Bloomberg Businessweek
January 10, 2022

How Jessica Simpson Bought Her Name Back

When your billion-dollar empire implodes, you get a loan, go to bankruptcy court, and start over 32


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Some things you don't.
The trick is to be ready
for anything.
Pablo from Infrastructure Support is
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So you can keep on.
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Bloomberg Businessweek

January 10, 2022

◀ Girls in a safe house in Narok, Kenya, in April

PHOTOGRAPH BY NICHOLE SOBECKI FOR BLOOMBERG BUSINESSWEEK

FEATURES

CORRECTION

Because of a processing error, "Ola's Scooter Factory Isn't Making Many Scooters" (Technology, Dec. 27, 2021) wasn't the latest version of the story. A corrected, longer version can be found at https://bloom.bg/32R6QIP.

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■ COVER TRAIL

How the cover gets made

❶

"This week we have a story about Jessica Simpson getting her name back."

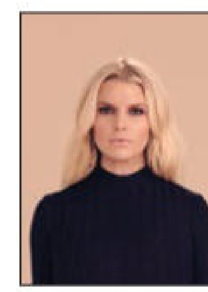
"Where did her name go?"

"Well, she licensed it out, and it did great for a while, but then things went south fast."

"Do we have a good photo?"

"We have a GREAT photo."

❷



"Yeah! She looks like a person who's getting her name back, for sure."

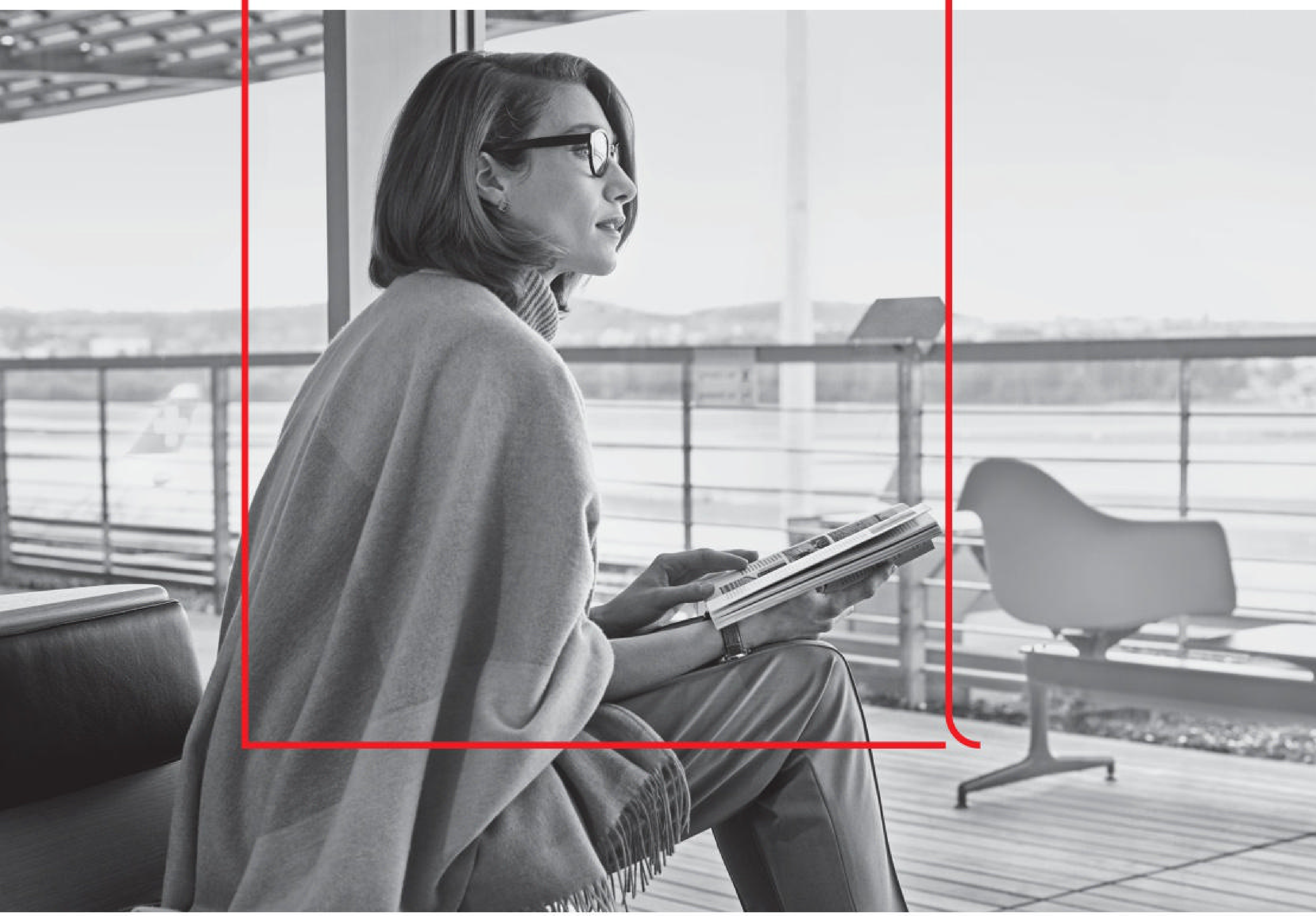
"What's *with* you?"

"I just don't understand how you lose a name."

"Well, that's what we have the story for."

Cover:
Photograph by Ramona Rosales/August

ECONOMICS: ANDREY RUDAKOV/BLOOMBERG

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■ IN BRIEF

● Global coronavirus cases have passed 242 million,

5.4m

people have died, and more than 9.2 billion vaccine shots have been given. With the omicron variant running rampant, the U.S. set a global record of more than 1 million new Covid-19 diagnoses on Jan. 3—almost twice the previous record, set just days before.

● Kazakhstan was rocked by violent protests over political and economic stagnation.

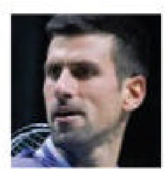
Protesters stormed the mayor's office and attempted to seize the presidential residence in Almaty, the country's largest city, on Jan. 5.

● Hundreds of motorists—including Senator Tim Kaine—were stuck in heavy snow for more than 20 hours along a 50-mile stretch of Interstate 95 in Virginia on Jan. 3. Heavy snowfall on the East Coast has caused power outages and traffic accidents.

● "The unvaccinated, I really want to p--- them off. And so we're going to continue doing so, until the end. That's the strategy."

French President Emmanuel Macron lashed out at militant anti-vaccination activists, threatening to cut them off from public life as much as possible to increase the take-up of Covid shots as infections across Europe surge once again.

● The Australian Border Force decided on Jan. 5 to deport Novak Djokovic.



After holding the tennis star overnight at the Melbourne airport, the ABF canceled his visa, saying he'd failed to supply proof that he qualified for a medical exemption to play in the Australian Open without being vaccinated against Covid. Lawyers for the nine-time Open winner, who was set to fly home on Jan. 6, said they'd appeal the decision.

● Apple's market value briefly rose to about

$3t

on Jan. 3, setting a record. The stock first reached $1 trillion in mid-2018 and $2 trillion about two years later.

● Government authorities in China's Hainan province gave Evergrande 10 days to demolish 39 nearly completed condos.

The order followed what local officials say were construction and environmental violations. The embattled developer has appealed the order.

● The Fed said higher inflation and a strengthening economy could lead to faster-than-expected rate increases, according to minutes from its December meeting published on Jan. 5. Stocks fell on the news, with the Nasdaq ending the day down more than

3%

● Elizabeth Holmes was found guilty of criminal fraud following the collapse of the Theranos blood-testing startup she helped build. The 37-year-old is likely to appeal. ▷ 8

● RIP, BlackBerry.

The handset that paved the way for mobile working two decades ago shut off software support for its remaining devices on Jan. 4.

I-95: CHIP SOMODEVILLA/GETTY IMAGES. MACRON: THIERRY MONASSE/GETTY IMAGES. DJOKOVIC: OSCAR GONZALEZ/GETTY IMAGES. BLACKBERRY: COURTESY BLACKBERRY

The Jan. 6 Committee Should Finish Its Job—And Let the Voters Make the Final Call

In the year since the Jan. 6 attack on the U.S. Capitol, the government has responded better than might have been expected. Law enforcement agencies have arrested and charged at least 700 people in 47 states. Congressional investigators have interviewed hundreds of witnesses. Federal courts have resisted efforts by former President Donald Trump and his allies to deny Congress access to documents and testimony. Despite fears that extremists might be inspired to commit more violence, there have been no repeat performances.

Such progress demonstrates the resilience of America's democratic institutions. It also underscores the need for the House select committee investigating Jan. 6 to quickly complete its inquiry and resist pressure to expand its scope. An open-ended probe that attempts to bring criminal charges against Trump and his inner circle would only undermine confidence in the committee's findings and embolden the same forces that staged the insurrection in the first place.

The investigation began slowly. After Republicans rejected proposals for a bipartisan commission, it took nearly seven months for the Democratic-controlled House to form a select committee. The panel has held only one public hearing, in which Capitol Police officers described being assaulted. Some former officials tied to the Trump White House, as well as Republican lawmakers who communicated with Trump on Jan. 6, have ignored subpoenas or otherwise refused to cooperate.

Despite the obstruction, the committee has collected more than 30,000 attack-related records. It's pressured recalcitrant Trump aides by holding them in contempt of Congress for failing to testify, which could subject them to prosecution. It's subpoenaed cellphone records of more than 100 people and requested access to Trump's presidential records, held by the National Archives. (In December, a federal appeals court denied his attempt to prevent their release; he's appealed to the Supreme Court.)

But while the committee has made progress, it now needs to pick up the pace. Its chair, Representative Bennie Thompson, says the committee plans to release "interim" findings by the summer, suggesting it intends to extend the probe deep into 2022. The committee should complete its work and issue an unredacted public report well ahead of the November midterms. That's more than enough time to produce a comprehensive account of the events surrounding the insurrection—and to recommend reforms to prevent future attempts to overturn election results.

At the same time, the committee should back away from suggestions that it will recommend criminal prosecution for senior Trump officials. While such referrals would no doubt satisfy the former president's critics, they would validate Republican arguments that the investigation is a partisan witch hunt. They're also unnecessary. Should the Justice Department ultimately determine that Trump or members of his administration committed crimes, it can still bring charges against them, with or without a referral.

