons to the simultaneous peace talks and battles between U.S. and Chinese-backed forces during that conflict. The unsigned article was headlined, "If You Want to Talk, We Can Talk. If You Want to Fight, We Will Fight."

What type of trade war the U.S. declared on China has been the topic of much debate ever since negotiations to resolve the standoff started in the spring of 2018. Would it be short and with limited casualties like the Falklands War? Or longer and bloodier like the Korean conflict? Stock markets got off to a roaring start this year as a consensus grew that this was a short spat that would be resolved quickly. But that hope has been shredded as tit-for-tat escalation in

ILLUSTRATION BY PETER GAMLEN; DATA: DEPARTMENT OF TREASURY

Edited by Cristina Lindblad

tariffs is causing a massive repricing in equity, bond, currency, and commodity markets.

The current consensus now is... well, there really isn't one. But the idea that this fight could drag on much longer—and start doing more serious damage to global economies and markets—can no longer be dismissed. "We believe that the market is probably underestimating how long this will take to resolve," says Charles Tan, co-chief investment officer of global fixed income at American Century Investment Management Inc.

In this trade war, it's time to consider the possibility that China is digging in. Tan points to an assortment of events this year that could stoke nationalistic pride and harden the country's stance, impeding progress toward an armistice: the centennial of the May 4 Movement, an uprising against Western colonialism; the 70th anniversary of the founding of the Chinese navy; and the 30th anniversary of the Tiananmen Square protests. "It's a very politically sensitive year for them," Tan says. "So you have a lot of significance for China to show political solidarity and to be able to stand up against the Western powers."

The ratcheted-up tariffs have caused economists to take erasers to their forecasts, but so far they're not predicting a recession or other economic doomsday. Most say the latest round of duties and counterlevies will pare 0.1 percentage point to 0.3 percentage point off U.S. growth by 2020. In the event of a full-blown trade war, the International Monetary Fund estimates the hit could be as much as 0.6 percentage point in the U.S. and 1.5 percentage points in China.

The escalation has the potential to either cause higher prices for U.S. consumers or damage profit margins at companies that trade with China—or a combination of the two. The original 10% levies on $200 billion in Chinese imports likely did raise costs for some goods sold in the U.S., but price pressures elsewhere were so mild that it didn't move the needle on inflation indexes.

It's a different story now that the U.S. has increased those tariffs to 25% and is exploring levies of up to 25% on an additional $300 billion worth of goods. "If companies can't pass on those higher costs, then margins are going to get squeezed, and that's going to flow through and put more pressure on the equity market," says Jack McIntyre, portfolio manager at Brandywine Global Investment Management LLC.

Other knock-on effects—such as damage to consumer and business confidence and widespread uncertainty that stymies investment—are harder to quantify. The escalation in hostilities is happening at a time when U.S. growth already was poised to slow from a strong 3.2% reading in the first quarter. That quarter did get a boost from the U.S.-China trade tensions but not in a sustainable way. In the final three months of 2018, producers rushed goods and raw materials into the U.S. and stockpiled supplies in anticipation of higher duties. The effect of bringing forward those purchases was to lower imports in the first quarter, which shrank the trade deficit and boosted gross domestic product. Companies continued to build inventories in the first quarter—but those swollen stockpiles threaten to become a drag on growth, according to economists at Bloomberg Intelligence.

The Institute for Supply Management index of manufacturing activity fell in April to the lowest level of Donald Trump's presidency, while the ISM reading for service industries was the lowest since August 2017. Both gauges are still in growth mode but inching closer to levels that signal economic contraction.

There is also the question of what other bad news may happen. With China running out of imports from the U.S. to match tariffs dollar-for-dollar, speculation abounds about other ways Beijing could push back. Modes of retaliation could include boycotting U.S. products, delaying customs inspections, or increasing regulatory scrutiny of American companies doing business in China.

Two levers in financial markets are also being watched carefully: China's holdings of U.S. government bonds and the daily fixing of its currency. With $1.1 trillion of U.S. Treasuries in its portfolio, China could theoretically cause chaos in financial markets—in the form of higher interest rates—by dumping U.S. government debt at a time when investors are being inundated with auctions of new bonds to finance a deficit swollen by tax cuts.

It's an alarming prospect, but many bond market participants say it would be foolish to attempt because the impact wouldn't be worth the damage to China's ambitions as a global financial powerhouse. Even if a fire sale of Treasuries by China were to cause U.S. borrowing costs to surge initially, the Federal Reserve could cut interest rates and restart its bond-buying program to bring rates back down. And the seemingly limitless global appetite for U.S. debt goes far beyond China—ensuring yields remain close to historic lows despite a borrowing spree that's pushed bond issuance north of $1 trillion annually. "The dumping of U.S. Treasuries is likely well down the list of China's retaliatory measures, that comes after all tariff increases across all goods have been exhausted," Deutsche Bank AG currency strategist Alan Ruskin wrote on May 13. There aren't many other places for China to ▶

● Largest foreign holders of U.S. Treasury securities, as of the end of March

◀ invest its reserves, he said, and an exodus from U.S. securities would "be disruptive for all markets inclusive of China's own reserve assets and even more important its own asset markets."

Devaluing the yuan to make Chinese exports more competitive might be another retaliation option for Beijing, though it also comes with risks. While the yuan has dropped by more than 2% vs. the dollar since Trump launched his latest tariff salvo, currency traders believe China has actively prevented a more pronounced slide for fear of invoking the wrath of Trump, who's frequently accused the country of manipulating its currency.

What's more, devaluation isn't as powerful of a tool as it once was because China's trade surplus has narrowed significantly as a share of GDP in the last decade. And, according to Bloomberg Intelligence economists, close to 20% of the value added in its exports comes from imported parts, which get more expensive as the yuan weakens.

Regardless of whether or how China fights back, investors are gravitating to the idea that there's no guarantee Beijing will blink first. After all, there are less than 18 months until the next U.S. presidential election, and Trump has made a strong economy, a buoyant stock market, and his skill as a dealmaker the pillars of his sales pitch for a second term. "From a tariff standpoint, China gets hurt more than the U.S., but from a time standpoint I think the U.S. is more disadvantaged than China because we have short election cycles," says Brandywine's McIntyre. "China can ride this out."

So will Trump blink instead? Perhaps, but that may not be before investors endure a whole lot more pain. Equities need to drop at least 10% for Trump to talk up prospects of reaching a deal with China when he meets with President Xi Jinping at the Group of 20 meetings at the end of June, according to Raymond James policy analyst Ed Mills.

Similar guesses are being made across Wall Street. Using options market jargon, investors talk about a "Trump put." A put contract allows the holder to sell at a certain price, limiting potential losses. When stocks fall below that price, the put is "in the money." So the theory is that if stocks fall too far too fast, Trump will suddenly strike a deal with China or do something else to juice the market.

Not everyone buys that theory. "I don't think the president has a put," says David Lafferty, chief market strategist at Natixis Investment Managers SA in Boston. "And if he does, it's a pretty far out-of-the-money put." —*Michael P. Regan and Emily Barrett*

THE BOTTOM LINE With Beijing and Washington hardening their positions, investors may have to endure a whole lot more pain before either side caves.

Botswana's Elephants Are a Hot-Button Issue

● The government weighs lifting a hunting ban ahead of elections in October

Proceedings had barely begun at a recent summit in Kasane, Botswana, to discuss its huge elephant population, when a man returning home from an evening out with friends encountered a herd and was trampled to death. His grieving father told a local paper he now hates the animals that gather in the northeastern corner of the country. "I used to like elephants," he said, but "they did a cruel thing to me."

For Botswana, elephants are becoming a dilemma. The government wants to lift a ban on hunting wildlife because the pachyderms are destroying crops and occasionally killing people, arguing that while the nation's savannas may be popular with wealthy foreigners who pay $355 a night for a luxury lodge, trophy hunting would bring in more revenue. An elephant hunt in neighboring countries costs about $45,000.

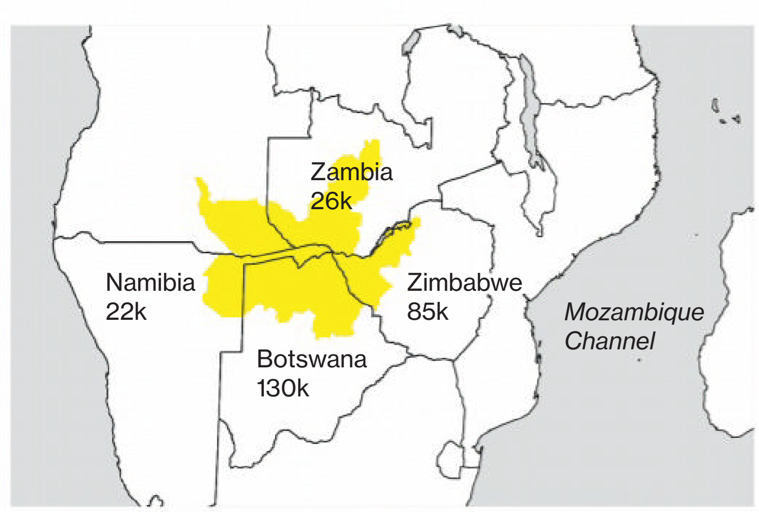
Conservationists fiercely opposed to the idea say Botswana is one of the animal's last safe havens in Africa and believe President Mokgweetsi Masisi's motives are political. Support for his Botswana Democratic Party, in power since independence from the U.K. in 1966, reached a record low of 46% in the last vote in 2014. Lifting the ban would appeal to villagers struggling to keep elephants out

● Masisi

Safe Haven

Elephant populations of select African nations

■ Kavango Zambezi Transfrontier Conservation Area



DATA: UNIVERSITY OF PRETORIA, NAMIBIAN MINISTRY OF ENVIRONMENT AND TOURISM, ZAMBIAN TOURISM MINISTRY, ZIMBABWEAN NATIONAL PARKS AND WILDLIFE AUTHORITY, PEACE PARKS FOUNDATION, NATURAL EARTH

▲ An expedition camp in the Okavango Delta

of their fields and boost Masisi's popularity ahead of general elections in October.

As the debate rages, the size of Botswana's elephant population is its own talking point. Environment Minister Kitso Mokaila put the number at 160,000. A member of Parliament last year said it was close to 230,000, citing government data. Scientists including Rudi van Aarde, emeritus professor of zoology at the University of Pretoria, say the population has been stable for years at about 130,000.

Former President Ian Khama, who still wields enormous influence in the country of 2.3 million, is one of the animal's most ardent champions. A son of Botswana's founding father and a conservationist, he introduced the hunting ban in 2014 and approved a shoot-to-kill policy against poachers. His disapproval of the government's plan has caused an unprecedented rift in the ruling party. Local media accuses him of trying to oust Masisi, his former deputy, and waging a propaganda war to protect a tourism industry that accounts for a fifth of the economy.

Khama says he's simply "extremely disappointed" with the new administration. If Botswana has more elephants than it should, it's because many are "refugees" that have crossed borders from areas where they're hunted and poached. "Our tourism has been really booming in recent years, and the elephant probably stands out above anything that people want to see," he says. "If you're going to start hunting and getting rid of them, you're going to start devaluing that resource."

It isn't hard to see why elephants have polarized Botswana, a dry, landlocked country with little choice but to rely on wildlife and diamonds for income. Its nature reserves aren't fenced, so dangerous animals can roam freely. Humans and elephants compete for water in the only areas where farmers can grow sorghum, millet, and corn.

The government compensates farmers when elephants eat their crops or attack villagers, but people in rural areas say it isn't enough. "The only solution is for elephants to be reduced," says Twaemango Ndoze, a deputy headman of Seronga, a village in the swampy Okavango Delta.

Last year, Masisi's government set up a committee to organize public hearings across the country, but that resulted only in recommendations that—unsurprisingly—support the view there are too many elephants. It also suspended the shoot-to-kill policy and removed military-grade weapons from antipoaching units.

Masisi hosted the presidents of three other southern African nations at the May 3-7 summit in Kasane to try to work out a common policy. The four nations share management of the Kavango Zambezi Transfrontier Conservation Area, a border-straddling, 520,000-square-kilometer (200,773-square-mile) expanse of swamp, savanna, and riverine habitat that's home to about half of the world's elephant population of at least 415,000. "We cannot continue to be spectators while others debate and take decisions," Masisi said at the meeting, complaining about the outcry in Western media whenever reducing numbers is brought up.

Masisi floated culling at the summit as a possible solution. But the suggestion that some meat could be sold as pet food caused a firestorm among animal-rights activists, and the proposal was abandoned. Instead, a technical paper distributed at the meeting favored "cropping," arguing that if communities are allowed to hunt for meat, they may be encouraged to conserve their wildlife.

Conservationists claim that the government is in denial that poaching is on the rise. Mike Chase, director of Elephants Without Borders, warned authorities last year the animals were being killed at a "worrisome level" in four hot spots. He says he received death threats when the BBC reported that his organization had undertaken a four-year survey that concluded there'd be a sixfold increase in "fresh carcasses" in northern Botswana. The government dismissed the report as false and misleading and said it would start its own investigation.

"Are elephants a decisive issue in the elections? In my constituency, yes," says Parliament member Ronald Shamukuni. (It was his cousin who was trampled to death recently.) "As much as we live with wildlife, there has to be a way of benefiting from them." The government needs to be responsible when its people raise concerns, he says. "Outsiders just don't know what is going on." *—Pauline Bax*

THE BOTTOM LINE Botswana, home to the largest population of elephants in Africa, may allow trophy hunting to compensate communities for losses caused by the pachyderms.

FROM LEFT: JUSTIN LANE/EPA-EFE/SHUTTERSTOCK; AGE FOTOSTOCK/ALAMY

● Owen Barry's Allen laments the "lack of a deal"

A Costly Farewell

The politics of Brexit get the headlines, but the toll on business is grim in advance of the split

Tom Westley runs one of Europe's leading foundries out of Cradley Heath, a small town near Birmingham in the West Midlands. He produces parts from precision molds for shipbuilders and carmakers on the Continent. But he's losing sales. The reason: Brexit. The Westley Group had revenue of about £30 million ($39 million) in 2018. In the same period, he says, the vote to quit the European Union cost the company about £2 million after multiple German buyers canceled orders from Spunalloys, one of Westley's divisions.

European customers are sourcing outside the U.K., afraid that British exports to the Continent will face customs checks and tariffs—meaning delays and added costs—once the country leaves the EU. In Westley Group's case, that will increase what clients pay for the copper-based-alloy castings Spunalloys sells. "It's very disappointing, but what can you do?" says Westley, who, in the 2016 referendum, voted to remain in the EU. He was outnumbered. The West Midlands voted to leave by almost 60%—a larger proportion than the U.K. as a whole. "Brexit is costing business right up front, with no benefit to us whatsoever," he says.

The U.K. is hurting even before the country has officially split from the EU, which takes 44% of its exports and is a market of half a billion consumers. Multinational companies across industries are retreating from the world's fifth-largest economy, which over the last four decades became the leading corporate gateway into Europe. Three years of political uncertainty have cost the U.K. about

Edited by Howard Chua-Eoan and James E. Ellis

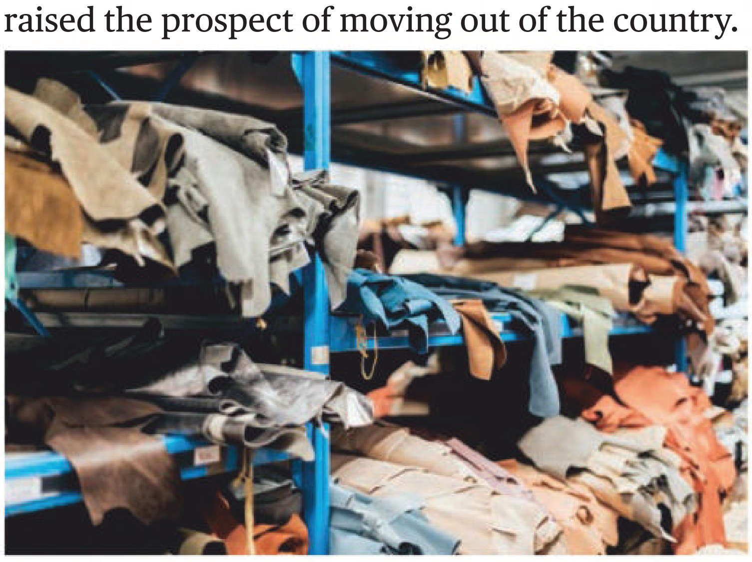
PHOTOGRAPHS BY NICHOLAS J R WHITE FOR BLOOMBERG BUSINESSWEEK; DATA: BLOOMBERG, U.K. OFFICE FOR NATIONAL STATISTICS

£600 million a week and left the economy 2.4% smaller than it otherwise would have been, according to a report by Goldman Sachs Group Inc.

The U.K. Parliament has repeatedly rejected Prime Minister Theresa May's proposed deal with the EU. Deadlines to leave came and went in March and April, with the EU choosing to kick the can down the road to prevent an economy-jolting no-deal divorce. The next deadline is Oct. 31, but the EU could push it off again if Britain hasn't resolved its political impasse. The unpredictability has left businesses in a state of consternation. Another delay "would be a nightmare, a rolling uncertainty," says Anand Menon, professor of European politics and foreign affairs at King's College London. "You can only plan for a few months, instead of a few years."

May is now seeking the backing of the opposition Labour Party to get her deal over the line, given a lack of support from her own Conservative Party. Labour's key demand is that the U.K. remains in a customs union with the EU, which would avert tariffs. But the frictionless trade that now exists would come to an end. There would be border checks and paperwork for British goods going into Europe, and vice versa. "The customs union is really very, very thin," says Lorand Bartels, a trade lawyer at Linklaters in London. "There will still be physical inspections on goods, which will cause queues."

Manufacturers based in Britain who rely on just-in-time deliveries of parts and material at their factories have led the Brexit backlash. Japanese automaker Nissan Motor Co. has abandoned plans to build a new model at its factory in North East England, concerned Brexit will disrupt the flow of components and finished vehicles across the U.K. border. Nissan, which set up shop in the region in the mid-1980s to use its North Sea ports to ship cars into Europe, employs 7,000 people in the Brexit-supporting town of Sunderland. Rival automakers BMW AG and Toyota Motor Corp. have also raised the prospect of moving out of the country.



Airbus SE has given the starkest warning yet. The company, which manufactures wings at sites in Wales and South West England, employs 14,000 people in the U.K. directly, and its supply chain accounts for an additional 110,000 jobs. It will move future investments out of the U.K. if there's a no-deal divorce from the EU, Airbus's then-Chief Executive Officer Tom Enders said in January. "Brexit-related uncertainty has hit confidence hard and investment even harder," says Adam Marshall, director general of the British Chambers of Commerce. "We anticipate the U.K. economy will continue on a weak growth trajectory."

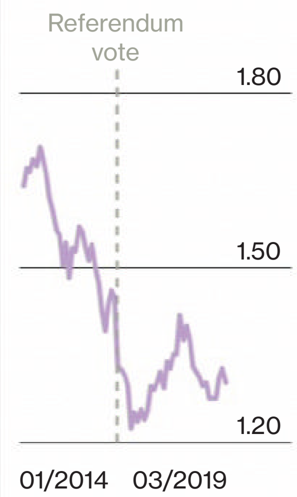
The country's financial sector—the City of London—is the other big Brexit casualty. Banks such as HSBC Holdings Plc and Royal Bank of Scotland have spent hundreds of millions of pounds Brexit-proofing their operations, while the likes of Deutsche Bank AG and Citigroup Inc. are shifting billions in assets out of the U.K. Foreign exchange and debt markets have moved to Amsterdam. People are on the go, too: Thousands of employees from JPMorgan Chase & Co., Morgan Stanley, and other banks have left for Frankfurt and Paris.

Japanese electronics groups Sony and Panasonic, insurer Chubb, and money-exchange company TransferWise are among the companies that have shifted their EU headquarters out of the U.K. or set up new European subsidiaries. And they're unlikely to return, even if somehow the country decides not to leave. "If you've gone to the lengths and hassle of moving, why would you bring it back now?" says Edwin Morgan, interim director general of the Institute of Directors, an organization of about 30,000 company directors and senior business leaders. "Businesses see this as a huge distraction, and where they've spent money, it feels like a waste of money."

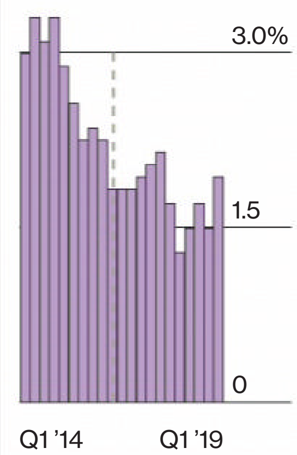
The constantly looming no-deal deadlines have led Britain to stockpile goods and raw materials in a way not seen since World War II. Warehouses across the country filled to capacity in the runup to the March deadline as manufacturers hoarded everything from printing ink and packaging to aircraft parts and tinned food.

LittlePod Ltd., a maker of ethically sourced vanilla paste and extract in Devon, in South West England, has spent £100,000—about 20% of annual revenue—bringing in extra product. That's cash that the company would otherwise be investing in a new machine to boost production. LittlePod is in talks with online grocer Ocado Group Plc about becoming a supplier but needs the device, which makes 45 tubes of vanilla paste per minute, to ▶

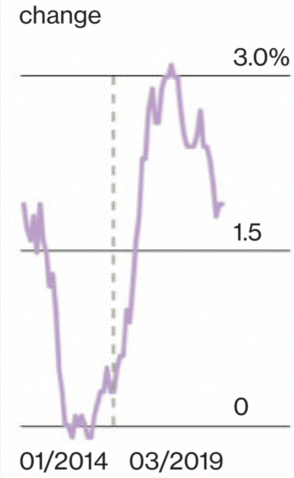
● Value of British pound in U.S. dollars



● U.K. real GDP growth, year-over-year



● U.K. consumer price index, year-over-year change



◀ The weaker pound is driving up the cost of imports, such as these animal skins

◀ meet the demand. "You can't grow the business at the moment," says Janet Sawyer, the company's managing director, who sells her products, including vanilla beer and Madagascan bourbon vanilla pods, in stores such as Whole Foods and Planet Organic. "We're just treading water."

Exporters are especially Brexit-affected. Leather and sheepskin apparel and bag maker Owen Barry Ltd. in Somerset has lost £190,000 in sales, about 10% of its total revenue, from customers in Japan who canceled orders because of concerns about disruptions to deliveries. Meanwhile, the cost of the sheepskin that Owen Barry imports from Spain and Turkey has increased 15% because of the weaker pound, shrinking profit margins and leading the company to cut staff hours by a quarter. Owen Barry is considering getting an extra overdraft facility from its bank because business has slowed and buyers are taking longer to pay for goods. "I think we've been let down by the government," says Jack Allen, the company's finance and production manager, who voted for Brexit because he wanted the U.K. to have more control over its laws and still believes Britain will be better off once it leaves the EU. "The lack of a deal is just debilitating."

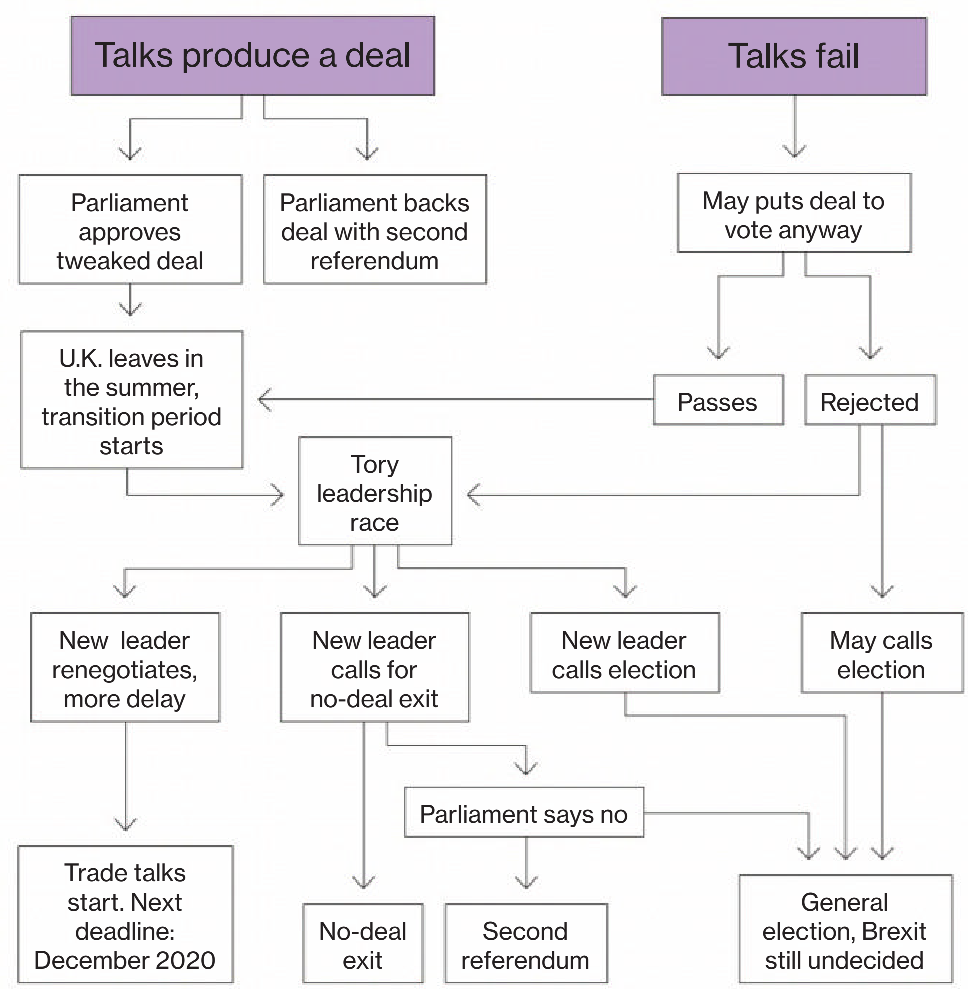
Brexit turmoil is a boon for some. Logistics companies and customs agents are benefiting from a strong increase in demand for their services. "My phone's been ringing off the hook," says Keith Robe, a customs adviser in North East England who helps businesses with their export form-filling and preparing for Brexit. Robe's sales are up 40%. Lawyers and consultants are other big beneficiaries, collecting steady fees as the Brexit saga drags on.