The siege of the Capitol one year ago amounted to an attack on American democracy. The Jan. 6 committee can best serve the public interest by delivering an unvarnished account of what transpired on that day. The rest will be up to voters. *For more commentary, go to bloomberg.com/opinion*

AGENDA

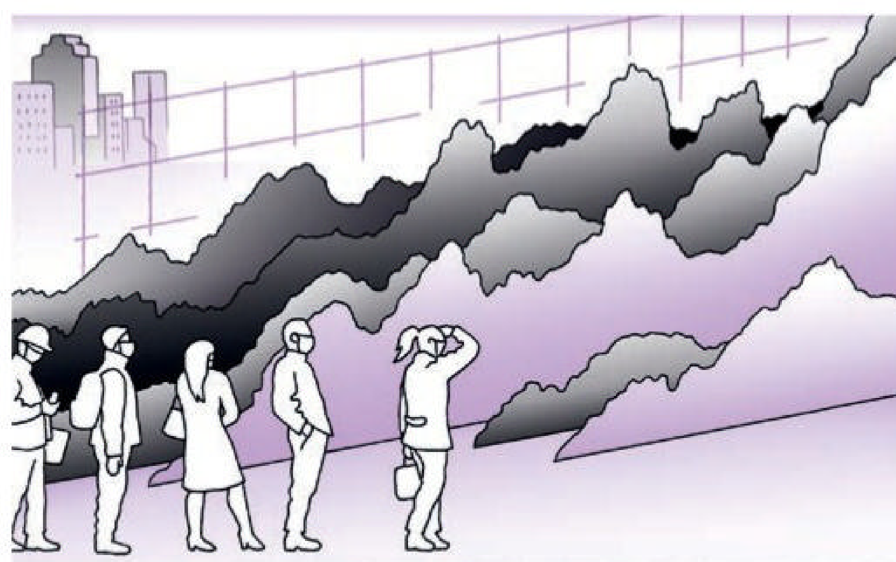


ILLUSTRATION BY DAPHNE GEISLER

▶ Money in the Bank

Citigroup, JPMorgan, and Wells Fargo kick off a busy week of fourth-quarter banking earnings on Jan. 14. Trading revenue likely boomed, but the omicron surge has Wall Street companies delaying return-to-office plans.

▶ The Bank of Korea sets interest rates at its Jan. 14 policy meeting. The bank hasn't ruled out a first-quarter increase after two rate hikes in the second half of 2021.

▶ On Jan. 13, Taiwan Semiconductor Manufacturing Co. reports fourth-quarter earnings. The numbers will provide a gauge for Apple and Huawei, which use TSMC chips.

▶ Billionaire money manager Jeffrey Gundlach, the chief investment officer at DoubleLine Capital, gives his outlook for 2022 in his *Just Markets* webcast on Jan. 11.

▶ Abu Dhabi opens Sustainability Week on Jan. 15, convening heads of state, policymakers, and industry specialists to contemplate life after fossil fuels in the Persian Gulf.

▶ UBS holds its Greater China Conference Jan. 10-19, most likely in a hybrid online/in-person format. The world's largest wealth manager is looking to win more Asian clients.

▶ Virgin Orbit will send its LauncherOne rocket into space on Jan. 12 from an airborne Boeing 747. Eight small U.S. government satellites and two from Poland will be released.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The Pointless Parable of Elizabeth Holmes

● Is there a lesson to be learned from Theranos? Is anyone learning it?

● By Ashlee Vance

We like to think our frauds mark important moments and teach us deep lessons. WorldCom and Enron took the greed of the dot-com boom too far, and their falls signaled a return to more sober times. Bernie Madoff's demise capped a period of gross financial engineering and reminded everyone that returns that seem too good to be true usually are. And now we have the fraud conviction of Theranos founder Elizabeth Holmes, which highlights the end of… well, possibly nothing.

Silicon Valley investors won't be changing their ways because of Holmes. Members of the venture capital class have made it clear that they never bought into Holmes or the miraculous tale she told about her blood-testing startup in the first place. Just about every venture capital firm that had a chance to invest in Theranos passed. It was the rich suckers with old family money who fell for her charms and scientific boasting, allowing Theranos to raise more than $1 billion. Because venture capitalists see no connection between Holmes and other problematic companies they've backed, they intend to go right on being infallible geniuses and leave the rubes to continue being rubes.

It wasn't just investors that Theranos hoodwinked. The company, founded in 2003, began receiving huge helpings of attention from the tech and business press around 2014. That was a simpler, more naive era in which reporters started in on each story with the assumption that technology was a force for good, rather than the source of all our modern ills. But we in the tech press don't plan to change our ways because of Theranos, either, because we've convinced ourselves we've already internalized the lessons of that era. More diligent and cynical now, we're no longer the types to be fooled by a good story and an unusual, charismatic leader.

As for Theranos's board of prominent names from the political and military spheres that gave the company credibility when it deserved none? I would dare suggest that the types of distinguished older White gentlemen who fell for Holmes may still be drawn to the charms of intelligent, attractive, younger women.

If Holmes's conviction does lead to something positive, it would be a curb on Silicon Valley's "fake it until you make it" culture. "The verdict signaled the end of an era," David Streitfeld wrote in the *New York Times*. "In Silicon Valley, where the line between talk and achievement is often vague, there is finally a limit to faking it." You can still fake it and fake it pretty big, but now there's a chance that you might get in real trouble, so maybe limit yourself to at least faking it a little less than Holmes did.

If you buy into this theory, then you have to ignore an awful lot about what's going on with technology and finance. The current incarnation of special purpose acquisition companies was engineered to get companies into the public markets in their earlier, riskier days, so they could take investment not just from wealthy old money families but from everyone with the Robinhood app on their phones. Startups still make wild promises about glorious futures. New flavors of finance like altcoins, meme stocks, nonfungible tokens, and all the rest take the whole situation to the next level. Some of what's going on in this world would classify as outright, Madoff-style Ponzi schemes, and there's a school of thought that it's now just fine to run a pump-and-dump scheme so long as you admit it out loud. One doesn't get the feeling that newfound limits of any sort have been discovered.

This situation is so frothy that, in fact, it almost makes you long for someone like Holmes. At least she put some artistry and effort into the fraud. If someone is selling you a cryptocurrency based on a dog meme, they should have the decency to don a nice costume, adopt an accent, and vacuum you into their unblinking gaze instead of simply spending a few minutes writing a Reddit post explaining how you can be rich, too.

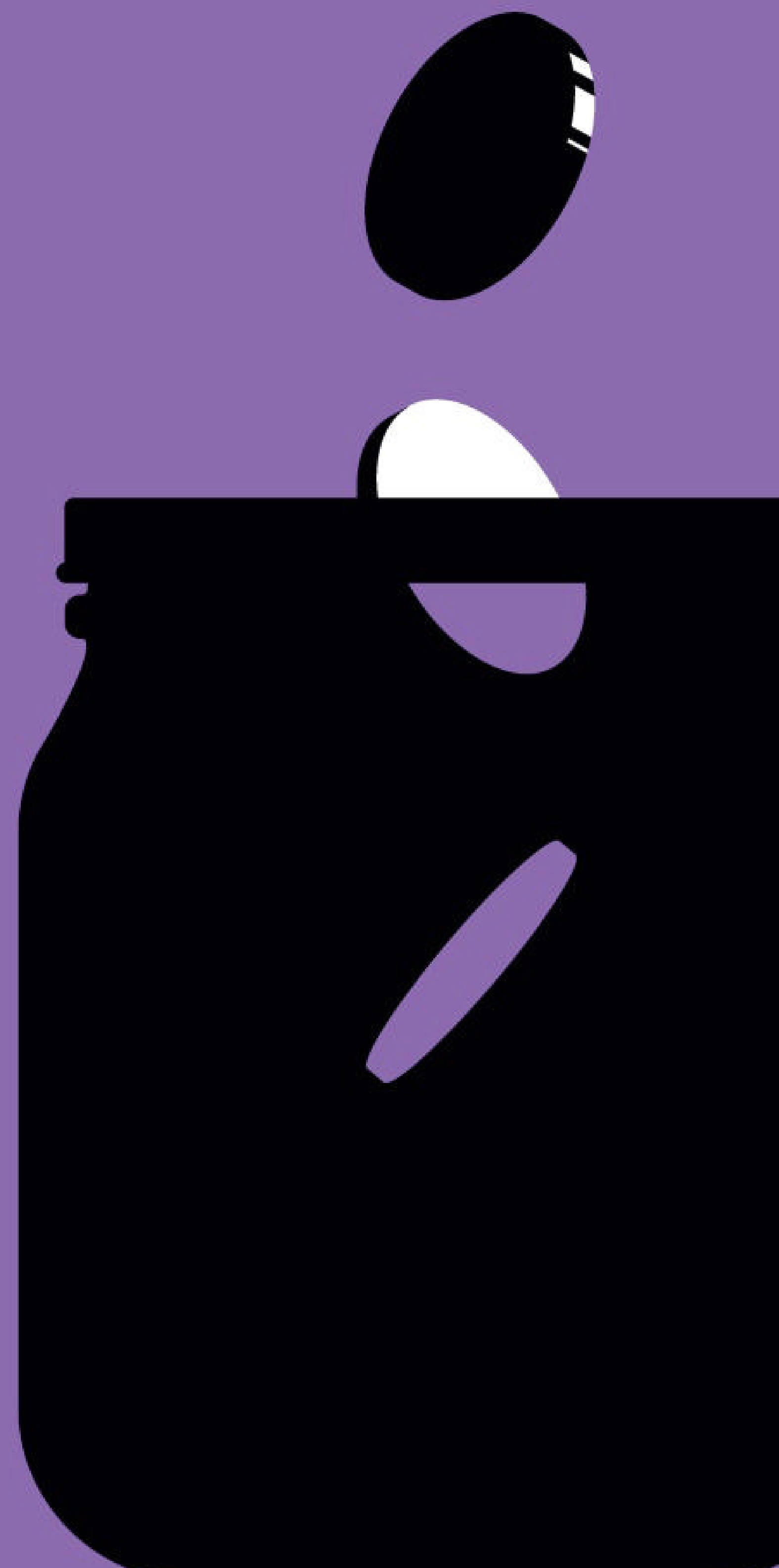
The sad reality of the Theranos debacle is that its major, lasting consequence may be that it makes life harder on some of the very people a successful Holmes could have helped the most: female entrepreneurs and chief executive officers, particularly those in the biotech industry. Take the case of Celine Halioua, who's founder and CEO of Cellular Longevity Inc., a company looking to extend the lives of dogs and one day possibly humans under the brand Loyal. "Every female founder working on something technically challenging or strange gets compared to" Holmes, Halioua says. "I've gotten it plenty of times. It's often phrased as a joke, but it's not actually a joke."