The weak pound is also good for British exporters that don't have to contend with rising import costs. Mo Bro's Ltd., a Leicester-based seller of male grooming products that sources most of its materials locally, has seen its revenue increase 10% thanks to the currency decline and rising international sales. Keval Dattani, one of three brothers who founded the company, voted for Britain to remain in the EU but is bullish on the opportunities from new free-trade deals post-Brexit. "The outlook is promising still," he says. "The level of interest we've had from new potential partners has far exceeded our expectations."

There are economic bright spots: The unemployment rate is at its lowest since 1975, and wages are growing faster than inflation, supporting consumer spending and confidence. But the buoyant jobs market highlights the weakness of productivity and could have a direct Brexit link, as companies prefer to hire employees who can be laid off with a no-deal Brexit, rather than commit to big capital investment that can't easily be reversed.

May is planning a June showdown to give lawmakers one final chance to vote for her deal. If that fails, the political turmoil will only intensify. Some combination of an election, change of prime minister, or second referendum may be needed to break the deadlock. A more hard-line Brexit-backer like Boris Johnson could end up in 10 Downing Street and pursue a no-deal exit. The socialist Jeremy Corbyn could win a general election and seek close ties with the EU. A public vote with the option of overturning Brexit could yet stop the process.

What Ifs: After the Tory-Labour Brexit Talks



None of that consoles Westley. Back in the West Midlands, he has a plastics company, Westley Plastics, that makes products used in rail maintenance, construction, and the steel industry. It stockpiled £500,000 worth of goods in anticipation of a no-deal Brexit in March. Westley is planning to build up the stockpile again for October, which means tying up more cash that he can't use for investment. "I think we've all been hoodwinked," he says. "All I can see is, it's cost us all a load of money and could cost even more." *—Joe Mayes*

THE BOTTOM LINE While no one knows what will happen next in the Brexit negotiations, U.K. businesses have already lost billions of pounds and are unlikely to get much of it back.

We Know That Funny Face

● Nigel Farage, the bête noire of Remainers, has a new party and may never, ever go away

He's back, and no one in British politics knows what to do. As leader of the U.K. Independence Party until November 2016, Nigel Farage helped to turn leaving the European Union from a fringe idea of a few constitutional obsessives into the policy of Her Majesty's government.

After the 2016 Brexit referendum, he announced his retirement from frontline politics and his intention to get his "life back." This turned out to mean hosting a U.K. radio phone-in show and becoming a contributor to Fox News. He also kept his seat in the European Parliament.

Now he's returned as the head of a new outfit, the Brexit Party, which has gone from nowhere among British parties in the runup to this month's European elections to polling in first place, at around 30% of the vote, according to surveys. His message is simple. Britain needs to leave the EU immediately, without a deal. That this hasn't happened is the result of a plot by mainstream politicians to thwart the will of the people.

"We voted to leave," Farage told the BBC. "We didn't vote for a deal." When it's pointed out that before the referendum he assured voters there would be a deal with the EU, he replies that it's Prime Minister Theresa May's fault for failing to negotiate properly.

Part of the problem other parties have in dealing with Farage is the struggle that mainstream politicians have with populists everywhere: Complex compromises are harder to sell than easy absolutes. Farage has long appealed to a section of the electorate that chooses to see him as an unspun straight talker.

There are specific British reasons why this is an ideal moment for Farage. On Brexit, there are many in May's Conservative Party who agree with him. Indeed, it's hard to see the difference between Farage's position and that of the anti-EU Conservatives who refuse to vote for May's Brexit deal because they say it's not really Brexit. The strategy of the establishment Conservatives is to run a campaign for the EU elections that's somewhere between low-key and subterranean.

Meanwhile, the opposition Labour Party, which might usually expect to benefit from a split government, is wrestling with its own Brexit torture. Many of the party's voters and its leader, Jeremy Corbyn, back leaving the EU. But the majority of its activists and its members of Parliament hate the idea. Corbyn's solution is to try to avoid discussing Europe in the European elections.

That means that Farage's Brexit Party is almost the only actively campaigning party that supports leaving the EU. The other party that fits the bill explains why Farage, for all his current success, isn't without problems: UKIP, the party that Farage led and shaped in his own image. Farage left UKIP in 2018, saying it was a damaged brand obsessed with Islam. The changes he decried happened after he left, but the decision to make UKIP a party that campaigned against immigration and warned that British culture was under threat was made by Farage. In his new party, he recognizes that anti-Islamic language puts off voters he wants to appeal to, but he's struggled to escape it. He's had to remove several senior staff over their past inflammatory comments.

Foreign Secretary Jeremy Hunt on May 14 expressed the hope that a heavy defeat for the

◀ Farage

Conservatives would shock his side into voting for the prime minister's deal. But a win for Farage is likely to result in the opposite: "Leave" Conservatives who believe he speaks for them feeling vindicated, more entrenched than ever in their positions. —*Robert Hutton*

THE BOTTOM LINE The populist architect of Brexit is back—and he may have an even greater impact on what's left of the process than he had before.

MARK THOMAS/REX/SHUTTERSTOCK

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RED SOX CHARLOTTE SYNERGY PLATFORM SOCIAL AGGREGATOR CLOUD GEN-Y DISRUPTIVE CONTENT DATA HYPER CONVERSION MATRIX THE GOOD LIFE DETROIT CITY SUPER electric WEWORK DETROIT WE RISE hello WILD & FREE DO WHAT YOU LOVE

WeWork CEO Adam Neumann loves tequila shots, artisanal oats, and spending money. With profits nowhere in sight, he's creating an alternative to the benefactors who are tired of giving him cash to burn

By
Ellen Huet

Photograph by
Amy Lombard

Adam Neumann runs one of the few startups on Earth for which $2 billion of fresh funding was, or ever could be, terrible news. Just before last Christmas, Masayoshi Son, Neumann's most important investor, called to say that was his final offer and that their negotiations over an additional $16 billion for Neumann's WeWork were over. Shares of Son's SoftBank Group Corp. stock had dropped sharply a few days earlier along with the rest of the stock market, and Son had decided the $8.5 billion he'd already invested wasn't worth more than doubling, even to take a majority stake. With a cash infusion almost an order of magnitude less than it had expected, WeWork Cos. would have to figure out on its own how to stop losing $1.9 billion a year.

That flip-flop revived questions about what exactly the office-space-renting startup is and how it should be seen. Son made the call because the biggest investors in SoftBank's $100 billion Vision Fund didn't want to be so exposed to a single real estate company, according to people familiar with his thinking. SoftBank didn't respond to a request for comment. Neumann says the reversal was understandable given the momentary market freakout and that it's tough to get too annoyed at the guy who's given you a grand total of $10.5 billion. "They're very nice people," he says.

Neumann is the kind of chief executive who sees pies in every sky, so it's not surprising that even after a $14 billion step back, he calls the relationship with SoftBank "very, very, very, very positive." While he's known as a fierce and unpredictable negotiator whose bargaining tactics include tequila shots, he's also always ready with a pep talk about finding your purpose, doing what you love, and making people feel less alone. Neon slogans on WeWork office walls implore you to "Hustle Harder" and "Get S#!t Done." Neumann told a reporter in 2017 that WeWork's 11-figure valuation had less to do with its revenue than its "energy and spirituality." In a recent promotional video, he intoned, "The single most powerful word is the word 'we.'"

In the past nine years, WeWork has opened 425 office locations in 36 countries, become Manhattan's biggest tenant, and upended the stodgy world of commercial real estate. Its ubiquitous low-slung seats, curtains of trailing vines, and beer kegs haven't just changed real estate agents' ideas of how many freelancers can be packed into a homey office space; they've also reshaped the white-collar world's expectations of office culture. As the company, last valued at $47 billion, continues to sprawl, it's also looking to prove it's a safe bet. It said last month that it had filed confidential paperwork for an initial public offering, which will likely be the year's second-biggest behind Uber Technologies Inc.

Of course, most of Uber's investors have lost money since the company went public on May 10, and the decline of its shares has cast a pall over the other mega-unicorns prepping IPOs. WeWork skeptics note that, even by the standards of its cash-incinerating startup cousins, the company's business model—taking out long-term leases and renting out short-term parcels—doesn't deserve the favorable treatment of a tech company and looks glaringly vulnerable to an economic downturn as the global bull market in equities stuttersteps toward Year 12. "They don't make money even with the economy roaring," says Scott Crowe, chief investment officer at CenterSquare Investment Management, which focuses on real estate. "If the economy softens, the receivables go away."

Neumann says only two things are holding his company back: "Cash," he says, pausing for a beat of suspense, "and space." In addition to SoftBank tightening its spigot, some buildings with WeWork as a major tenant have had trouble getting bank loans. And some landlords have grown leery of leasing much more space to Neumann, afraid of what terms he might be able to negotiate. He says alternative sources of funding and real estate can pick up the slack.

Now, after more than a year of ▶

Phrases seen on the walls of WeWork spaces:

I LIKE THE WAY WEWORK IT, NO DIGGITY
The Celebration of the Century Rising Again Terminus Marthasville City of Atlanta
I LIKE BIG BOOKS AND I CANNOT LIE
ONLY LOVE CAN DO THAT WEWORK ATLANTA
Do What You Love
Do What You Do What You Love Love
SCRABBLE TIPS AND TRICKS
I'd rather DIE ENORMOUS than live DORMANT THAT'S HOW WE ON IT JAY-Z
BOSTON RODEO
Do What You Love WEWORK
YOU ARE IN THE RIGHT PLACE

COME ON IN MI4I DRINKFINITY
STAY WILD BIENVENIDO A WEWORK
AMOR Create Your Lifes Work
IT'S ALL GOOD Cheers ELLO
A SUNSET AND WAVES
New York NEW YORK NEW YORK NEW YORK New York
CHEERS HELLO CREATE
DON'T KILL MY VIBE
GRIND Do What You Love
HUSTLE Do What You Love
SWEAT INSIDE MY HAND
IT'S ALL GOOD
hello brooklyn

Impossible TAKES A WEEK DIFFICULT TAKES A DAY FORTUNE FAVORS THE BOLD
2010 TOGETHER EST. WE WORK Better
HUSTLE THE EMBRACE
HUSTLE Everybody
OVERRATED NORMAL IS
YOUR ENERGY COLOR OF Amber IS THE
RESTLESS DREAMS City of
Settle Never #ALWAYSBETTERTOGETHER
TEAMWORK MUSIC
HUSTLE HARDER

◀ planning, WeWork is creating an investment fund that aims to raise billions of dollars to buy stakes in buildings where it will be a major tenant. If all goes according to plan, the fund, called ARK, will start with $2.9 billion, including $1 billion from Canadian real estate investor Ivanhoé Cambridge Inc. WeWork has long said it mostly stuck to leasing space because it believed in being "asset-light." Now it's wagering that buildings become more valuable with WeWorks in them, in which case ARK will put more of that added value back in the company's own pocket.

The fund's pitch to investors revolves around the relative safety of a real estate play with a large tenant in hand. It also depends on a gut-level faith in WeWork's vibe. Sylvain Fortier, Ivanhoé Cambridge's chief investment and innovation officer, says the company's strength is what he calls a "recipe." "People actually want to be in the office, actually want to be together. They feel a little bit like home," Fortier says. "I bet you that sooner rather than later, a WeWork-branded building will be attracting other tenants the same way you will never have a vacant space next to an Apple Store."

ARK, which WeWork hasn't previously discussed publicly, is an ambitious move to establish the company as a landlord, a complicated feat of financial gymnastics and also a bit of public relations. WeWork has been dogged by criticism from some investors this year for renting space in buildings partly owned by Neumann. That's legal, but outside of the real estate world, the boss negotiating how much to pay his own investments from the company's coffers carries more than a whiff of unseemliness. Partly for that reason, Neumann is transferring some of his own real estate holdings into ARK. The fund will be run independently from WeWork's main office-leasing business but will remain under the executive team's control as part of an umbrella company, so for all intents and purposes, WeWork will still be sitting on both sides of the table when it leases ARK-owned spaces.

Neumann's company is taking other steps toward stability. It's renting more space to businesses with boldface names (Amazon, Facebook, IBM, Microsoft), and it's expanding its use of management agreements and custom offices that don't require it to take on leases. Critics say the co-working company is already too reliant on optimistic financial metrics and profitability projections. And ARK won't exactly put to rest concerns about conflicts of interest. "The question will be, what happens when the interests of the limited partners diverge from the interest of WeWork?" says Charles Elson, a corporate governance professor at the University of Delaware. "The more complicated structures someone comes up with, the more difficult it is to explain."

"Everyone wants to know what ARK is. I think it's going to be amazing," Neumann says one morning last month at WeWork's headquarters in Manhattan's Chelsea neighborhood. Throughout our conversation, he's at ease making grand statements, as if the dreary details will fall in line later as long as the vision is bold enough. He's also hungry. It's just past 11:30 a.m. when a male assistant in a black baseball cap delivers a shallow gray ceramic bowl with brown grains and a spoon. "I haven't broken my fast yet," the 40-year-old CEO says apologetically, instead of using the word "breakfast." He's clearly a big fan of the oats, sourced from Dan Barber, an "amazingly interesting" farm-to-table chef developing grains with "amazing qualities." (These are high in fat.) Neumann invested in Barber's seed company, Row 7, last year.