While raising funds recently, Halioua heard so many Holmes references from one potential investor that she turned down the money in the end. She saw his barbs as a sign of his sexism–and a reflection of his insecurity about whether he was really capable of understanding Loyal's technology.

Even though it's unfair, it's now up to people like Halioua to make it clear that Holmes was an anomaly in the biotech industry. "The only positive I have felt is that it's actually motivation to set a good example," Halioua says. "It highlights the importance of role models and how impactful it is to have a truly successful billionaire female founder CEO."

Ultimately, it may be hard to draw lessons from Holmes's fall because her story was rather exceptional. Even in an industry full of hucksters and greed, it's the rare person who's able to spin such a fantastic yarn for 15 years and lean into the lie with such unflinching gusto. The moral of Holmes's story is not some truth about the technology industry or where the world is heading. It's that every now and then someone who pulls off a ridiculous con gets caught. Ⓑ

AP PHOTO



1 BUSINESS

ILLUSTRATION BY 731

Edited by
James E. Ellis

No one would call 2021 an uneventful year. The U.S. Capitol was stormed in a would-be insurrection. Inflation surged to levels not seen in decades. And almost 300 million people worldwide were infected by Covid-19 as the emergence of variants wrecked any return to normalcy. But for bankruptcy, a sector usually goosed by global disruption, it was unusually quiet.

Large bankruptcies—those involving companies with at least $50 million in liabilities—dipped to 121 last year from 245 in 2020, according to Bloomberg data. That's below the 10-year annual average of 130. But that could change this year as stimulus money wanes and companies and their creditors try to figure out what to expect.

"A lot of people have the view that you're going to see an uptick in some combination of out-of-court restructurings, certainly by the second half of this year," says Felicia Gerber Perlman, who heads the restructuring group at law firm McDermott Will & Emery, as lenders try to assess a new normal.

Last year's shutdowns, from elective surgery to Broadway shows, froze the economy, making decisions on lending—or pulling the plug—tough. "It's hard to determine what the correct capital structure for a company is, hard for a lender to evaluate the business in the midst of the uncertainty that we were facing last year," Perlman says.

Filings were also scarcer last year because 2020's initial pandemic upheaval sent some already struggling companies into bankruptcy. So rather than limp along for a year or two, "all the companies on the brink got pushed into 2020" filings, says Michael Eisenband, global co-leader of FTI Consulting's corporate finance and restructuring unit.

For those not on the precipice, stimulus propped up both consumers and companies, the Federal Reserve kept interest rates low, and ample financing was available to businesses that might not have gotten a second look a few years ago. "We have never seen so many triple-C companies get financing," Eisenband says, referring to the debt rating category S&P defines as "very weak."

That's due in part to the growth in the private credit market, which has risen to about $1 trillion. Such lenders, which include standalone funds and credit arms of such buyout fund managers as Blackstone Group Inc. and KKR & Co., are able to provide loans to midsize companies that Wall Street banks shun because, say, the borrowers already have a lot of debt.

Cheaper debt means a longer lifeline for companies, including the retail sector that accounted for much of the last batch of filings, says Derek Pitts, co-head of debt advisory and restructuring at investment bank Solomon Partners. That's a key reason he's not convinced a near-term wave of restructurings is coming.

Many weaker players in retail are gone, felled by excessive buyout debt, Pitts says, and the sector has returned to its traditionally low level of leverage. More broadly, even if the economic boom slows, he doesn't see an increase in filings because companies that want to borrow still can. "People are working, consumers are spending," he says. "What is it about this economy that isn't right for lending? Nothing."

Companies are taking advantage of the environment by extending debt maturities, removing a trigger for restructuring, Pitts says. So while the boom won't last forever, "you could see a lot more rolling refinancings in the years to come," which will allow companies to keep making their debt payments.

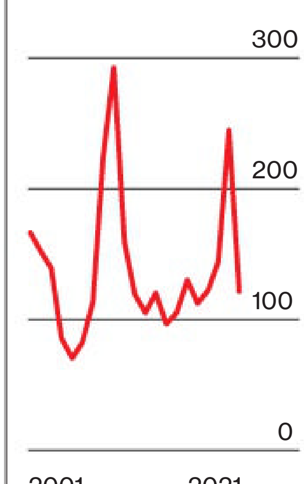
Perlman thinks that pool will shrink, though. A lot of private lenders eager to put money to work have already allocated it, she says, some to questionable deals, and "you're going to start seeing some of those unravel, which will put stress on those private lending markets as well." Then there's the uncertainty about interest rates and inflation, the latter being the top concern from the stakeholders she speaks with, she says.

"You're also now starting the year in a way people, if you'd asked them six months ago, wouldn't have expected, with omicron out there" and businesses shutting down again, Perlman says. "None of that was anticipated when people put money to work." It will prompt another reckoning on how and whether to lend new money.

While filings were scarcer, last year did see notable cases where bankruptcy was used to manage claims asserted against companies that filed and non-bankrupt related parties that "could have some major implications for the way that we practice bankruptcy law in the future," says Cullen Drescher Speckhart, head of the bankruptcy and restructuring practice at law firm Cooley. That includes overturning a multibillion-dollar settlement that would have shielded Purdue Pharma LP's owners from future lawsuits. This year, Speckhart expects restructurings to pick up out of court, while industries that rely on foot traffic, such as retail, hospitality, and dining, will still be at risk as the pandemic drags on.

As government funds wind down, companies will have to rely more on their lenders. But some "can't go to the well again" once lenders reassess their portfolios when things normalize, FTI's Eisenband says. "Some of them are going to have to wait to see how some of these aggressive investments pan out" before committing more money, he says. "There was just too much money in the system in '21. Now we're getting into a more traditional cycle."

▼ Corporate bankruptcy cases filed in U.S. courts*



*CASES INVOLVING LIABILITIES OF AT LEAST $50 MILLION. DATA: COMPILED BY BLOOMBERG

Energy and retail companies dominated the last cycle of bankruptcies; Brooks Brothers, Chesapeake Energy, and JCPenney all sought protection in 2020. Eisenband says energy will remain "choppy" next time, but he expects to see the most restructuring in technology, media, and telecom, spurred by the disruptive rise of streaming.

FTI has seen a slight pickup in restructuring over the last month or so, though Eisenband says he doesn't expect to see a notable uptick until at least the second half of this year. In the meantime, companies that are mismanaged or face industry disruptions can still tilt into distress. "There's a lot of broken companies out there," he says. —*Lauren Coleman-Lochner*

THE BOTTOM LINE After an initial surge at the start of the pandemic, large corporate restructurings fell by half in 2021, to 121. Rising interest rates and inflation could endanger the calm.

Lab-Grown Meat's Religious Conundrum

● Food tech startups are racing to market it, but meeting halal and kosher dietary rules is a challenge

After thousands of years of humans raising animals for food, the prospect of building a business around meat created in a laboratory instead of on farms or feedlots looks to be a huge technical challenge. Yet for food tech entrepreneur Josh Tetrick, success depends not just on scientists familiar with the latest advances in bioengineering but also on sages devoted to the details of religious dietary laws.

Tetrick is chief executive officer of Eat Just Inc., a San Francisco startup backed by billionaires Marc Benioff, Peter Thiel, and Facebook co-founder Eduardo Saverin that's developing meat that's grown in bioreactors rather than raised on farms. Unlike plant-based products from Beyond Meat Inc. and Impossible Foods Inc., cultured meat is grown from animal cells and is structurally identical to meat. "From a genetic, from a nutritional profile, it is meat," Tetrick says. "You just don't have that slaughter component as a step in the whole process."

But that lack of bloodshed creates all sorts of questions for religious Muslims and Jews who only eat such meats as beef, chicken, or lamb from animals slaughtered according to long-established rules. For instance, can meat be halal or kosher if it's grown in a lab and doesn't come from a killed animal? Is it really even meat? These are no small questions given that billions of people globally subscribe to faiths or traditions that have strict guidelines about meat preparation.

Tetrick is betting that today's technology can find favor with ancient traditions, ushering in a new way to satisfy the world's ravenous appetite for protein. In 2020, Eat Just began selling lab-grown chicken nuggets in Singapore, and in December it received permission to introduce cultured chicken breast there. The company, which raised $267 million in 2021, is now targeting Muslim consumers—in August it announced plans to build a facility in Qatar. While Eat Just has consulted with religious experts, it hasn't yet gotten a seal of approval for its new type of meat. "It's a really important question, maybe even more important because of what we're going to be doing in Qatar," Tetrick says. "But we don't have that stamp yet."

Agribusiness giants aren't waiting for such questions to be settled before entering the industry, which is still in its development stage and could be worth $25 billion by 2030, according to McKinsey & Co. Brazil's JBS SA, the world's top supplier of animal protein through brands including Swift and Primo, agreed on Nov. 18 to acquire Spanish cultured meat company BioTech Foods for $100 million. Archer-Daniels-Midland Co.'s investment arm, ADM Ventures, co-led a $347 million investment in Israeli startup Future Meat Technologies, the companies announced on Dec. 20. Cargill Inc. and Tyson Foods Inc., along with Bill Gates and Richard Branson, are investors in California-based lab-grown meat developer Upside Foods. ▶

◀ Cultured meat will be off-limits to observant followers of Islam—the world's second-largest religion, with about 2 billion adherents—if Islamic authorities decide it's not halal. Indonesia's largest Muslim organization, Nahdlatul Ulama, did just that in September, saying in a statement that cells taken from live animals and then grown in bioreactors fall "into the category of carcass which is legally unclean and forbidden to be consumed."

The fatwa from Indonesia, the world's most populous Muslim nation, could encourage authorities in other countries to issue similar decisions. In Pakistan, the second-largest Muslim country, scholars led by Islamic law expert Muhammad Taqi Usmani last year ruled cultured meat permissible only if the original cells come from animals slaughtered according to the Sharia-compliant process. However, many startups rely on cell lines that originated in live animals.

The industry also faces a challenge with observant Jews, since rabbis have yet to reach agreement on whether meat can be kosher if it's not from an animal killed by a ritual slaughterer. Jewish authorities also worry about the use of fetal bovine serum (FBS), taken from the blood of fetuses killed during the slaughtering of pregnant cows, to feed the animal cells in the bioreactors. FBS could render the meat unkosher because of a prohibition against consuming blood, says Joel Kenigsberg, a rabbi with London's United Synagogue who studied Jewish law and science at Israel's Bar-Ilan University and is advising companies on kashrut issues. "This technology is so novel, so new, trying to find precedent is the greatest challenge," he says.