When WeWork officially announced the smaller-than-expected $2 billion SoftBank round in January, it paired the news with a grandiose announcement in a different direction. The corporation was rebranding as We Co., which would also include its communal-residence business, WeLive (tag line: "Build a world where no one feels alone"), and a private elementary school arm called WeGrow ("Unleash every human's superpowers"). ARK represents a fourth We pillar, Neumann says in his office, though he notes, "I like triangles, so that would really ruin my triangle."

Why the name ARK? "There are a lot of explanations," he says later. "Adam, Rebekah, and Kids—that's one." His wife, Rebekah, is a WeWork co-founder; they have five children. He doesn't contest a more Biblical origin, noting that "Noah's Ark represents a covenant between God and the people to never destroy the world."

The following day, a spokesman stresses that Neumann's first answer was a joke, and offers a third option: "Asset, return, kicker."

We Co. is to control ARK, but the fund's capital mostly comes from outside investors. "ARK's job is to leverage external money, off balance sheet," Neumann says, leaning back in his chair and steepling his fingers.

He emphasizes that he'll be selling his controversial property stakes to ARK for the same price he paid. He also says this will mean a huge sacrifice for him personally, though it's unclear how much the assets—in New York, Chicago, San Jose, and elsewhere—have appreciated. On the San Jose property alone, he estimates, he could net hundreds of millions of dollars. Instead, "I'll make zero. Maybe the cost of money." The winner will be ARK, he says. "Day 1, they'll have a huge appreciation. It's going to be amazing." I start to ask another question, and he cuts me off. "I'm a great real estate buyer, so if I bought for $100, it's probably worth $300. I'll still sell it for $100."

Does Neumann think renting to himself was inappropriate? "Not if what I did was purely for the sake of pushing the business up," he says, arguing that using his own money was necessary to prove that WeWorks make buildings more valuable. "If I don't put my own money on it, why would other real estate owners have the courage to buy it?"

WeWork has yet to actually go through the legal process of

"Let's not build a company just for the sake of revenue. Part of creating value is not maximizing"

incorporating as We Co. But even if ARK keeps Neumann's holdings at arm's length from the CEO, its independence isn't exactly immutable. One of its heads is Wendy Silverstein, a big name in real estate investing, and the other is Rich Gomel, a WeWork executive for three years. Although they have a fiduciary duty to make decisions that benefit all of ARK's investors, Neumann still has some power to fire them, and his interests certainly might win out if, say, WeWork wanted to rent ARK-owned space for less than a different tenant offered.

Neumann says WeWork doesn't need to haggle with ARK over rent; it needs to convince landlords that having a WeWork in their building is worth paying, say, 90% of the costs of turning the square footage into one of his office-space rentals. (Today the average U.S. landlord covers about 70% of the costs.) WeWork says an independent ARK investment committee will head off any potential conflicts of interest. In cases related to Ivanhoé Cambridge, Fortier, the Ivanhoé executive, will be among the arbiters. He says he trusts himself to make sure the deals are fair.

WeWork's paeans to togetherness and following your bliss offer few answers for employees with serious grievances. Last fall a former employee filed a lawsuit alleging she'd been sexually harassed and groped at a company-wide event and that she was retaliated against for reporting it. Buried in the lawsuit was an accusation that WeWork was also underpaying women. Because the company forces employees to agree to settle such complaints through private arbitration, there's no way for the public to know whether others are out there. A month after the lawsuit was filed, WeWork announced it would limit people in four New York locations to four beers a day. The company says the move wasn't related to the suit, that it doesn't tolerate harassment of any kind, and that it's committed to fostering an inclusive, supportive, and safe workplace.

WeWork's office culture remains a huge part of what the co-working company is selling. Its mission statement is to "elevate the world's consciousness." Co-founders wearing shirts that read "High on We" and "Operationalize Love" address workers sipping from metal, reusable cups that read "Always Half Full." At least five executives, most of them regional managers, have the title chief We officer (CWeO). WeWork has flown tens of thousands of employees and members to twice-annual bacchanals in Los Angeles and the English countryside, and it also buys carbon offsets and removed meat from its offices last summer. (Employees can't expense meat anymore, either. The company says it's ending one of those big parties, called Summer Camp.) These kinds of elements, like the beers, make up the story WeWork wants to tell, and that story is the CEO's.

Neumann took control of 65% of WeWork's voting equity as part of a 2014 funding deal—while celebrating, he partied so hard he broke a floor-to-ceiling window in his office, according to a person familiar with the incident—and since then, he's been known to make company-level decisions on what look, from the outside, like whims. When WeWork sold bonds for the first time a year ago, it originally planned to sell $500 million worth, but the final number was $702 million, because 702 was deemed a lucky number, a source familiar with the matter says. Neumann referred a question on the number to his general counsel, who declined to comment. It's unclear what strategic value WeWork's investment in an indoor wave pool company offered, but Neumann does love to surf.

Neumann frames his idiosyncrasies in terms of spiritual enlightenment, which he says was especially heightened after SoftBank took the extra $14 billion off the table in January. "Let's not build a company just for the sake of revenue," he says. "Part of creating value is not maximizing." Then he spins the conversation back toward life coaching, asking me what I think my superpower is. Connecting with others, I say. That doesn't seem to satisfy him; he prompts me for another.

"Making people laugh," I say.

"We haven't seen that side of you yet," he says. "My superpower is change, and change is painful."

As WeWork grows and changes, its CEO is learning to listen more, he says in a group interview later. "Part of growing up is getting comfortable with the world, where people do have an opinion that might not be your opinion," Neumann says. "It's good to listen." Then, for the third time that day—perhaps because he joined the interview remotely—he calls me Amy, which is not my name. A spokesman says he regrets that.

Neumann tells me he wants this article to teach a lesson, one that has little to do with his company's on-paper performance. "I think your readers need a little bit of that. Not just numbers. Give them something they can use," he says. "So that when someone reads, they might say, like, 'Hey, I can create value. I can embrace change. I'm going to be a better version of myself.'" It's the same tone as the neon slogans on the walls, but with a slightly different point: Don't sweat our cash, our space, our demand. We're here to talk about you. Ⓑ —*With Gillian Tan*


MONETIZING
EDEN

Guyana is showing the rest of the world a way to preserve rainforests and still make money from them

Text and photographs by Lucas Foglia

The only road that transects Guyana's rainforest is mostly unpaved and often impassable during the rainy season

How do you save a rainforest? Create a national park, hardcore conservationists would say. That isn't practical, though, if you're a nation with 45 million acres of rainforest—an area about the size of Washington state—and a per capita income of just over $8,000 a year. "A tree left standing is not valuable to a family who can't feed their children three square meals a day," says Pradeepa Bholanath, head of planning and development for the Guyana Forestry Commission.

With the help of international donors, Guyana, a country of fewer than 750,000 people, is pioneering an approach to protecting the trees that cover more than four-fifths of its surface. To make the rainforest last, it's using it up slowly.

Norway signed a deal with Guyana in 2009 offering it as much as $250 million to curb deforestation, and with it, climate change. Trees are one of the world's oldest and best carbon-capture technologies; they absorb carbon dioxide from the air, store the carbon in wood, and release oxygen. The money paid for, among other things, scientists from Winrock International Inc. to assist the Guyana Forestry Commission in developing a system for measuring the quantity of carbon stored by the country's forest. Having carried out an inventory of its trees, the commission can now make educated decisions about which ones can be cut down without imperiling the health of the entire ecosystem. Guyana's annual rate of deforestation has dropped to 0.048%, one of the lowest figures in South America and well below the 0.275% average for tropical countries.

The biggest threat to the country's rainforest isn't loggers or farmers but miners. Gold is the country's No. 1 export, and there's more of the metal, as well as diamonds and other minerals, under the forest floor. Unearthing those riches would likely imperil Guyana's commitments under its agreement with Norway.

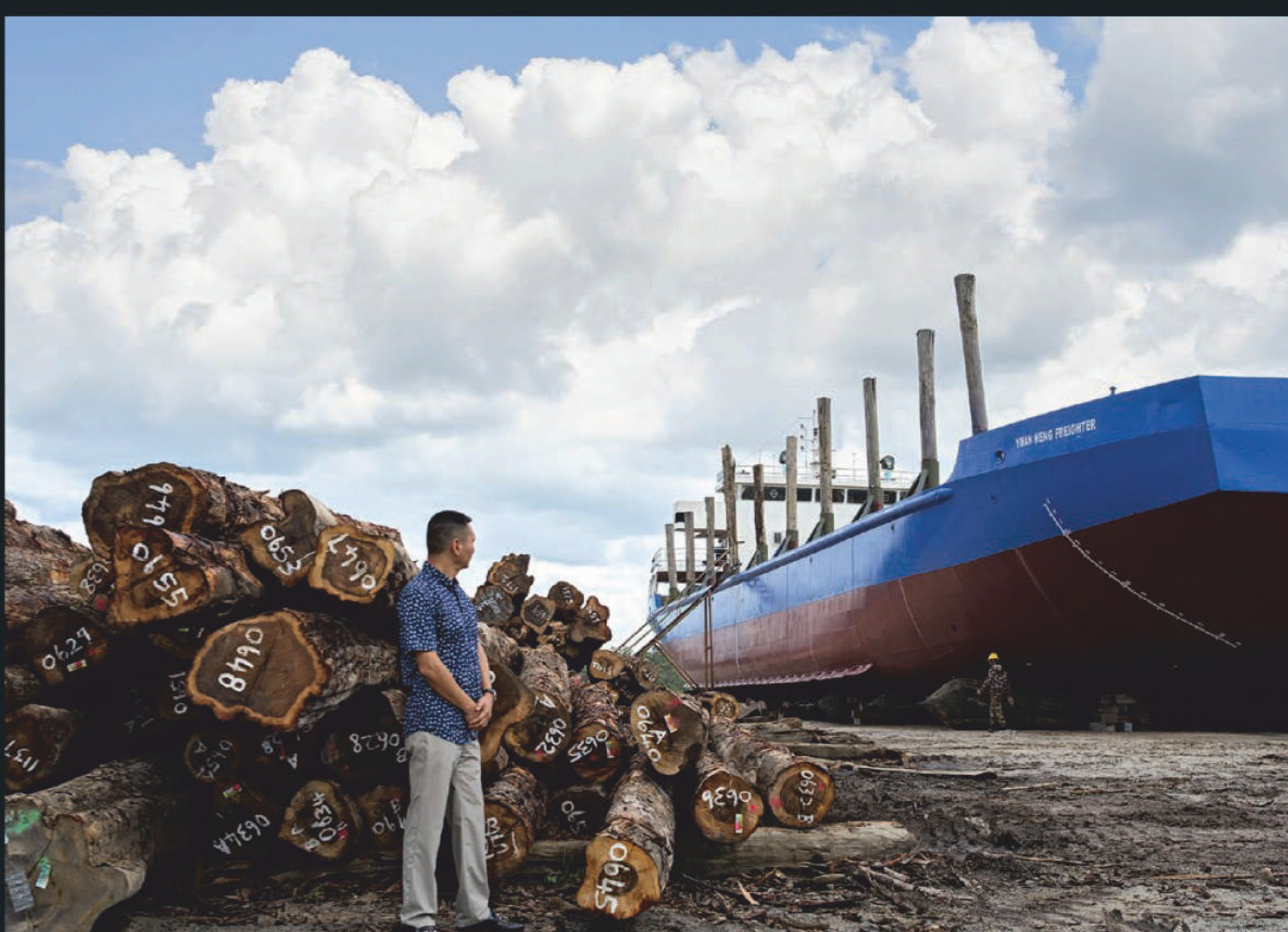
Oil, too, could pose a threat, albeit indirectly. A massive discovery by Exxon Mobil Corp. some 120 miles offshore could have the country pumping 1 million barrels a day by 2025—more than neighboring Venezuela. While Exxon's oil rigs don't appear to pose a menace to Guyana's rainforest, the billions of dollars in taxes and royalties flowing into the government's coffers might. The windfall will easily double the country's gross domestic product, which was about $3.6 billion in 2018. Some of the oil money could pay for power lines, better schools, and improved health care for the 100,000 people who live inside the rainforest. But that also would require building more roads—which would make the area more accessible to logging and mining companies. ▶

Winston Bumbury is one of 136 Amerindians employed by French company Amazon Caribbean Guyana Ltd. to harvest manicole palm, a native species whose tender heart is a delicacy in many countries. The palm takes just three to five years to regrow, compared with 60 years for a hardwood tree. "Manicole grows fast and wild," says Chief Executive Officer Jean-François Gerin. "All you have to do is harvest it in a sustainable way."

Felix Braithwaite performs a stump inspection for the Guyana Forestry Commission at a logging concession.

Ryerson Hazel works for Superior Woods, a Guyanese-owned timber producer and exporter. The lumber in the photo comes from the purpleheart tree, whose dull brown wood turns a deep eggplant purple after it's cut and then fades over time. Tropical hardwoods are much in demand in Asia, where local supplies have been decimated.

Chen Ming, owner of Rong-An Inc., surveys a log barge. The Chinese company secured rights to log 2 million acres in 2017. It has applied for loans to embed sensors on all the harvestable trees within its concession area, to track them as they move along the supply chain.



Canadian-owned Aurora Gold Mine (above) is the largest such operation in Guyana. Trucks haul ore to be crushed and mixed with cyanide, which leaches out the precious metal. Pictured on the right, a lone tropical hardwood tree left standing in an area clear-cut for the site.

◀ On the flip side, some of this infrastructure might also support Guyana's fledgling efforts to become a destination for ecotourism. The Iwokrama Forest, a million-acre preserve, receives about 1,200 visitors each year, according to its manager, Dane Gobin. A grant from Exxon for a science program designed to attract international researchers and students could increase that number.

Guyana may yet prove to other poor nations that rainforests can be monetized without being cut down. But Gobin recognizes that the moment hasn't arrived yet. "You can take the title to your house to the bank and borrow money. Why? Because the market puts value on a house. We need to see rainforest at that same value level," he says. "Conservation has to be market-driven. The long-term benefits of a healthy forest are more valuable than the short-term profits from logging or mining." Ⓑ

The Rebel Economists Of Beijing

SHENG HONG AT UNIRULE'S OFFICE IN BEIJING

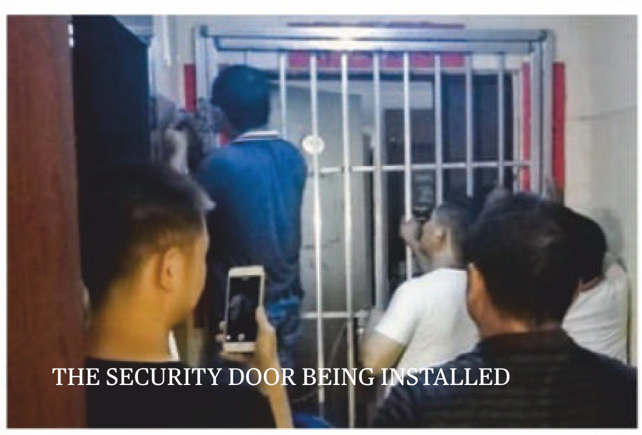
Pro-capitalist scholars are China's latest public enemies

By Matthew Campbell and Peter Martin
Photograph by Gilles Sabrié

Around 10 a.m. one day last summer, a low-ranking government official visited the offices of China's most prominent free-market think tank to lodge a complaint. The scholars of the Unirule Institute of Economics were being too loud for the neighbors, the official said, and should consider finding an alternative place of business.

It was an odd allegation to make against a group whose idea of a wild night out might include a vigorous discussion of Hayek's minor works, but no one at Unirule was surprised. For months, the organization had been harassed at its converted western Beijing apartment by a rotating cast of angry visitors: a landlord claiming it was violating the terms of its lease, tax collectors demanding to inspect financial records, bureaucrats citing violations of unspecified municipal regulations.

Unirule's executive director, an amiable 64-year-old economist named Sheng Hong, had given his staff a set of instructions for such visits. They were to be polite, provide any requested files, and promise to address any genuine problems. His colleague Jiang Hao followed the script with the official, telling her the think tank would duly apologize to anyone who'd been disturbed and would be quieter in the future. His promises seemed to be successful, and the visitor departed.



THE SECURITY DOOR BEING INSTALLED

Jiang was at his desk that afternoon when Unirule's landlord arrived, accompanied by a property manager and a team of construction workers carrying power tools, a welding torch, and a reinforced metal door. Security doors aren't uncommon in Chinese residential buildings, and at first Jiang wasn't particularly alarmed. Then something astonishing happened: The workers began welding the door across the entrance to Unirule's office, sealing Jiang and several colleagues inside. He protested and took photos, but the workers refused to stop. Not knowing what else to do, Jiang called the police. Soon, officers arrived and persuaded the building caretaker to let the Unirule staffers out. When they returned the next day to collect their belongings, the metal door was secured in place again. A few days after that, two security cameras were set up outside.

Unirule is the brainchild of Mao Yushi, a respected 90-year-old economist who was among the first scholars to spread free-market ideas such as deregulation and privatization within China. Until recently, the think tank was one of the country's more influential nongovernmental organizations, benefiting from the relative liberty granted to economics since the rule of Deng Xiaoping, who once declared that he didn't care "if the cat is black or white, so long as it catches mice." So long as they stayed mostly clear of politics, scholars were free to discuss Western thinkers and how their ideas applied to China. The result was a vibrant intellectual community that interacted with government decision-makers, providing data-driven reality checks for officials with little experience outside the Communist Party.

That space has shrunk drastically under President Xi Jinping, who has forcefully reasserted the party's power and the state's economic role, and has attacked the civil society that emerged under his predecessors. A crackdown on dissent that began shortly after he took office in 2012 has seen Unirule, which has a small but consequential following among entrepreneurs and academics, hounded almost into oblivion. Its Chinese website and social media accounts have been shut down, its events broken up, and some of its staff barred from traveling abroad.

As China navigates the challenges of a slowing economy and a bruising trade war with the U.S., some foreign observers have become alarmed. "Economic decision-making has become incredibly personalized under Xi. An economist who raises questions may be seen as raising questions with Xi personally," says Julian Gewirtz, a researcher at Harvard and the author of *Unlikely Partners: Chinese Reformers, Western Economists, and the Making of Global China*. He calls the resulting chill "a profound source of risk for China's future."

Unirule found another office after its sudden eviction, and so far it has survived, if just barely, thanks to its prominence abroad and the prestige of Mao, who retains quiet admirers in China's establishment. But the think tank's experience demonstrates just how little scope for independent inquiry remains, even on critically important economic issues such as fiscal policy and the sustainability of the country's vast archipelago of state-owned enterprises. In Xi's China, it turns out, practicing the wrong kind of macroeconomics can be a thought crime.

China in the 1980s was a place of intellectual ferment, with previously banned ideas being widely discussed—at first gingerly, as citizens who came of age during the Cultural Revolution tested their new boundaries, then with increasing openness. At a time when Ronald Reagan and Margaret Thatcher were transforming the economies of the U.S. and U.K., these ideas included the theories of thinkers from the Chicago School, who argued that free markets are invariably better at creating wealth than governments.

Such views sometimes gained a remarkable degree of official sanction in China. The government invited archlibertarian Milton Friedman to Beijing in 1980 to get his advice on how to curb inflation resulting from the relaxation of state price controls, for example. (Admittedly, his opinion wasn't well-received.) Over the next several years, China also began allowing more academics to study abroad. They got direct experience of Western prosperity, and many returned with opinions on how to replicate it.

COURTESY UNIRULE

One Mao Yushi essay, "Returning Mao Zedong to Human Form," called the late dictator "childish"

Mao Yushi was among the fascinated. Born in Nanjing and sent as a young man for "labor reform" in rural Shandong, he spent most of his career as an engineer for the state railways, driving trains and working on engine designs in a Beijing office. As the country opened up, he began reading widely in economics and attending lectures by the foreign academics who were visiting more and more frequently. He was struck by the ideas of Friedman and others of the Chicago School. Their theories might have translated in China into reducing the state's role in setting prices and allocating investment, or into moving faster to chip away at state monopolies in industries such as telecommunications and airlines—emulating the free-market-oriented policy overhauls under way in the West.

Despite being entirely self-taught, Mao took up a position in 1984 at the Chinese Academy of Social Sciences, a degree-granting government research agency that employed much of the economics elite. The next year he published his first book, *The Mathematical Foundation of Economics: The Principle of Optimal Allocation*. Dense with formulas, it was well outside the Chinese academic norm; most contemporary economists were trained to think like Marx and Engels, not to do math. A year later, Mao was accepted as a visiting scholar at Harvard, where he was perplexed by a class on taxation. In China, where virtually all companies belonged to the state, the tax system was still primitive.

At CASS he encountered Sheng, a doctoral student similarly interested in free-market ideas—particularly those of Ronald Coase, a British theorist known for his work on why companies, not individuals, come to dominate economies. CASS was an elite institution, but its perks were minimal. Salaries were paltry, and funds for research or overseas travel were severely limited. Meanwhile, in broader society, serious money was flowing.

In 1992, Deng embarked on his so-called Southern Tour, an extended trip to Guangzhou, Shenzhen, and Shanghai that marked the end of a post-Tiananmen relapse into communist orthodoxy. Mao and Sheng, feeling that CASS was out of step with the booming economy outside its walls, decided it was time for a change. The following year they created Unirule—the name an allusion to a Chinese poetic concept suggesting that "universal rules" govern human interactions—to serve as a think tank and for-profit consulting firm. The arrangement's advantages were more than financial. The legal status of NGOs in China has always been uncertain, and incorporating as a business added a layer of protection from officials.

To get Unirule up and running, the pair turned to a sympathetic businessman, who provided 900,000 yuan (about $160,000 at the time) in capital. The early days were hard going. Mao at one point traversed Beijing on a bicycle selling copies of one of Unirule's first publications, a magazine called *Overseas Business* that targeted the country's new executive class.

Gradually, Unirule developed links to academics abroad and established itself as a respected source of analysis on China's growing economy. It also began making decent amounts of money, in many cases by selling its services to government officials eager to learn about capitalist ideas. One early client was China Unicom, a state-owned telecommunications giant for which Unirule prepared a report on liberalizing the nascent mobile market. Another piece of work, for the rail ministry, analyzed potential pricing reforms. At one point, Mao and Sheng were commissioned to devise an economic strategy for the remote city of Kashgar, in the western region of Xinjiang. Their proposal—that the ancient trading hub reestablish links with the countries along the historic Silk Road—anticipated the "Belt and Road" initiative, Xi's signature foreign economic policy.

As Unirule entered something resembling the intellectual mainstream, Mao and Sheng began to feel comfortable, even lucky, to have a front-row seat for one of the most dramatic economic transitions in history. "This was a really rare opportunity to observe a planned economy transforming into a market economy," Sheng recalls. "You couldn't really research that in America." Emboldened, they called repeatedly for the state to move further and faster to open up the economy—mild advocacy by Western standards but potentially dangerous in China. While plenty of Chinese thinkers were endorsing aspects of free markets, Unirule's embrace of essentially the whole capitalist system was unusual. To Mao and Sheng, this was a matter of intellectual honesty.

Unirule's freedom shrank somewhat in the mid-2000s, when President Hu Jintao moved to curtail criticism of state policies. But the organization remained a vital force, with as many as 30 staff members and annual revenue that exceeded 5 million yuan in 2004. In 2011 it thrilled entrepreneurs and infuriated government officials by publishing a widely read report arguing that virtually all of China's state-owned enterprises would be unprofitable without favors such as low-interest loans and cheap land. That year, Mao also published an essay, "Returning Mao Zedong to Human Form," that called the late dictator "childish" and argued that his "capacity for destroying the country was higher than anyone." In a nation where the founding leader's image adorns most every bank note, it was provocative stuff.

Even as Unirule's influence grew, attitudes toward Chinese economic liberals were beginning to turn. In 2012 the Cato Institute, Washington's top libertarian think tank, presented Mao—the scholar, not the revolutionary—with its Milton Friedman Prize for Advancing Liberty, an honor given previously to Peter Bauer and Hernando de Soto, both internationally prominent economists. During the presentation at the Washington Hilton, a protester representing the growing ranks of "neo-Maoists"—Chinese activists drawn to the hard-line ideologies of the early People's Republic—burst ▶

◀ into the ballroom, shouting and waving signs labeling the economist a "traitor" who "serves rich Americans."

Back in Beijing, the government was preparing to hand leadership to Xi, a dedicated communist who'd spent his entire adult life in party institutions. As he consolidated power, sidelining critics from both the right and the left and extending the reach of party propaganda, Unirule found itself targeted. At first, it was bit by bit. Starting in about 2015, some of Sheng's and Mao's posts on social media platforms WeChat and Weibo (where Mao had more than 2.6 million followers) began disappearing. Venues around Beijing canceled Unirule seminars and panel discussions, citing burst water mains, mysterious power cuts, or other excuses.

No one from the government ever informed Unirule of what it had done to offend, but Sheng and Mao hardly needed to be told. Many of Xi's policies were focused squarely on reestablishing the centrality to economic life of the state in general and state-owned companies in particular. And other sources of independent research were in even worse trouble. A prominent legal and economic think tank, the Transition Institute, was shut down after officials said it lacked proper registration. Consensus Net, a website that published essays and commentaries by academics, went permanently offline.

In January 2017, Unirule's blacklisting became almost complete: Across a few hours, its website and social media accounts disappeared from the Chinese internet, again without explanation. Later that year, the institute was pressured into leaving its office near Beijing's business district, moving from there to the apartment where its staff would be barricaded in. (The State Council, China's cabinetlike decision-making body, didn't respond to a request for comment on the government's moves against Unirule.)

Last November, the state finally made clear to Sheng what it thought of him and his fellow free marketeers. He was at Beijing's main airport, checking in for a flight to Boston, where he'd been invited to speak at a Harvard symposium marking the 40th anniversary of China's economic liberalization. When he tried to scan his documents at the automatic passport-control gate, it refused to open. Confused, Sheng asked a border officer for an explanation. After consulting a computer, the man delivered the news: By order of the State Council, Sheng had been banned from leaving the country. He was considered a threat to national security.