There's not even agreement on whether Jews should consider products grown in a lab to be meat, which can't be consumed with dairy products, or pareve, a neutral category that's neither meat nor milk. "What the companies call it doesn't matter," says Avrom Pollak, president of Star-K Kosher Certification Inc., a Baltimore-based organization that works with clients such as Nestlé SA and Walmart Inc. "There's going to be some who say that it's not really meat."

Many companies are trying to move away from using FBS. Israel's Aleph Farms, which cultivates slaughter-free beef, on Dec. 8 announced a partnership with Munich-based Wacker Biosolutions focused on nonanimal alternatives to feed the cells in bioreactors.

To address concerns about slaughter-free meat, Future Meat Technologies uses cell lines that originated with ritually killed cattle, chickens, and lambs, according to Yaakov Nahmias, its president. Future Meat, which is seeking regulatory approval from the U.S. Food and Drug Administration, aims to have its chicken in restaurants by early 2023 and expects to have its religious issues resolved by then. "We already have had several groups of rabbis visit. We are well on our way," Nahmias says, adding that winning Islamic certification won't be difficult. "It's going to be both kosher and halal," he says.

In Singapore, whose government has been the world's speediest in approving commercialization of cultured meat, Muslim experts are nonetheless taking it slow. "Novel foods such as these are new areas in Islamic jurisprudence and require appropriate religious research, analysis, and interpretations," the Islamic Religious Council of Singapore (IRCS) said in an emailed statement. "It is a new development which IRCS is studying in detail." *—Bruce Einhorn, Harry Suhartono, and Faseeh Mangi*

THE BOTTOM LINE About 2 billion people adhere to faiths with rules on slaughtering meat. Products grown in a lab could run afoul of those guidelines.

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Rusty Carter remembers the burning cross on his lawn as a child – the reaction to the campaign his father's North Carolina newspaper waged against the Ku Klux Klan. The Tabor City Tribune – which won a Pulitzer Prize for its efforts – grew into Atlantic Packaging, the largest privately held packaging company in North America. His grandfather's example inspired Wes Carter to battle climate change and pollution by encouraging his customers to use less packaging. "The folks at Wells Fargo have always believed in the vision of Atlantic, that we're trying to change the marketplace," he says.
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Cyberwar at the White House

● Anne Neuberger and the competition to set Biden's cybersecurity agenda

Anne Neuberger, the Biden administration's Deputy National Security Advisor for Cyber and Emerging Technology, organized a virtual summit on ransomware for Oct. 13, 2021. She invited representatives from about 30 countries and the European Union, but no one from several of the key U.S. agencies handling cybersecurity, including the Department of State, the Cybersecurity and Infrastructure Security Agency, and the newly created Office of the National Cyber Director.

Officials at all three agencies eventually received invitations to attend, but only as observers, and people at State and CISA came away feeling rankled, according to five people familiar with the summit who requested anonymity to discuss the politically sensitive event. The flap reflected mounting tension within the Biden administration as different factions vie for control over a critical policy area—and reinforced the impression that Neuberger, a former star at the National Security Agency (NSA), has developed into a sharp-elbowed power player within the White House. "Anne basically ran the summit like it was a covert operation," says a former senior U.S. cybersecurity official familiar with the planning, who asked not to be named because sensitive details are involved.

The stakes of bureaucratic tussling are high. Over the last year gangs of criminal hackers, some with ties to the Russian government, have carried out a series of disruptive attacks on U.S. businesses and critical infrastructure, and Russian President Vladimir Putin has shown little inclination to cooperate in attempts to rein them in. Rising tension with China raises the prospect of cyberconflict with an even more formidable adversary.

For more than a decade, U.S. cybersecurity policy has been hampered by confusion and internecine power struggles. Over the last two years of the Trump presidency, there was no one who had clear authority to take charge. The Biden administration seems to have the opposite problem. The president brought Neuberger into the White House last January, but she was on the job only a few months before the Senate confirmed Chris Inglis, a former mentor of hers, as the country's first national cyber director.

Inglis, who reports directly to the president, immediately became a rival power center. "It created an awkward situation from having nobody in charge of cyber to having two people in charge of cyber," says John Nagengast, a 38-year veteran of the NSA, who then spent 15 years working on security issues at AT&T.

The Biden administration can make the case that things are getting better. It successfully recovered most of the ransom paid to the perpetrators of a hack that took down Colonial Pipeline, the U.S.'s largest fuel pipeline, and the biggest attacks have tapered off from the first half of 2021. "We have accomplished more to modernize national cybersecurity in the public and private sector in that last 12 months than in the past decade," says National Security Advisor Jake Sullivan, who credits Neuberger for much of the improvement.

Edited by Joshua Brustein

NEUBERGER: DREW ANGERER/GETTY IMAGES. INGLIS: BILL CLARK/CQ-ROLL CALL/GETTY IMAGES

According to interviews with more than 40 people who know Neuberger personally or professionally, she is known as a brilliant tactician who can command a room and bend government bureaucracy to her will. But her relentless style has also made her a polarizing figure throughout her 14-year career in government. Neuberger had a particular tendency to butt heads with lawyers, say people who worked with her, an attribute that some of her NSA colleagues admired. “If she thought, ‘This is what we need to do,’ she would push and try to get it done,” Nagengast says. “And people that objected to that, sometimes she would run them over, basically.”

Neuberger, 45, was born into an Orthodox Jewish family in Brooklyn, N.Y. Seven of her eight great-grandparents were killed at Auschwitz; her parents, George and Renee Karfunkel, were on a plane that Palestinian terrorists hijacked in 1976 and were held hostage at Entebbe International Airport in Uganda for a week before Israeli commandos rescued them. Throughout her career, Neuberger has continued to keep kosher and get home in time for the sabbath, although national security crises now occasionally intervene.

George Karfunkel started American Stock & Transfer Trust Co. in 1971 with his brother, Michael. The company made both men billionaires, and Neuberger started her career there as a computer programmer in 1993. Her parents didn’t want her to attend college, but she persuaded them to let her go to an all-girl’s night school while she continued working at her father’s company; she eventually received a double master’s degree from Columbia.

Neuberger has attributed her interest in a career in national security to her family’s personal history with terrorism and her experience living in New York on Sept. 11. She got a job as a White House fellow in 2007 and quickly stood out even among the other overachievers in the program. Three years later, Neuberger became special assistant to Keith Alexander, then-director of the NSA, and the two became close. In what would become a common thread in her career, Neuberger’s quick rise to favored status caused some resentment in an agency whose top ranks have always been dominated by men. “She was initially viewed as an outsider, and she had the eye of the director,” says one former NSA employee. “So immediately antibodies in the NSA culture start to come out.”

Neuberger soon began running one of Alexander’s favorite projects, a program to foster cooperation with private industry to help protect domestic infrastructure. In May 2013 she took over as the director of the NSA’s Commercial Solutions Center, which worked with private companies to collect intelligence and develop cybersecurity tools. These partnerships became the center of the biggest scandal in NSA history one month later when Edward Snowden, an NSA contractor, leaked documents implicating a handful of major technology and telecom companies in a massive domestic surveillance operation.

The Snowden leak left the NSA to deal with angry and embarrassed corporations it depended on for intelligence operations, and Neuberger was central to the agency’s efforts to clean things up. Serving as its chief risk officer, she embarked on a cross-country apology tour, meeting with people from private industry, academia, and the media. “She was one of the first people that was trusted to speak on behalf of the agency,” says Sabra Horne, who worked closely with Neuberger at the timed.

One of Neuberger’s last big projects at the NSA was to establish its Cybersecurity Collaboration Center in 2020, in which employees from private companies work shoulder to shoulder with NSA employees on private cyberthreats. The center’s existence, and the NSA’s public promotion of it, would have been unthinkable in the immediate aftermath of the Snowden scandal. Current NSA Director Paul Nakasone credits Neuberger with reshaping the agency’s relationship with the private sector, making the project possible. “She’s a change agent,” he says. “She’s someone that can take an idea, operationalize that idea, and challenge some of the assumptions on which it’s made.”

The highly politicized environment of the White House could be a stumbling block for Neuberger, says Michael Rogers, who was NSA director from 2014 to 2018. “I would argue now she’s in a totally different world over there,” he says. “So it’ll be interesting to see how that plays out for her in a totally new environment. Because I doubt she’ll be in that job for four years.”

Soon after being appointed, Neuberger wrote a sweeping executive order requiring federal contractors to meet certain cybersecurity standards. She also served as the public face of the administration, briefing reporters at the White House when the attack on Colonial Pipeline led to panic buying of gasoline across the East Coast.

But Neuberger had to begin sharing the spotlight when the Senate confirmed Inglis as national cyber director in June. Despite their past relationship, many people within the cybersecurity apparatus became concerned that having two new powerful cybersecurity roles would lead to turf battles. Inglis and Neuberger sat together for an hour-long interview on Oct. 28 at the Center for Strategic and International Studies in Washington. The ▶

◀ Neuberger at a White House press briefing on the Colonial Pipeline cyberattack in May

The White House has “created an awkward situation from having nobody in charge of cyber to having two people in charge of cyber”

● Inglis

◀ purpose of the event, according to two people familiar with its planning, was to show that they'd get along. But the strain has been evident to people close to them. After the issue with the invitations to the ransomware summit, Inglis was caught off guard again in December when he learned of Neuberger's plans to summon technology companies to the White House to discuss open source software.

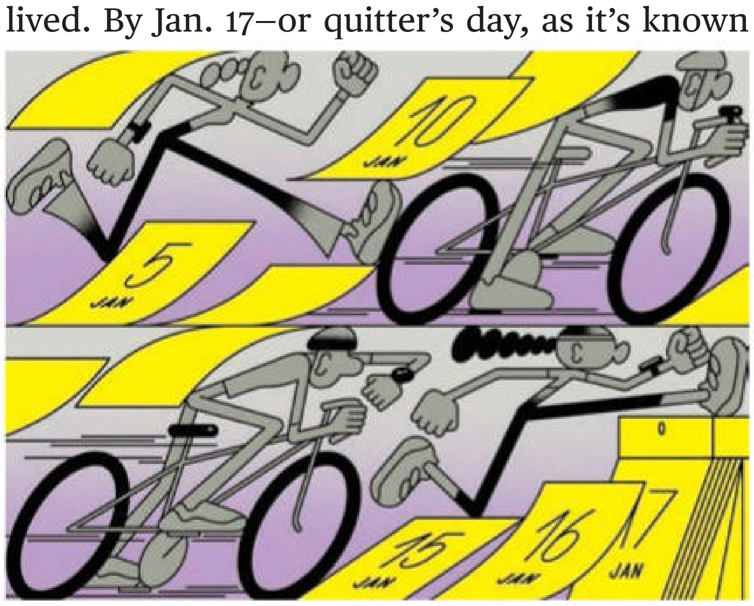
The tension is also affecting other senior government officials who want to get everyone pulling in the same direction. In February, Senator Mark Warner (D-Va.), chairman of the Senate Select Committee on Intelligence, was initially effusive about the Biden administration's choice of Neuberger. He says he talked to Neuberger soon after the SolarWinds cyberattack but has not had much contact with her since. Warner wants to understand how the pieces of the administration's cybersecurity policy interact, he says, but he's been frustrated in his attempts to figure it out: "There's still some confusion in my mind." —*William Turton*

THE BOTTOM LINE The Biden administration's direction on cybersecurity policy is complicated by competition between rival centers of power.