What's left of Unirule operates from an apartment abutting a busy rail corridor about 15 miles north of central Beijing. It's accessed through a dingy hallway with dirt-streaked, peeling white paint; above the call button for the rattling elevator, someone has scrawled an advertisement for a local prostitute. Unirule is in a cramped unit on the 10th floor. During a recent visit, Jiang, the economist who called the police last summer, provided what passed for a tour, pointing out bookshelves sagging beneath Unirule studies and works by foreign economists. "The only Communist Party document we have here is the constitution," he said with a chuckle. Most of the 10-person staff works at bare tables in a converted living room. Jiang, who wore a faded plaid shirt and wrinkled blue trousers held up by a frayed leather belt, conceded that the job now entailed significant personal sacrifice. "All these people," he said, "are strong believers in freedom."

Sheng's office is in an old bedroom crowded by two wooden desks intended for a larger space. The leather armchairs reserved for visitors are similarly disproportionate and show signs of hard use, with one armrest split to bare the stuffing inside. "There are a lot of people interested in liberal ideas, especially private entrepreneurs and middle-class professionals, and if it weren't for the pressure from the government, we would have more interest," Sheng said from behind one of the desks. "Xi wants to control everything, even what he can't really control," he added. "Our voice is very tender, very peaceful, but still he doesn't want to hear it."


MAO IN HIS APARTMENT

Sheng, who's compact and wiry, with thin salt-and-pepper hair, argued that Unirule remains relevant—publishing papers, meeting with foreign academics, organizing seminars and a reading group devoted to Friedrich Hayek and other classical liberals. The organization has also quietly continued offering economics classes to businesspeople, though attendance has dwindled in light of the government's disapproval. Financially, Unirule is sustained by revenue from those classes and the generosity of a small group of benefactors, none of whom are willing to reveal their support.

Xi is arguably China's most dominant leader in decades, and the state periodically shuts down troublesome organizations and imprisons people it deems threatening. Yet while Sheng (and now Jiang) can't leave the country and the staff gets occasional requests to come "for tea" with police or intelligence agents, they're otherwise walking free. To Sheng, the reason for Unirule's tenuous survival is simple: Even in China, even under Xi, there are limits. Unirule has been careful to stay within the letter of every regulation it can, and

ADAM DEAN/BLOOMBERG

an outright ban might produce international protest. "The government wants to have a good surface presentation," he said. "They would like us to disappear by ourselves."

That Unirule still exists probably also owes something to Mao's cachet. His works were common on Chinese university campuses in the 1990s and 2000s, studied by a generation that's since fanned out into high-level jobs in business and government. And at a time when Beijing is eager to repair badly frayed ties with a Republican-led U.S. government, being the favorite Chinese economist of Cato, an influential Beltway think tank co-founded by a Koch brother, probably counts for something.

Mao lives in western Beijing, in a complex of squat apartments reserved for government workers and retirees. (He qualifies thanks to his father's career as a bureaucrat.) Government minders patrol outside his flat, asking visitors to identify themselves and sign in on a clipboard. Before Mao began an interview in a sitting room crowded with framed accolades and photos of trips abroad, his wife, Zhao Yanling, asked that "sensitive topics" be avoided as much as possible. "I want to maintain the little bit of freedom we still have," she later explained.

Mao, who was seated next to her on a bulky armchair, took little heed, speaking with a frankness that might land a less esteemed public figure in jail. "The freer a country is, the richer it is. There are no unfree countries that are rich," he said in Chinese. Alert and focused but clearly frail, he wore gray long-underwear bottoms and a navy cardigan over a light blue button-down shirt. "The idea of communism is a tragedy, a disaster," he went on. "All countries that embraced communism have failed, without exception." Yet though Mao has continued to call for China to transition to a more unapologetically capitalist system, he doesn't advocate regime change or anything like it. To emphasize the point, he pulled out a yellowed copy of the constitution of the People's Republic, which nominally guarantees freedom of speech and assembly. "Everything I do is according to the constitution," he said.

Mao is essentially retired, and he sometimes spoke about Unirule as though it no longer existed, at one point describing it as having been "canceled." But he expressed confidence that China would bend toward openness and liberalization as the contradictions of a state-dominated economy become irreconcilable. "For the long term, you can very clearly see that the public sector has major problems and the private economy is very dynamic," he said. "For a market to be efficient, it must respond to market forces, not government."

China's current leadership might disagree, he recognized. "But I really believe the direction of the world is toward liberalization, not toward communism." The country, in his view, can't forever violate what he cast as near-immutable laws of human relations—his inversion of the Marxist notion that capitalism's inherent flaws will lead inevitably to its replacement. The trade war instigated by President Trump, he asserted, is less about specific policy disputes than the fundamental tension between antithetical philosophies, one of them doomed to fail. "The contradiction between the countries has to do with their systems, not trade," Mao said. And in China, "the system needs to change."

"The idea of communism is a tragedy, a disaster. All countries that embraced communism have failed"

In economic terms, Xi is hardly taking China back to the Cultural Revolution. Private companies and their leaders continue to be powerful actors, and in recent months he's made several statements of support for markets and entrepreneurship. Partly in response to pressure from the White House, China's rubber-stamp legislature passed a long-awaited law on foreign investment in March, promising to thin the web of restrictions that effectively exclude overseas companies from much of the economy.

Xi's overall strategy, however, is unprecedented: to harness the wealth-generating potential of the market while steadily restricting the sources of information and analysis on which the market depends. The media has been almost entirely muzzled, in line with the president's 2016 pronouncement that the primary role of the press is to serve the party. Many NGOs have ceased operations since a 2017 law required them to find official sponsors or face closure. Access to information from the uncensored non-Chinese internet, long quietly tolerated for its utility to businesspeople and academics, has been severely curtailed. Government economic data remains the object of significant suspicion from overseas analysts. And as Sheng and Mao have learned, publicly challenging official narratives from within China is almost guaranteed to attract a severe response.

Among researchers and government officials who might otherwise publicly question policy, these measures are having a predictable effect. "Very few younger economists are now willing to criticize the macro picture," says Victor Shih, a professor at the University of California at San Diego who studies Chinese banking and fiscal policies. In private, "there's still a debate, but none of them would ever put these thoughts into a journal article." Such repression is of course damaging China's scholarly output. But it could have broader consequences, too. The fear is that, with investors essentially forced to take the Communist Party's word on the state of the economy, unseen distortions could build up until a crisis arrives. And a crisis for China's economy would be a crisis for the world.

Quixotic though it may seem, Unirule's remaining staff say they're determined to mitigate that risk by carrying on until the ideological tide turns. Even with their operations badly hobbled, Sheng and his colleagues continue to publish. Their latest projects concern how the government allocates resources and how access to mobile broadband is transforming China's economy. Another, more provocative initiative will examine how to realize the constitution's Article 35—the section promising freedom of speech. "We will continue to work," Sheng said, "until it's impossible." —*With Xiaoqing Pi*

MONACO'S AMAZING RACE

Ninety years after the first running of the city-state's Grand Prix, it still reigns supreme on the Formula One calendar
By Hannah Elliott

Racing legend Niki Lauda takes a turn at the Grand Prix in 1985

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Edited by Chris Rovzar

Businessweek.com

The first place I ever hitchhiked was Monte Carlo. I'd never considered it before, but I found myself sun-cooked and far removed from my lodging—a whitewashed condo somewhere far above the sapphire Mediterranean—with no way to get there.

Sauntering along a narrow footpath near Quai des Etats-Unis in 2016, winding away from Monaco's gleaming seaside boutiques, I was exhausted but in high spirits. The day had been a cacophony of money, power, and adrenaline I was unlikely to experience anywhere else.

Each year in May, 200,000 of the human beings with the world's most outward-facing wealth engorge a city the size of New York's Central Park. They're here to imbibe Formula One's dizzying Monaco Grand Prix—this year the sixth race in the sport's 21-stop global tour and always its most glamorous. "Winning the Monaco Grand Prix is the highlight of any racing driver's career," Nico Rosberg, who won in 2013, 2014, and 2015, told Sky Sports.

The 2.094-mile Circuit de Monaco course winds directly up and down the narrow switchbacks carved by the city streets, making it impossible for even pedestrians to traverse any main arteries. Surrounded by cars and excess that day three years ago, I'd chuckled at the irony: I needed a lift.

THE INSTITUTION

The first Monaco Grand Prix was held in 1929, and it's been running every year, uninterrupted, since 1955. It's the jewel in the crown of the Formula One circuit, the famous open-cockpit racing series for teams such as Aston Martin Red Bull, Ferrari, and Mercedes-Benz. If you want to reach driving immortality, you must triumph here: Brazilian god Ayrton Senna won six times, Michael Schumacher won five. F1's current star, Lewis Hamilton—the 12th-highest-paid athlete in the world—has won twice. Fresh off victories in China and Barcelona, the 34-year-old Brit is poised to do it again on May 26, which would be convenient, since he also lives here.

He'll have his work cut out for him. With 78 laps, 161.73 miles in total, Monaco's grand circuit is the most dangerous and technically demanding in an F1 calendar, which includes a night race through the crammed thoroughfares of Singapore.

The drivers piloting these 1,000-horsepower rocket ships must abruptly shift speeds here, going from 185 mph to just 30 mph as they combat the gravitational force of up to five Gs on tight curves. "To achieve anything," 1961 Grand Prix winner Stirling Moss famously said, "you must be prepared to dabble on the boundary of disaster."

The average driver changes gears 3,666 times during the 90-minute race, and there are often inferno-inducing crashes—particularly coming out of the course's tunnel. Australian Daniel Ricciardo holds the record for the fastest single lap ever run, covering its expanse in 1:10.81 last year. When asked how he felt after placing second in 2016, he replied: "Like I've been run over by an 18-wheel truck."

THE SCENE

Kings and princes watched Ricciardo's feat, along with shipping scions and their tanned associates. Then there are the modern-day royals: Drake and Elton John, Rihanna and Gigi Hadid. The latter come wearing diamonds and watches priced like Porsches to hobnob with peers in paddock clubs and pit lounges; they perform at after-parties at established hot spots Buddha-Bar and Jimmy'z, or at swank pop-ups such as the party thrown by New York's 1 Oak.

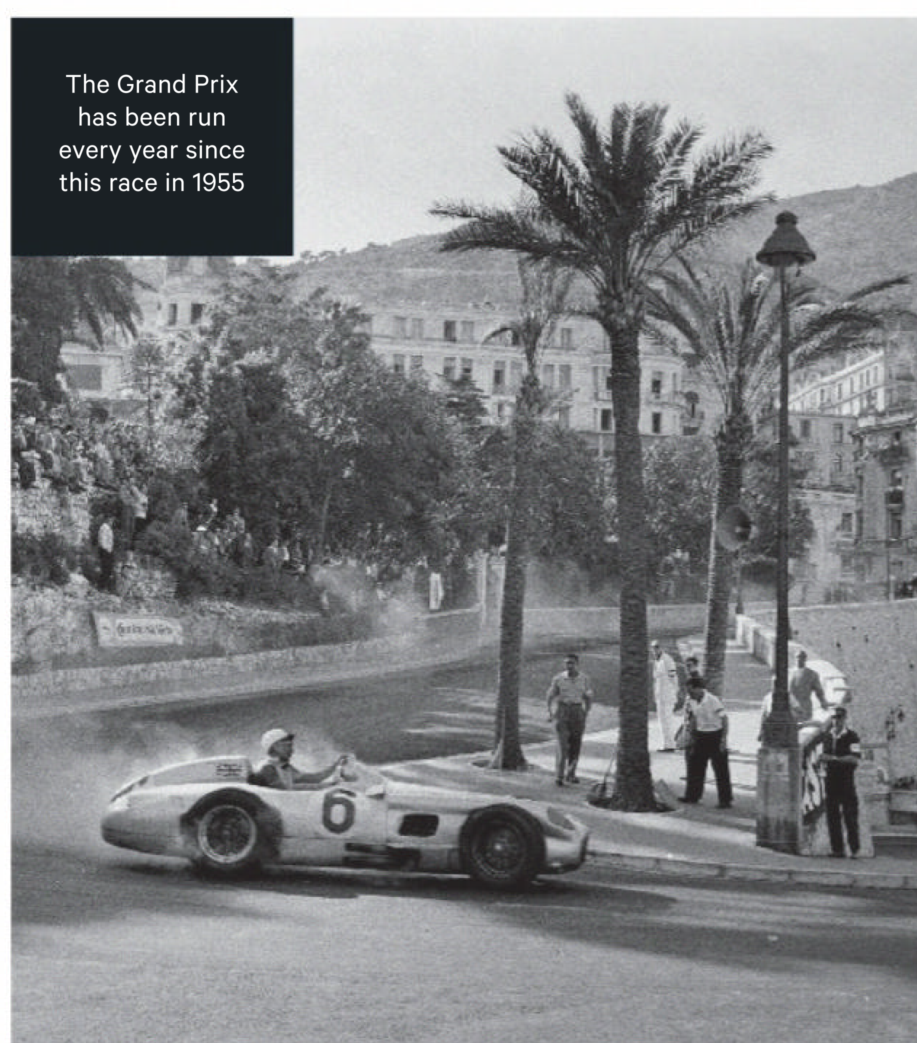
The Monaco F1 soiree circuit starts early in the week, as *Symphony* (owned by LVMH Chairman Bernard Arnault), *Musashi* (owned by Larry Ellison), and other superyachts pull into the bay fresh from Mykonos and Ibiza. Mornings start late, with a midday brunch, some swimming and shopping, and a late-afternoon rest back in your stateroom before dressing for sunset cocktails. In the cool of the evening, dinner will be at Odyssey, the exclusive Joël Robuchon restaurant designed by the late Karl Lagerfeld, or Omer, Alain Ducasse's chic new spot in the Hôtel de Paris Monte-Carlo. After dinner, there may be dancing until dawn—it helps if you have friends who work at the clubs; entry at 1 Oak for a mere mortal costs $10,000, and that's before you start drinking.