Strava vs. January

● The fitness app's revenue spiked 68% in 2021. The company's next challenge: Holding on to the New Year's resolution crowd

Starting right around Christmas every year and continuing through mid-January, traffic to Strava, the social network geared to athletes, surges. "It's that new year, new you phenomenon," says Chief Executive Officer Michael Horvath. Unfortunately, both for the company and for those people who really do plan to get off the couch this time, resolutions to exercise more are almost always short-lived. By Jan. 17—or quitter's day, as it's known



at Strava Inc.'s San Francisco headquarters—the company expects traffic to drop dramatically, as inertia defeats another year's crop of aspiring cyclists and distance runners.

All fitness businesses have some version of this rhythm, though it was thrown off during the pandemic. The 2020 lockdowns temporarily closed health clubs, leading to a spike in interest in tech-enabled alternatives such as Strava and internet-connected exercise bicycles and treadmills like those from Peloton Interactive Inc. Soon overachievers were ordering so many $2,000 spin bikes that Peloton had to delay deliveries by months. But usage of the company's subscription service declined starting this summer, as Covid case numbers fell and the appeal of getting shouted at via a tablet stuck between one's handlebars suddenly seemed less enticing than, say, actually riding a bicycle outdoors.

Strava, which was until recently known mainly to a small group of hardcore runners and cyclists who used its smartphone apps to track their mileage, also saw a burst of interest in March 2020. The Lycra-clad strivers accustomed to weekend runs and group rides began gathering in the app instead, and popular races such as the New York City Marathon went virtual, encouraging athletes to record their miles with the Strava app or on one of the more than 400 devices that can automatically sync with the company's software. (These include running watches with GPS and cycling computers, as well as indoor exercise equipment, including Peloton's.)

In 2020, Strava added 2 million users a month. Revenue spiked to roughly $100 million, up 75% from 2019, mostly in the form of the $60 annual subscriptions it sells to a small percentage of users who want advanced features unavailable on the free version, such as route recommendations, training plans, and online leaderboards.

▼ Miles logged by Strava users*

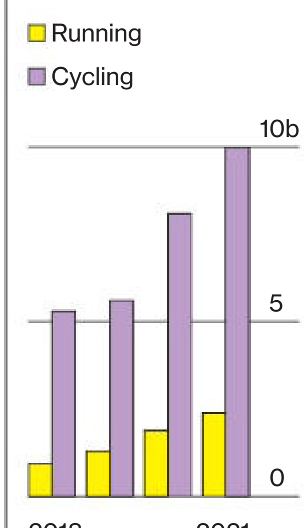


ILLUSTRATION BY ARNE BELLSTORF. *YEARS REPRESENT 12 MONTHS ENDED SEPT. 30. DATA: STRAVA

While Peloton usage started falling in mid-2021, coinciding with a roughly 70% drop in its stock price since July, Strava users have been more willing to stick around. “We’re not seeing any of the headwinds that we hear about in these other brands,” Horvath says.

His explanation: Unlike Peloton and similar services, Strava works outdoors as well as indoors. Walking and hiking were two of the fastest-growing sports in 2021, and many of the users who took to Strava to complete virtual marathons stuck with the app even after the real-life versions of those events came back. About 41% of the 30,000-person field in the 2021 New York City Marathon recorded their race on the app; at the London Marathon it was 52%.

As a result, growth continued at a torrid pace in 2021, with revenue increasing by another 68%, Horvath says. This suggests revenue of approximately $170 million and a paid subscriber base of 2 million to 3 million. (Counting people using the free app, Strava has about 100 million users.)

Horvath says the company was profitable in 2020 and 2021. Such financial success has been long in coming. The company–which Horvath founded in 2009 with Mark Gainey, a teammate from Harvard’s lightweight crew squad in the late 1980s–grew at a plodding pace in its early years, focusing on generating revenue through paid subscriptions, rather than by selling advertisements. “Back in 2010 and 2011, if you couldn’t get to a billion people in three years with an ad model, you weren’t worth investing in,” Horvath says. But the success of Netflix, Spotify, and Zoom have put subscription businesses back in favor. Last year, Strava raised $110 million in a round led by Sequoia Capital and TCV.

The next step would be an initial public offering. Strava has added a chief financial officer, Lily Yang, who helped take Pinterest public, as well as board members from Walt Disney Co. and Spotify Technology SA.

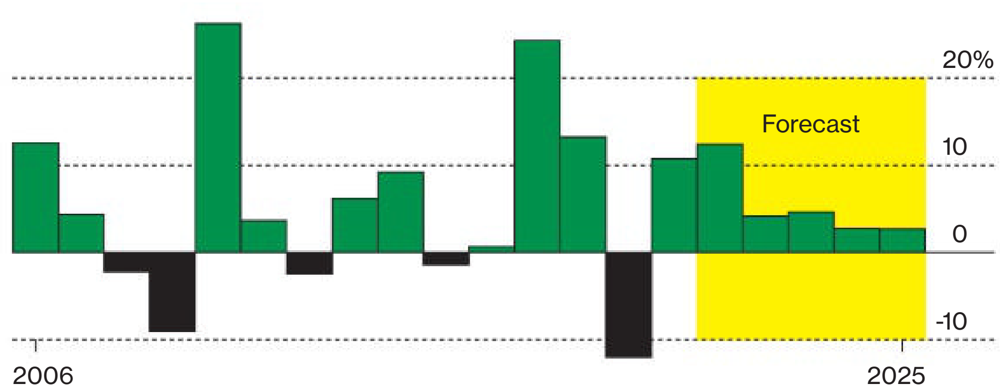
Horvath says an IPO isn’t in the company’s immediate future. Before that, Strava has to overcome its annual quitter’s day challenge. The company has found that anyone who makes it past the milestone is likely to stick to their new habits. It steers users toward virtual clubs and “challenges” within the app–for instance, to complete a virtual half-marathon–because its data shows these users generally enjoy improved fitness or, at least, improved levels of Strava usage. “We really try to encourage people,” Horvath says. “Just get past the 17th of January.” —*Max Chafkin*

THE BOTTOM LINE Strava has grown rapidly during the pandemic and made about $170 million in revenue in 2021, which suggests it has 2 million to 3 million paid subscribers.

Chips | Hot Streak

Semiconductor revenue is poised to top half a trillion dollars in 2022 for the first time. But another milestone may be even more significant for the famously boom-and-bust industry. If estimates from researcher IDC hold, the industry could be heading for its longest stretch of consecutive annual sales increases in more than a decade. —*Ian King*

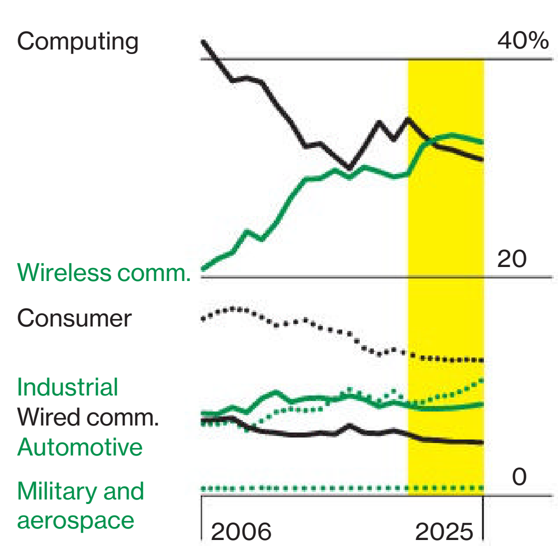
Semiconductor industry revenue, year-over-year change



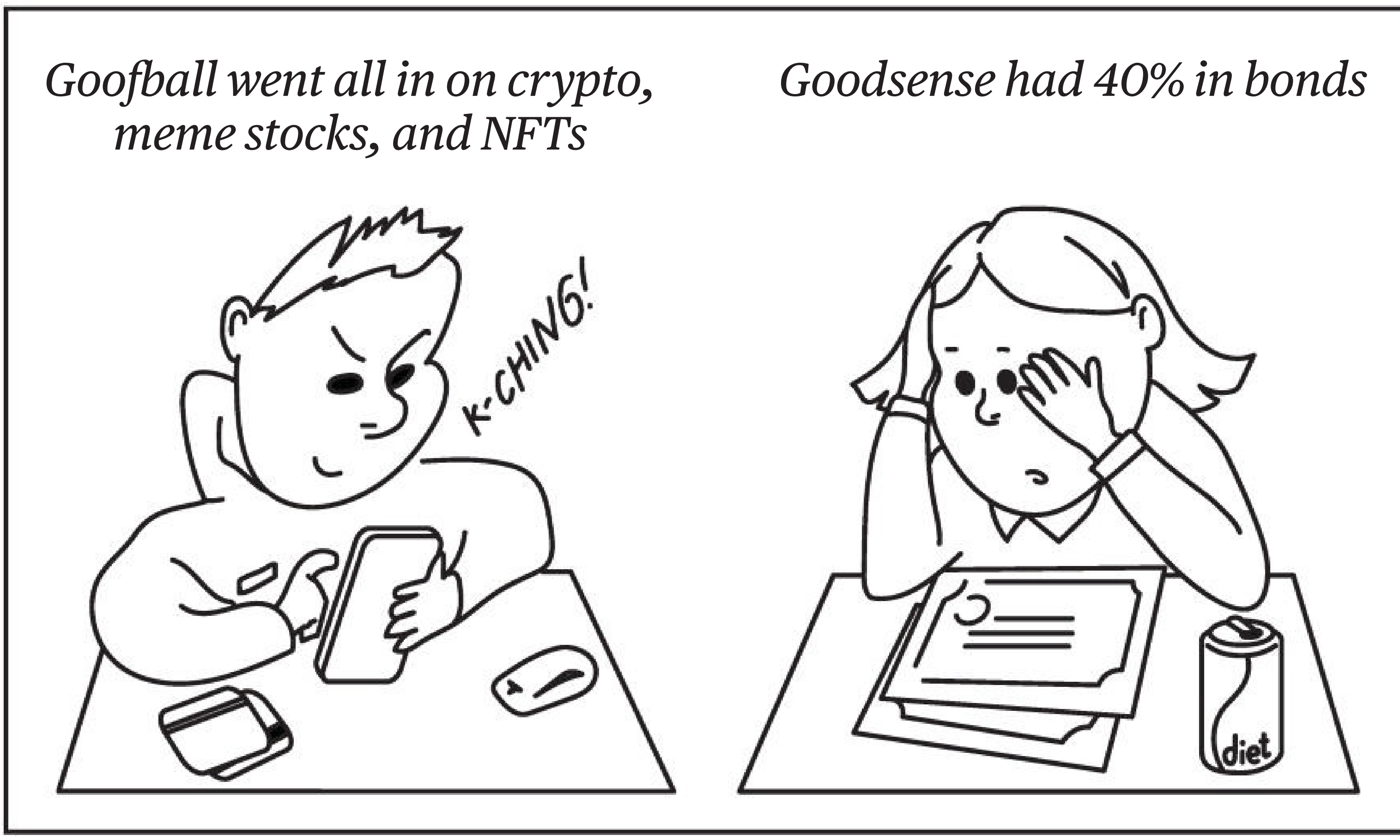
Stable growth would be a sharp departure from the volatility that’s always defined the economics of semiconductors. Surges in demand lead companies to make more chips just in time for sales to crash. This rhythm has repeated itself so consistently that by this point investors see it almost as a natural law.

Chipmakers say it’s different this time around. And they may be right. Chips are used in cars, fridges, and even clothing these days, instead of only computers and mobile devices. So the risk of a glut is lower.

Product category’s share of chip industry revenue



Takeaway The excess demand and supply chain issues also reduce the risk of a crash. For now the main issue is still that there are not enough chips, rather than too many.



When the Safe Haven Leaves You Wanting

● It was a disappointing year for bonds, yes—just keep it in perspective

Early January is when many investors give their portfolios a checkup, and this year a sting awaits from the bond market. While equity returns dazzled in 2021, "safe" government bonds registered their first negative return since 2013.

Professional investors are of course accustomed to the idea that even so-called risk-free bonds lose money when interest rates rise—or are expected to rise. Those taking a diversified approach with their nest eggs are accustomed to think of Treasuries and high-quality bonds as conservative and safe investments that provide a consistent, if modest, positive return.

Except the sanctuary of government bonds cracked last year, with the Bloomberg Treasury index providing a total return of -2.3%. A broader exposure to fixed income that includes debt from high-quality companies, the Vanguard Total Bond Market Index Fund, lost 1.67% last year, its first down year since 2018—the last time the central bank raised its key overnight interest rate.

Once investors absorb the shock of a rare down year for bonds, some context is important. Equities are by far the dominant driver of long-term returns, because companies can increase their earnings over time. Negative years for bond returns are also more tolerable when equities perform strongly. Including the reinvestment of dividends, the S&P 500 gained 28.7% last year, and the Bloomberg 60/40 index, split between equities and bonds, returned 15.1%.

Still, the $22 trillion government debt market began 2022 on a bearish note, and some big fund managers expect Treasury bonds to remain a dead weight for a while yet. The Federal Reserve, focused on taming inflation, is expected to raise overnight rates toward 1% during 2022 and then above 2% by the end of next year. Strategists surveyed by Bloomberg News forecast higher Treasury yields by the end of 2022, with the 10-year yield reaching 2.04% and 30-year bonds rising to 2.45%. Rising yields mean falling prices, so if the forecasts are right, it would mark the first two-year losing streak for the Treasury index based on records dating from 1974.

"It is certainly conceivable that we see back-to-back negative years," says Gregory Faranello,

ILLUSTRATION BY 731

Edited by Pat Regnier

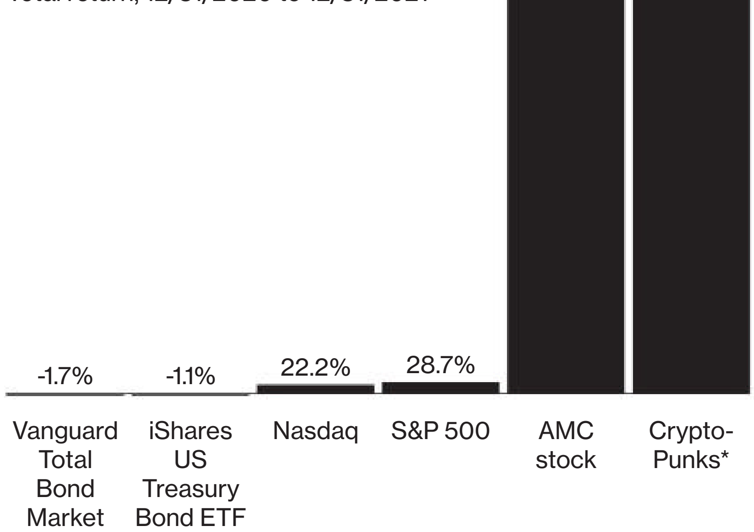
head of U.S. rates at AmeriVet Securities. "Investors need to find inflation-adjusted returns, and that is not being provided by the current level of nominal Treasury yields."

Investors currently receive an annual fixed payment of 1.375% for owning a 10-year Treasury note. Not only is that now below the headline inflation rate, but it also provides little protection against a decline in the price of a 10-year Treasury. This was the story over the past year. While the Treasury index collected interest of 1.55% during 2021, that income stream was more than wiped out by a price change of -3.9% as interest rates climbed. In past eras, higher rates provided more protection against price losses, which is why the outlook for high-quality bonds looks particularly challenging at the moment.

A question for investors in the next couple of years is the nature of the post-pandemic recovery. Stubbornly elevated inflation may well lead the Fed to raise rates more aggressively, which could slow the economy and impair the performance of stocks. That's one reason analysts and bond investors don't expect 10-year and 30-year yields to rise significantly from current levels: Bouts of equity losses usually prompt an appreciation in the price of Treasuries, as money leaves stocks and seeks a haven. Alternatively, some policy tightening by the Fed may help moderate inflation and extend the business cycle, resulting in lower bond prices, while allowing companies room to keep increasing their profits and stocks to keep rising.

How Was Your Year?

Total return, 12/31/2020 to 12/31/2021



DATA: COMPILED BY BLOOMBERG. *AVERAGE ASSET VALUE IN DECEMBER

After double-digit gains in the S&P 500 for each of the past three years, some cautious investors may be taking money out of stocks. Others may think it's prudent to get ahead of an extended bear market in bonds and increase their exposure to equities despite concerns about rich share price valuations. "It's likely that some investors will see the disparity in performance of equities and bonds and tilt their portfolios further toward stocks," says Todd Rosenbluth, head of ETF and mutual fund research at CFRA. "The patience of investors who own bonds will be tested as interest rates go up."

For those investors with a longer-term perspective, owning Treasuries provides an important element of diversification—especially when U.S. equities sit at lofty levels that require robust earnings growth to validate their high multiples.

Bond managers seek ways to mitigate the pain when interest rates are rising. Some tilt their holdings toward floating-rate debt and seek to reduce rate risk by owning bonds whose prices are less sensitive to changes in interest rates, a characteristic known as duration. A bond fund with low duration will suffer less of a price decline when interest rates rise. This approach can help a bond fund navigate a bear market spurred by Fed hikes and then buy higher-yielding bonds once interest rates steady at new levels. "The expectation of rate increases from the Fed is reasonable and at some point Treasuries will look more interesting," says Dan Ivascyn, group chief investment officer at Pacific Investment Management Co.

A period of rising Treasury yields that spurs negative returns in the near term may prompt institutional investors to buy long-dated bonds with the aim of diversifying their equity-dominated portfolios. "We have seen pension funds and insurers add to their fixed income holdings when 30-year yields have risen beyond 2%," says Faranello, who expects this pattern will repeat, because "we are still in a low global rate environment."

The silver lining from another tough year for bonds is that higher yields also pave the way for better returns in the future and bolster the ability of Treasuries to act as insurance. "You want to look at bond holdings through the prism of a diversified portfolio," says John Brady, managing director at brokerage R.J. O'Brien. Although he doesn't rule out another year of losses for bonds in the region of 2%, Brady says: "Equities can register bigger losses than bonds." —*Michael MacKenzie*

THE BOTTOM LINE Bond fund investors may be shocked to see losses on their 2021 statements, but that doesn't undermine the long-term case for keeping fixed income in a portfolio.

"The patience of investors who own bonds will be tested as interest rates go up"

Wall Street Digs In To China

● U.S. politicians are taking a tougher line on the country, but bankers say they have to be there

As tensions were rising between the U.S. and China last summer, the chief executive officer of JPMorgan Chase & Co. was letting it be known that he wanted to get to Hong Kong as soon as he could. Jamie Dimon did just that in November, becoming the first major U.S. bank executive to visit Greater China since the pandemic began. His 32-hour trip to the Asian financial hub was billed as a chance to thank thousands of employees there. But it was also a reminder of the company's commitment to the territory, as well as to mainland China, where JPMorgan has exposure of about $20 billion, mainly from lending, deposits, trading, and investments.

Some U.S. politicians have been calling for companies to back away from China, over concerns about national security and human rights. But Wall Street banks are instead deepening their ties. JPMorgan in August took full control of a securities joint venture with a Chinese company, and now wants to do the same with an asset management business it partly owns. Morgan Stanley is seeking five new banking licenses in mainland China in 2022, while Goldman Sachs Group Inc. has been doubling its workforce. Citigroup Inc. applied in December for a securities trading and investment banking permit and plans to seek a futures license in 2022.

Both the U.S. and Chinese governments have cracked down on Chinese companies listing their shares in New York, hurting a lucrative business that was driven from Hong Kong. But U.S. banks that want a piece of the world's second-largest economy—and second-biggest issuer of equities—are shifting gears to take on China's top lenders on their own turf. "I don't think we have a choice," says Gokul Laroia, CEO of Morgan Stanley's Asia-Pacific operations, describing the bank's decision to think of China as one big opportunity and to compete for business on the mainland as well as offshore. Even though global banks haven't made much money in China yet, the potential upside is massive, he says. "If you keep saying I am not going to invest in the domestic platforms because they are not as profitable, I think you're missing a trick."