If you're not crashing on a friend's yacht, you'll want to look to the grand Hotel Metropole Monte-Carlo, which houses Odyssey, or the vast Fairmont Monte Carlo, perched on the water's edge. (Book early; rates can swell past $8,000, more than 10 times the price of a room in low season.) Villas can also be rented in the hills around the city.

THE MONEY

Like Hamilton, many current and former F1 drivers own homes here. Looking up from the oceanside promenade, you see slopes jammed thick with villas hidden by bushy palms and discrete retaining walls, like mini feudal castles. It's difficult to resist a tax haven placed in the center of Europe's most stunning coast; the lack of capital-gains and income taxes and low inheritance taxes has contributed to an estimated $1 trillion sitting untaxed in the principality's bank accounts.

In fact, the Monaco Grand



The Grand Prix has been run every year since this race in 1955

PREVIOUS PAGE: ALAMY. THIS SPREAD: MAURICE JARNOUX/GETTY IMAGES; DAVID DAVIES/ALAMY

Sunbathers enjoy the weather as Hamilton drives by during a practice session in 2008

Prix has such élan that it's the only F1 locale in the world that doesn't pay anything near the roughly $30 million standard fee for the privilege of hosting. Where other cities lobby and then ante up to have billionaires descend on them, Monaco just sits back and puts out the vibe.

The race's promoting committee, the Automobile Club de Monaco, gets to keep all revenue generated throughout the weekend as well. The budget to produce the Grand Prix—which requires 50 engineers to erect 20 miles of temporary safety barriers and 1,100 tons' worth of grandstands—is about €36 million ($40.4 million), including a €6 million subsidy from the state. Trackside advertisers such as Vodafone Group Plc and Royal Dutch Shell Plc pay much of the cost in the millions of euros they spend to plaster their brands front and center along the course. Ticket sales also help. The cost to get inside the gates on Sunday's race day is $133. Seats in the grandstand start at $211 (already sold out) and can reach $734 (also sold out) and up. A view from a private terrace costs at least $2,000; access to the paddock club is $6,510. All told, the race weekend cull reaches €100 million, according to Michel Boeri, the Automobile Club's president.

THE RACE

But, oh, the thrill! That alone makes those ticket prices worth it. Any seat's a good one, with the ocean as the backdrop, the city rising behind you, and cars flying by so close you can feel the ground rumble as they approach. It's visceral drama that combines the energy of the Super Bowl, the pomp of Wimbledon, and the split-second, doom-avoiding calibrations of the Kentucky Derby—then hits fast forward.

The race itself starts with the wave of a bright green flag as fans stand in their seats, craning to see the starting grid. The cars are so low they seem to graze the asphalt as the contestants swerve to warm their tires and jockey for position. With the safety halos on top obscuring the drivers' faces, the cars become the focal point. Hamilton's is painted black, teal, and silver for Mercedes; Sebastian Vettel is ensconced in a blazing Scuderia red Ferrari. Drivers vie for the best line around corners, overtaking one another as they barrel down the straights. McLaren often has the fastest pit stops—roughly 2.5 seconds to change all four tires.

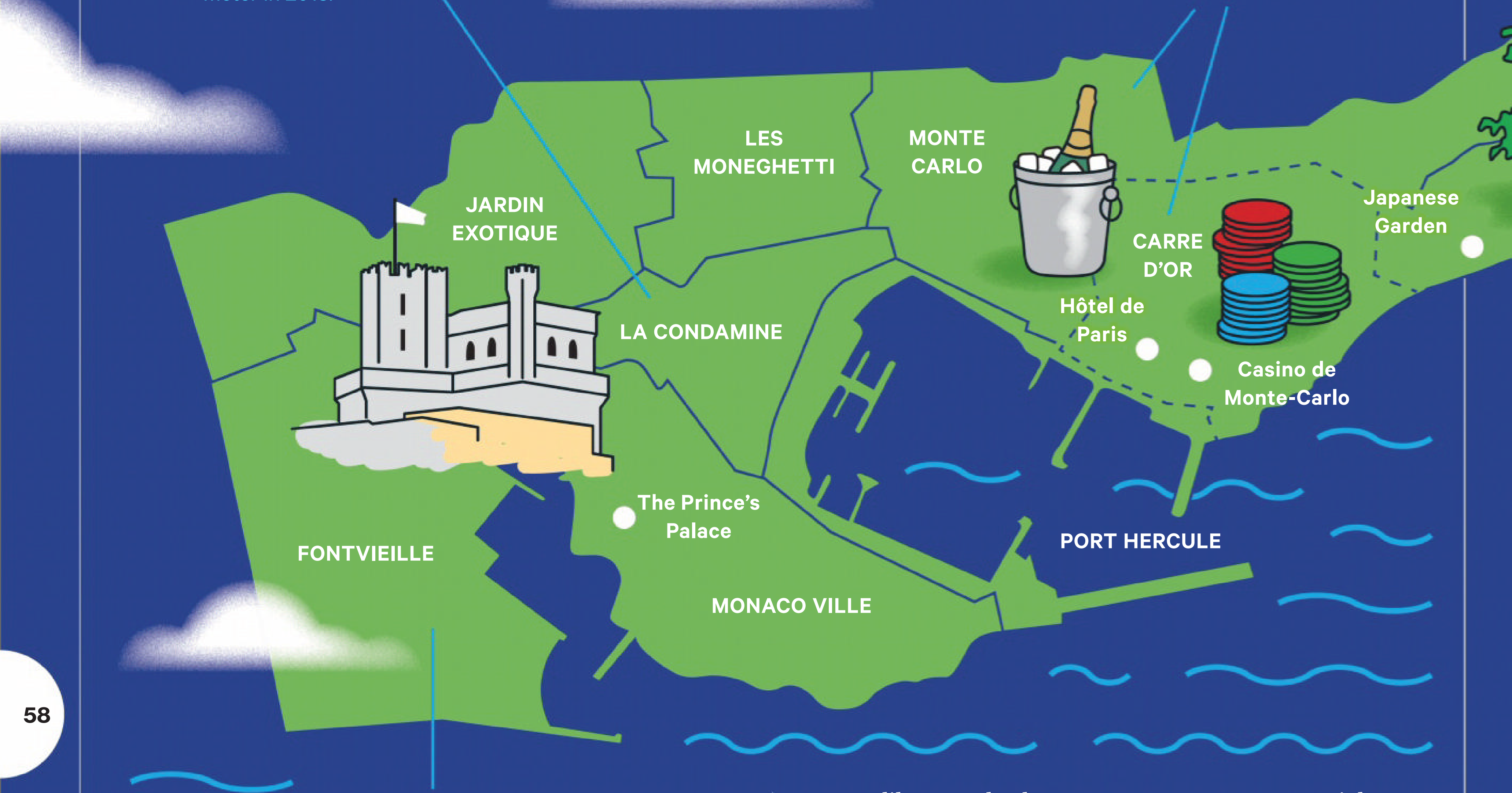
The winner, lately, has been Mercedes, an inevitability that's become tiresome for John Malone, the Denver media magnate who bought F1 for $4.4 billion in 2017. Smart watchers will look for Malone to shake things up, potentially by imposing spending caps to curb the influence of money on the outcome.

For two hours, Monaco becomes a universe of sensory overload: Engine notes pierce the salty air; grease and burning rubber permeate hair and clothes. You'll want lots of euros for refreshments, gobs of sunblock, and a hat for the wind. You'll be buzzing for days, physically and emotionally. And that's even if you don't, like I did, brush past Naomi Campbell in her full glory, wearing pristine summer white and stilettos as she slow-motion strutted down the pit lanes.

After the winner is crowned, the evening brings delights of its own. And I was ready, rescued from my unplanned walk by a gentleman on a Vespa, wearing a slim gray suit and loafers. He didn't speak a lick of English; it was just as well. My next stop was a celebratory dinner in the gilded rooms of the Hôtel de Paris and then an after-party inside the palatial Casino de Monte-Carlo next door. But first, I needed a nap. B

LA CONDAMINE
An easy stroll from the International School, a picturesque market, and the harbor of Port Hercule, this neighborhood had the sharpest increase in price per square meter in 2018.

MONTE CARLO AND THE CARRE D'OR
The primary hotel and shopping district in the city is adorned with belle epoque buildings, including the legendary casino and opera house. It's also Monaco's most expensive: The average price reached €56,000 per square meter last year.



FONTVIEILLE
Built on land reclaimed from the sea, the infrastructure here is relatively recent. It's a popular option for newcomers testing the market or families seeking to avoid the noise of the many renovation projects under way elsewhere.

MOVING TO ... MONACO

Getting Into Europe's Hottest Club

There are no real estate bargains to be had in Monaco. But the taxes are so, so low, the global wealthy are flocking there anyway
By Fabio Benedetti Valentini

It seems like everybody wants to move to Monaco right now—everybody who is super rich, that is.

Real estate in the sunny principality on France's Mediterranean coast is experiencing a surge in demand. Last year, home prices in the city-state's secondary market rose to €48,800 per square meter ($4,560 per square foot), an 18.1% increase from 2017. The value of total transactions came to €2.7 billion, according to Monaco's statistics office.

Interest is being driven by exclusive, large apartments. Sales fetching €5 million or more set a record in 2018, almost doubling the number logged five years ago. According to data from Savills Plc, Monaco has surpassed Hong Kong as the most expensive city in the world in which to buy prime property.

Stock remains tight in the family-led principality. The unpredictable twists of Brexit have created a wave of interest from wealthy British families worried about potential upheaval in the U.K., including in the real estate market. Some have already made up their minds. Monaco is home to high-profile Brits such as cyclist Chris Froome and Philip Green, chairman of Arcadia Group Ltd. and owner of Topshop and other clothing companies. To the global rich, Monaco offers a singular enticement—most living there don't pay tax on income or capital gains. Inheritance taxes can vary, but they're particularly low compared with those in other countries.

The process of buying a home here is unusual for several reasons. Most newcomers must fulfill various conditions to

ILLUSTRATION BY JACI KESSLER LUBLINER

TRY BEFORE YOU BUY

A relatively easy way to enter the Monegasque real estate game—and get the benefits of residency—is to rent. And one of the most promising new builds is **One Monte-Carlo**, a modern, eco-friendly residential project. Its seven curved-glass buildings sit along the principality's most coveted strip of land—Place du Casino, the chicest corner of Monte Carlo.

This undertaking and a toe-to-tip renovation of the Hôtel de Paris Monte-Carlo, both spearheaded by hospitality juggernaut Monte Carlo Société des Bains de Mer, cost €600 million. The Monegasque architect Alexandre Giraldi designed the One Monte-Carlo buildings, while Ivan Harbour, a senior partner at Rogers Stirk Harbour + Partners, imagined it as a new ecosystem within the city. "It's a piece of urban renewal," Harbour says. "It is very much about improving the livability, making the city more pleasant to walk around, trying to humanize it."

The 37 apartments have Mediterranean views and interior design from Bruno Moinard, who did the revamp of the Plaza Hôtel Athénée in Paris and the new Four Seasons Hotel in London. The annual rents range from €250,000 (for 60 square meters) to €3 million (for 800 square meters) for the apartments, which have herringbone-patterned parquet floors and all-marble bathrooms. Some of the upper-level units come with private swimming pools.

Residents are also afforded valet parking, 24-hour concierge service, and access to one of the finest spas in Europe—the pink-marbled Thermes Marins Monte-Carlo, which includes a heated seawater pool and cryotherapy room. Downstairs, Michelin-star chef Marcel Ravin's new bistro-patisserie concept Mada One is available exclusively to One Monte-Carlo residents and visitors, who also have the option to order room service from the Hôtel de Paris Monte-Carlo. —*Ross Kenneth Urken*

get long-term residency and qualify for the tax benefits: They must buy or rent housing proportionate in size to their family's need, provide a clean criminal record, and deposit at least €500,000 into a bank account in Monaco. (The principality's tax regime generally doesn't apply to those with a French passport, and Americans must pay U.S. taxes wherever they are.)

Other quirks are more real-estate-centric: External areas such as a terrace can be priced the same as interior space, for instance. A three-bedroom, 280-sq-m apartment with a 100-sq-m terrace that looks out on Cap d'Ail is listed at Sotheby's for €26.9 million.

These sky-high prices reflect Monaco's strengths as well as the light-tax policies. It's centrally located in Europe, has a steady political system, and enjoys a mild coastal climate. "Making a safe choice in terms of real estate investment is clearly a major worry for those considering to move in," says Florian Valeri, who founded an eponymous agency in the city. "After a peak of buyers from Russia and Eastern Europe a few years ago, we see lots of interest from U.K. residents."

Only about 1 in 4 of its almost 40,000 residents holds Monegasque citizenship, and a quarter of all its population in 2016 had moved in during the previous eight years. Almost half are 50 or older. "Of course there are retired businessmen, and also media stars and sports champions, but most of those moving in are not under the spotlight," says Irene Luke, managing partner at Savills Monaco. "They are generally entrepreneurs between 40 and 60 years old, often still active and successful, who are attracted by Monaco's advantages."

But property is scarce. The total land area is less than a square mile—the only country on Earth that's smaller is Vatican City—and the housing market is dominated by apartments in multistory buildings often a few decades old. Last year only 89 new builds came to the market; there were 15 in 2017.

Appetite is strong for buildings of all ages. As can be expected, sea views come with a premium, and high-floor, four- and five-bedrooms command the market.

The most in-demand neighborhood is **Monte Carlo**, which encompasses the **Carré d'Or** ("Golden Square") shopping district. Quintessential landmarks, including the Hôtel de Paris Monte-Carlo and the Casino de Monte-Carlo, are all located here. A 1,915-sq.-ft., two-bedroom apartment in the Mirabeau residence with a terrace that has views of the casino and the ocean is listed by Christie's for €21.9 million.

Fontvieille, one of Monaco's newer districts, is built on land reclaimed from the sea. The neighborhood has a relatively deep offering of two- and three-bedroom apartments, a park, several restaurants, and sports facilities. A 90-sq-m one-bedroom, which includes a 13-sq-m terrace, is listed with agent Caroline Olds for €3.9 million.

If you're looking for an authentic Mediterranean neighborhood, the closest you'll find here is **La Condamine**. It consists of a mix of three- or four-story "bourgeois buildings" and newer, taller ones. The Valeri Agency has listed a one-bedroom apartment in the new Le Stella building for €4.6 million. It's not a palace, but there is a view of one—the home of Prince Albert II on Le Rocher—from its 14-sq-m terrace facing the Mediterranean. Ⓑ

COURTESY MONTE-CARLO SOCIÉTÉ DES BAINS DE MER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ANONIMO
ORIS
PANERAI

A Winning Bronze Finish

The ancient alloy gets upgraded for the wrist. *By David Graver Photograph by Graham Pollack*

In 1988 watch designer Gérald Genta—the mastermind of Audemars Piguet's Royal Oak and Patek Philippe's Nautilus—unveiled the Gefica under his own company shingle. Eschewing a case of fancy gold or cheaper stainless steel, Genta chose bronze. It wasn't a common timepiece material, being more frequently associated with a third-place medal or the advances of very early civilization.

Today, alongside high-tech ceramics, future-forward carbon fiber, and technically superior titanium, bronze has become an alloy of choice for prominent and independent watch brands alike. The combination of copper and tin (or, alternately, aluminum) can quickly develop a patina, the earthy discoloration caused by copper oxidation. Since that patina will be slightly different for each wearer, bronze is "a living material," says Ander Ugarte, Tudor SA's head of design, changing over time depending on an owner's experience.

Bronze resists corrosion in seawater, which is why it has an illustrious history of use for ship hardware and housings for nautical clocks. In 2011, Officine Panerai-Firenze SA chose the material for its Bronzo diver. By then bronze had undergone cosmetic advancements—and its likelihood of leaving a greenish mark on one's wrist had diminished. Zenith, in 2015, joined the club with its Pilot Type 20 Extra Special. One year later, fervor over Tudor's Black Bay Bronze would officially set a trend ablaze.

Tudor has released four versions of that watch—its latest has a slate-gray dial. All feature an alloy the brand spent three years developing; according to Ugarte, it hoped to control the oxidation process in a way that would "allow for the development of a patina that is consistent and beautiful," with a dark chocolate tone.

Davide Cerrato, managing director of Montblanc's watch division, adds that "bronze has strongly taken hold despite regular rumors that the trend will stop soon." Like Tudor, Montblanc uses an alloy enriched with aluminum.

There's a heft to bronze. It's also antimagnetic and quite durable. But the real value is in the patina, a record the watch keeps of its time with the wearer.

1. Anonimo Militare chrono A strap buckle and pushers in bronze complement a 43.4mm case. A scratched dial in the same color, meanwhile, imitates the alloy's patina. *$5,080*
2. Oris Divers Sixty-Five "Bico" in steel and bronze No stranger to bronze watches, Oris taps into the two-tone trend with a 40mm stainless-steel case and bronze-insert bezel. Center links in the bracelet also feature bronze. *$2,200*
3. Tudor Black Bay Bronze slate gray The latest Tudor pairs a 43mm case with a screw-down winding crown and rotating bezel, all in bronze, with an inlaid slate-gray bezel and dial. *$4,050*
4. Zenith Pilot Type 20 Extra Special One of the pioneers in the bronze trend, Zenith draws from its aviation watch history—with glow-in-the-dark SuperLuminova on the numerals. *$6,700*
5. Panerai Submersible Bronzo 47mm Panerai modifies its classic Bronzo with a new ceramic bezel. *$16,500*
6. MeisterSinger No. 03 At the BaselWorld trade show in 2019, MeisterSinger GmbH introduced several bronze iterations of single-hand classics from its roster, such as this one with a teal dial. *$2,260*
7. IWC Pilot's Watch Chronograph Spitfire This 41mm bronze chronograph has a soft-iron inner case to combat magnetic fields. *$6,250*

PROP STYLIST: ALEX BRANNIAN

A Market Out of Control

How a few gallerists persuaded the world's richest people to spend millions on contemporary art

By James Tarmy

In 1986, 26-year-old Jean-Michel Basquiat was earning $1.4 million a year making art. Dealers in the U.S. and Europe were wiring the onetime graffiti artist $40,000 in lump sums. But "the more money Basquiat made, the more paranoid and deeply involved with drugs he became," writes Michael Shnayerson in his new book, *Boom: Mad Money, Mega Dealers, and the Rise of Contemporary Art*. Less than two years later, Basquiat died of a heroin overdose. Then his prices really took off—his auction record, set in 2017, is $110.5 million for a 1982 painting of a skull.

In this highly readable chronicle, Shnayerson argues that contemporary art, once a thing artists made and dealers tried (unsuccessfully) to sell, has become a form of fiat currency for the very rich. He traces that shift to a man named Leo Castelli, who made his money by marrying into it. Castelli began his career in the late 1950s selling art out of his father-in-law's Upper East Side town house.

Soon he was representing the giants of American modernism: Johns, Lichtenstein, Rauschenberg, Serra, Stella, Twombly, and others whom Castelli kept loyal with stipends that started in the low thousands of dollars and grew to more than $50,000 a month. At the time Castelli was making those payments, it was virtually unheard of, Shnayerson writes; today it's become standard practice.

In *Boom*, Castelli is positioned as the nucleus of the art world's subsequent big bang. He mentored powerful dealers Mary Boone and Marian Goodman—Shnayerson, a *Vanity Fair* contributing editor, goes out of his way to acknowledge the artists and dealers who became fixtures in New York's constellation of stars past and present—but the real supernova in this book is gallerist Larry Gagosian, who entered Castelli's life as a tenacious, no-holds-barred salesman just as the older dealer was losing his touch. "What he needed was a young, strong, powerful enforcer," Shnayerson writes. He describes Gagosian as a bright, vicious social climber: "Castelli knew he would find no better protector than Gagosian, and he was willing to be extraordinarily generous to enlist his support."

That generosity entailed giving him access to the gallery's inventory, over time, and introducing him to major clients, including the billionaire S.I. Newhouse. Gagosian, in turn, used Castelli's imprimatur to pioneer what Shnayerson describes as a new market dynamic: "The higher the prices, the more his wealthy clients vied to pay, hoping that the more they paid, the more valuable their new works would become."

Gagosian worked the so-called secondary market, where art that's already been sold changes hands privately or at auction. He began to make serious money. In 1988, the same year Basquiat died, Gagosian bought a town house on East 69th Street for $4 million and, soon after, an 11,000-square-foot beach house in Amagansett, N.Y., for an estimated $8 million.

As more and more works sold for millions, top dealers and artists became as rich as their clients. In 1990 the Upper East Side dealer Bill Acquavella partnered with Sotheby's auction house to buy about $150 million of art from the estate of the dealer Pierre Matisse, son of Henri. "Within 18 months, [Acquavella] had sold $300 million of art," Shnayerson writes.

Even Lucian Freud, an artist not often associated with high living, had his own version of lavish expenditure. Shortly after joining Acquavella's gallery, Freud informed his new dealer that he had $4.6 million in gambling debts. Virtually every page of the book is filled with such tidbits, which Shnayerson has culled from articles, books, and interviews. (Full disclosure: I, too, am briefly quoted.)

More-recent transactions are given an ominous slant. In 2016 the megagallery Hauser & Wirth donated $3.6 million to a pet charity of the artist Mark Bradford. That same year, Shnayerson notes, it poached Bradford from his London gallery. The young Colombian artist Oscar Murillo was "awarded" a five-week summer residency at Don and Mera Rubell's family foundation, but the price of that residency was everything Murillo made while he was there.

Other anecdotes speak for themselves, such as when the artist Takashi Murakami severed ties with his pregnant dealer Marianne Boesky, telling her, "You're lactating—you can't be my business partner." He later joined Gagosian's gallery.

There aren't a lot of heroes in *Boom*, and yet it's Gagosian, whose brand is "now as important as the artists," who comes out best. "If he was blunt, even brutal," Shnayerson writes, "at least he didn't try to be anything he wasn't." Ⓑ

ILLUSTRATION BY STEPHEN CHEETHAM

Good Screen Time

The handsome Miku baby monitor gives new parents enough data to rest easy
Photograph by Joanna McClure

At the heart of parental sleep anxiety—or sweet, sweet relief—lies the baby monitor, an increasingly polarizing device nonetheless engineered to bring peace of mind. The Miku, which went on sale in January, is a tech-obsessed parent's dream, combining sophisticated design with artificial intelligence to provide data-filled updates on the sound, motion, humidity, and temperature in the room. Notably, the $400 monitor can also track an infant's breathing without requiring her to wear a dedicated device. It uses Wi-Fi to stream high-definition video and audio to an app on your phone.

THE COMPETITION

- The Cocoon Cam also broadcasts Wi-Fi-enabled HD video to an app, and at $150, it offers most of the high-end amenities (a breathing tracker, night vision, easy setup) in a more affordable package.
- When it comes to plug-and-play functionality, nothing beats the $200 Eufy SpaceView baby monitor. Using radio technology, which is less hack-prone than Wi-Fi, it transmits video, audio, and temperature readings to a 5-inch HD display—no app needed.
- The $300 Nanit has a premium data-driven subscription service (starting at $120 a year) that uses its sensors and the baby's age to make personalized sleep recommendations.

THE CASE

Some parents prefer the all-in-one simplicity of a Nest camera, which offers HD video and a two-way talk function, even though it wasn't designed for this use. What sets the Miku apart is its robust data set, which comes in easy-to-understand charts that put the information in context. (The device does require the sex and birthdate of the child to develop new features—that may turn off those concerned with data privacy.) Built-in Ole Wolff speakers offer crisp audio, whether you're playing its waterfall and forest sounds or using the two-way feature to talk to your tot. *$400; mikucare.com*

With Bloomberg Opinion

Slack Is Gossipy Email With Push Notifications

By Shira Ovide

Like the open-plan office, Slack has become a controversial fixture of white-collar work. The company behind this workplace instant messaging software, Slack Technologies Inc., is preparing to make its stock available for the first time on exchanges in a quasi initial public offering.

For the uninitiated, Slack is email-ish, but instead of an inbox it has "channels" open to a few or many co-workers. It's like getting a window into your colleagues' email inboxes that shows only the stuff you care about. Slack also ties into other software so a manager can see a Word document, scan tech support requests, and approve a worker's vacation in one place.

Slack was released in 2013, and tech and media companies became some of its most ardent adopters. Employees on Lyft Inc.'s corporate accounts team, for instance, use Slack to give their colleagues and bosses quick reports on potential clients, which are fed automatically into a sales database. Online clothing brand Everlane Inc. uses Slack to coordinate customer returns.

At its best, Slack is a place for productivity to blossom and for bonding to occur among co-workers who might not all be in the same office. Is this better than email? Mostly. Slack makes easy some collegial interactions that might not happen otherwise. It's useful if you work with different teams at once, and it's more conversational and fun than email. (Slack lets you create customized emoji replies and fire off a GIF of, say, Beyoncé, with a two-word command.)

That's also why there's been a Slacklash. Channels fill with irrelevant conversation or drown in dumb jokes. Like text messaging, the app feels as though it demands instant read-and-respond, giving the workday a frenzied feel. Email still exists, so Slack is an added attention hog. While the company tries to mitigate some of these harms, there's no shortage of Slack-frustrated workers. "I hate Slack" returns 13.7 million results on Google. The gripes show the push-back against unhealthy technology habits isn't confined to our personal lives.

Slack isn't the only young company sensibly seeking to replace the 20th century tech that has been grafted onto our 21st century workplaces—and also not the only one to engender love-hate emotions. The problem may be us, not the technology. It's easier to change software than to remold people and organizations ingrained with decades of bad habits. Ⓑ *—Ovide is a tech columnist for Bloomberg Opinion*

10m

● FAILING UP
Slack started in 2009 as a messaging app for employees of Slack Technologies' predecessor. Today it has more than 10 million daily users.

● FAN CLUB
Most organizations using Slack pay nothing. Some 40% of revenue comes from the 575 customers with $100,000-and-up subscriptions.

ILLUSTRATION BY GEORGE WYLESOL

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a change-maker,
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