Wall Street has long viewed China as the last great moneymaking frontier, and 2021 was supposed to be the year companies' vast investments would start to bear fruit. Foreign banks had just been given the

right to take full control of their joint ventures and set up their own asset management businesses. But before the year even began, Beijing scrapped Ant Group Co.'s $35 billion initial public offering at the last minute. Then a regulatory squeeze on technology, education, property, and other sectors curbed demand for IPOs.

In addition, the U.S. is strengthening financial disclosure rules for Chinese companies listing shares on American exchanges. China's policymakers are forcing ride-hailing company DiDi Global Inc. to delist in the U.S., citing concerns about control over company data, and now they're tightening a loophole that's facilitated dozens of U.S. IPOs.

Although the New York freeze may be temporary, it's becoming clear that Chinese companies have less need to raise money abroad when they can easily list in Hong Kong or on the growing exchanges in Shanghai or Shenzhen. Peter Alexander, managing director of Z-Ben Advisors Ltd., who's been counseling global asset managers in China for almost two decades, says a senior official recently made that point to him: "He said, 'Peter, tell your clients we will more than welcome their capital, but we no longer need their capital markets.'"

Moving further into the Chinese market is fraught with risk. State-owned brokerages have extensive teams on the ground doing deals with established companies and startups. Global financial firms posted a combined loss on the mainland of $48 million in 2020, compared with $24.4 billion in profits at

PHOTO ILLUSTRATION BY 731; PHOTOS: ALAMY (2). DATA: COMPILED BY BLOOMBERG

China's investment banks, according to filings.

A look at dealmaking rankings shows foreign banks haven't made significant inroads in China after years of trying. Goldman ranked 15th in domestic Chinese equity-raising last year, according to data compiled by Bloomberg. Foreign banks have never cracked the local bond market, though they do better for China mergers and acquisitions, with five in the top 10 for 2021. "None of these companies really have anything to offer China" in the local market, says Dick Bove, an analyst at Odeon Capital Group. "They learned everything the American banks had to teach about how to run an investment banking operation."

Global bankers say that they're just getting started with licenses to expand on their own after decades working with local partners, and that gaining just a fraction of the $45 trillion market would lead to windfalls. They also say that with more money flowing into China, trading and asset management will be huge growth areas. Global banks and money managers could eventually take 10% of the mutual fund market in China over five years, says Jasper Yip at Oliver Wyman in Hong Kong.

U.S. financial companies are taking heat over China at home. Utah Senator Mitt Romney has called hedge fund billionaire Ray Dalio's investments in the country "a sad moral lapse," and Florida Senator Rick Scott accused bankers of placing profits above human rights. "This modern gold rush into China by the big Wall Street banks in hopes of fat profits raises numerous concerns," says Mark Williams, a Boston University professor and former Federal Reserve bank examiner. "Growing U.S. tensions with China have increased political risk and the likelihood of trade sanctions and abrupt policy changes that could halt planned expansion."

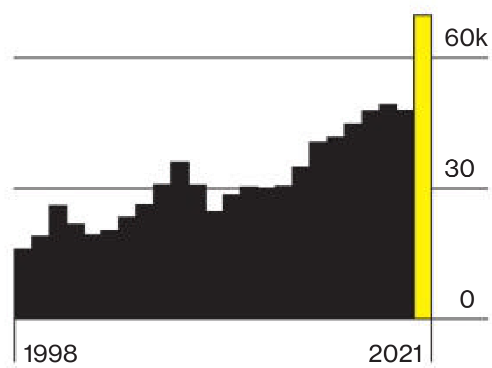
Wall Street remains undaunted, and Dimon's not the only CEO who's been eager to get on a plane: David Solomon of Goldman Sachs has been saying he'll go to the country as soon as it's allowed, according to people familiar with his plans. "Given the important position that China plays economically in the world, you can't be Goldman Sachs without participating in that," Solomon said at the Bloomberg New Economy Forum in Singapore last November. He said there's been no direct pressure on the bank to alter course in China, though that could change. "But we think about this with a 10-, 20-, 30-year perspective, not with the next couple of years." —*Cathy Chan and David Scanlan*

THE BOTTOM LINE With it getting harder for Chinese companies to list their shares in New York, U.S. banks are trying to make sure they can compete inside the country itself.

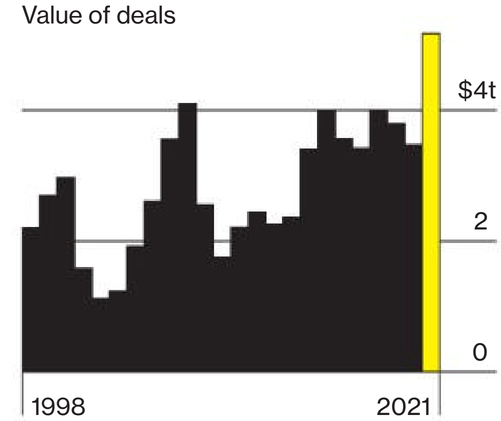
Deals Everybody Shake

The year 2021 topped all records for dealmaking. Here's a look at the most notable mergers, acquisitions, breakups, and corporate battles of a very busy 12 months —*Elizabeth Fournier*

Number of deals



Value of deals



Where the Action Was

MARCH

General Electric Co. sold its jet-leasing business to AerCap Holdings NV for $30 billion, and Canadian media giant Rogers Communications Inc. agreed to buy rival Shaw Communications Inc. A battle for control of Kansas City Southern began when the railroad agreed to combine with Canadian Pacific Railway Ltd., prompting a counteroffer from rival Canadian National Railway Co. CP won—but not until September.

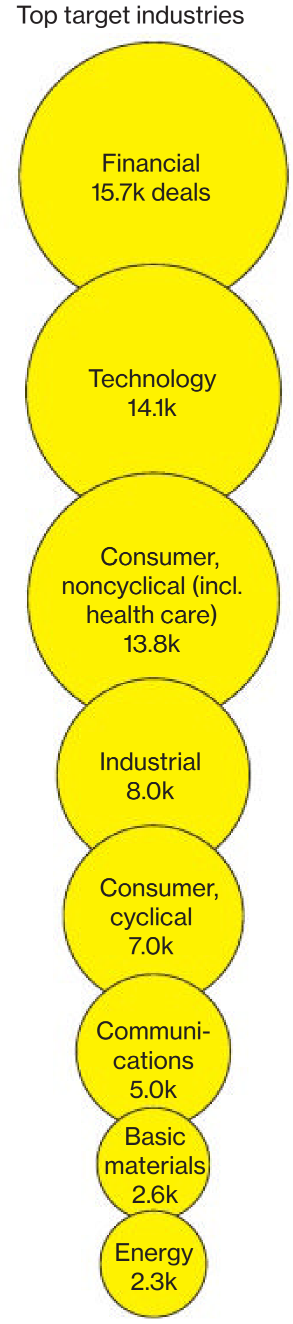
MAY

AT&T Inc. decided to spin off its media assets—most of which it bought way back in 2018—and merge them with Discovery Inc. It turned out to be the biggest deal of the year.

JULY

Another bidding war kicked off when U.K. chain Wm Morrison Supermarkets Plc accepted an $8.7 billion bid from Fortress Investment Group. It took three more months for rival bidder Clayton, Dubilier & Rice to emerge victorious.

Top target industries



AUGUST

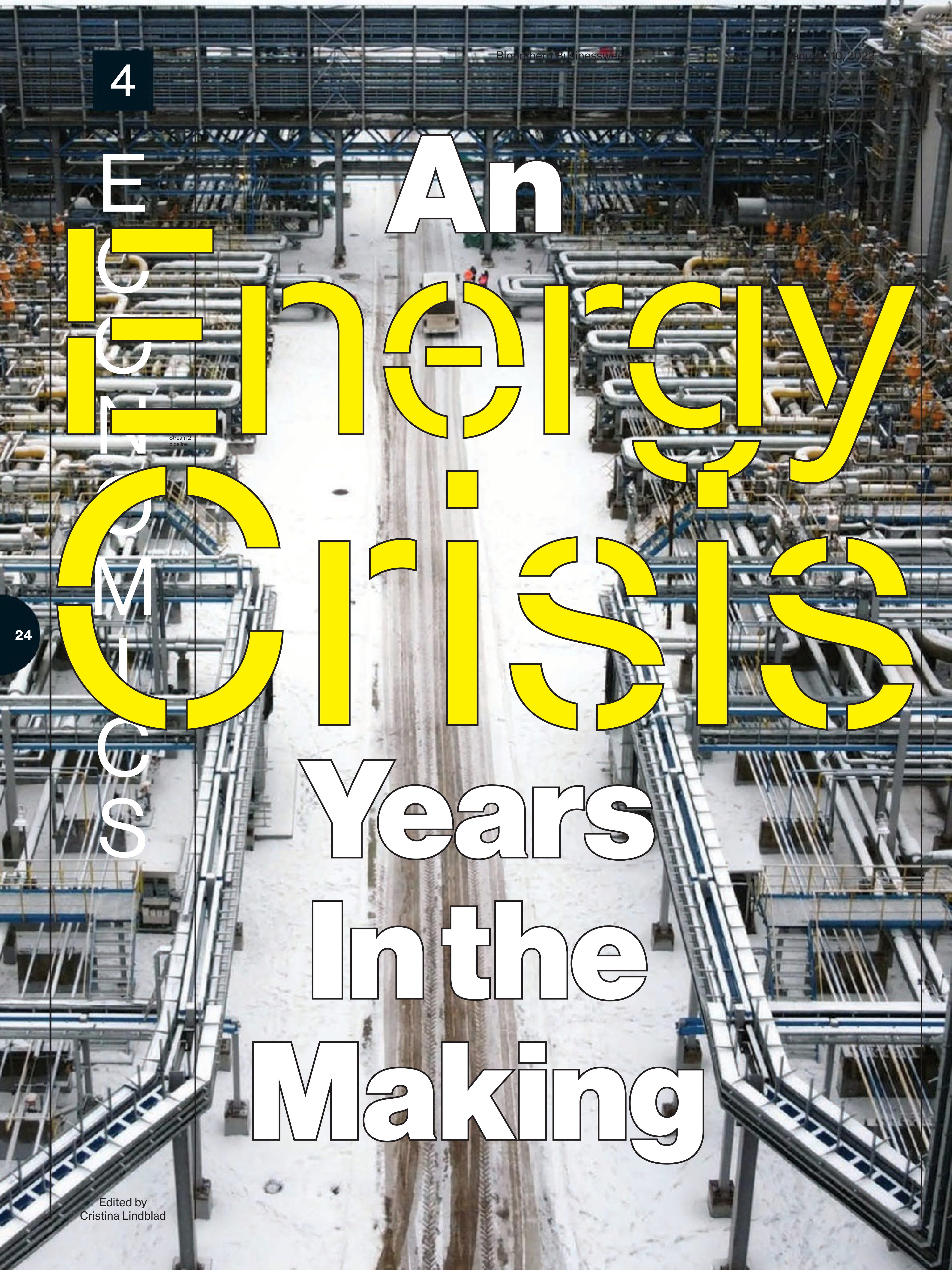
U.S. payment company Square (now Block Inc.) agreed to acquire "buy now, pay later" lender Afterpay Ltd. for $29 billion in the biggest deal ever for an Australian company.

OCTOBER

PayPal Holdings Inc. grabbed headlines by considering (then deciding against) a $45 billion bid for social media company Pinterest Inc. In a record European real estate deal, Vonovia SE purchased Deutsche Wohnen SE. Soccer club Newcastle United got a new owner: Saudi Arabia's sovereign wealth fund.

NOVEMBER

General Electric, Johnson & Johnson, and Toshiba Corp. all announced plans to carve themselves up.



An Energy Crisis Years In the Making

Stream 2 pipeline

Edited by Cristina Lindblad

● With gas inventories low, Europe is at the mercy of two wily forces: Vladimir Putin and the weather

The retired salt caverns, aquifers, and fuel depots that hold Europe's stockpiles of natural gas have never been so empty at this point in winter. Just four months after Amos Hochstein, the U.S. envoy for energy security, said the countries of the European Union weren't doing enough to prepare for the dark and cold season ahead, the bloc is grappling with a supply crunch that's caused benchmark gas prices to more than quadruple from last year's level, squeezing businesses and households. The crisis has left the EU at the mercy of the weather and Russian President Vladimir Putin's wiles, both notoriously difficult to predict.

"The energy crisis hit the bloc when security of supply was not on the menu of EU policymakers," says Maximo Miccinilli, head of energy and climate at consultants FleishmanHillard EU. He expects the energy crunch to keep prices volatile, triggering more political tension between regulators in Brussels and the leaders of the bloc's 27 member states.

Although the situation came to a head abruptly, it's been years in the making. Europe is in the midst of an energy transition, shutting down coal-fired electricity plants and increasing its reliance on renewables. Wind and solar are cleaner but sometimes fickle, as illustrated by the sharp drop in turbine-generated power the continent recorded last year.

Moscow's increased leverage over its neighbors became apparent at the tail end of the last winter, an unusually cold and long one that depleted inventories of gas just as European economies were emerging from the pandemic-induced recession. Over the summer, state-controlled Gazprom PJSC began capping flows to the EU states, aggravating shortages caused by deferred maintenance at oil and gas fields in the North Sea and raising the stakes on a costly and long-delayed pipeline project championed by the Kremlin.

At the same time, China, Japan, and other countries were boosting their imports of liquefied natural gas (LNG) in preparation for the coming winter. All of this left the EU struggling to replenish its dwindling stockpiles during the warm months, when gas is less expensive.

Still, the bloc's leaders betrayed no alarm. On July 14, the European Commission unveiled the world's most ambitious package to eliminate fossil fuels in a bid to avert the worst consequences of climate change. With their eyes trained on the longer-term goal of reducing greenhouse gas emissions at least 55% by 2030 from 1990 levels, the politicians did not sufficiently appreciate some of the potential pitfalls that lay immediately ahead on the road to decarbonization.

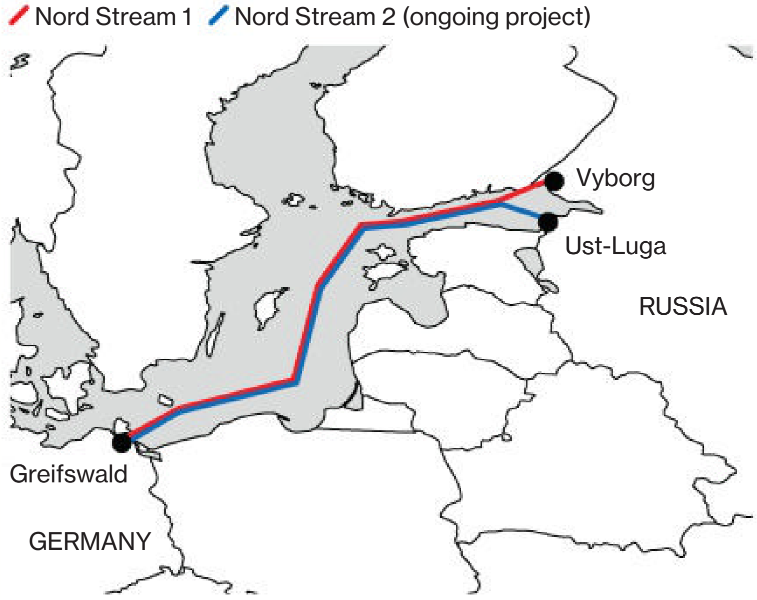
The EU's natural gas production has been in decline for years, leaving it more reliant on imports. Now, Russia stands poised to further cement its position as the bloc's top supplier. Gazprom and its European partners have plowed $11 billion into a 1,230-kilometer (764-mile) pipeline that runs beneath the Baltic Sea from Russia to Germany.

The construction of Nord Stream 2, a companion to a pipeline running along a nearly identical route that was completed in 2012, has been a decade-long project, repeatedly delayed by U.S. sanctions. It hit a new roadblock this fall, when a coalition government took power in Germany and the country's energy regulator put final approval on hold. The move further roiled European energy markets, where gas prices had been breaking records day after day since July. Putin, in a televised speech delivered on Dec. 24, touted the benefits of the controversial conduit, saying "the additional volumes of gas on the European market would undoubtedly lower the price on the spot."

A recent bump in LNG imports from the U.S. has provided some relief, but it's temporary at best. France needs to take several of its reactors offline for maintenance and repairs, resulting in a 30% reduction in nuclear capacity in early January, while Germany is moving ahead with plans to shut down all of its nuclear plants. With the two coldest months of winter still ahead, the fear is that the EU may run out of gas. ▶

Hooked on Russian Gas

Nord Stream 1 / Nord Stream 2 (ongoing project)



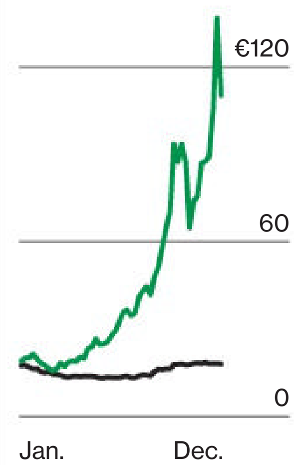
DATA: GAZPROM

◀ The starting point of the Nord Stream 2 gas pipeline in Ust-Luga, Russia

▼ European natural gas price, weekly benchmark futures per megawatt

2021

2016-20 average



ANDREY RUDAKOV/BLOOMBERG. DATA: COMPILED BY BLOOMBERG

◀ Storage sites are only 56% full, more than 15 percentage points below the 10-year average. "In none of the past years since records began have we had comparably low storage levels at this time," says Sebastian Bleschke, head of INES, the association of German gas and hydrogen storage system operators. Barring an increase in Russian exports, something that doesn't appear to be in the cards at present, levels will be at less than 15% by the end of March, the lowest on record, according to researcher Wood Mackenzie Ltd. And that's assuming normal weather conditions.

With energy policy largely in the hands of member states, EU officials lack the authority to compel national governments to replenish gas inventories more quickly. To make matters worse, Russia is building up troops on the border with Ukraine, a move U.S. intelligence sources say presages a possible invasion. A third of Russian gas flowing to western Europe crosses Ukraine, and though shipments weren't disrupted during Russia's 2014 annexation of Crimea, there's no guarantee that would remain the case if a war breaks out this year.

The energy situation limits the scope of actions Western powers can take to counter Russian aggression, says Jason Bordoff, director of the Center on Global Energy Policy at Columbia University. "The ability of Europe and the U.S. to respond to a Russian invasion is constrained both by a desire not to exacerbate Europe's energy crisis by sanctioning Russian energy exports and, more broadly, by the threat that Russia could retaliate to any confrontation by restricting gas flows into Europe, as Russia did in 2006 and 2009," says Bordoff, a former energy and climate adviser in the Obama administration.

Traders are already preparing for the worst, with prices for gas delivered from spring through 2023 surging more than 50% over the past month. Some say the crunch could last until 2025, when the next wave of LNG projects in the U.S. starts supplying the world market. "It's hard to see how decent levels of gas storage can be achieved without additional Russian exports via Nord Stream 2 or existing routes," says Massimo Di-Odoardo, vice president for gas and LNG research at Wood Mackenzie. "2022 will be another volatile year for European gas prices." —*Isis Almeida, Ewa Krukowska, and Anna Shiryaevskaya, with Elena Mazneva, Olga Tanas, and Vanessa Dezem*

THE BOTTOM LINE The energy crisis gripping the European Union could endure for much of the year, as nations have few options for rebuilding stockpiles of gas either quickly or cheaply.

● Current level of Europe's gas storage sites

56%

The Plant Manager's Almanac

● Climate change poses a bigger threat to supply chains long term than Covid-19

The pandemic has tied a series of paralyzing knots in the global economy, but beyond the transportation delays and parts shortages lies a more enduring challenge for supply chains: climate change.

Consider that last year alone saw Hurricane Ida, a typhoon near Chinese ports, the Texas freeze, British Columbia flooding, and freak December tornadoes across the U.S., and it's clear that global trade is struggling to cope with much more than a health crisis. As temperatures creep higher, nature is likely to be a more frequent, intense, and random economic disrupter.

An analysis of 405 extreme weather events over the past decade by Carbon Brief, a website in London devoted to climate science, shows that 70% were more likely to occur, or made more severe, because of global warming. "It's not the next big supply chain crisis. It's the next big supply chain crises, plural," says Jason Jay, director of the Sustainability Initiative at the MIT Sloan School of Management. "What it ends up looking like is a set of individual crises in different places at different times. They're hitting a different part of the supply chain, and they're hitting it in a somewhat unpredictable way."

Much like the pandemic, extreme weather events are acute and hard to protect against. They begin in one region but can quickly ripple through supply chains, affecting production and delivery times. In Texas, where temperatures dropped

DRONE BASE/REUTERS. DATA: SWISS RE INSTITUTE to record lows in February, the petrochemical industry was disrupted for days, affecting the supply of resins and plastics, as well as that of widely used chemicals such as citric acid and carbon dioxide, according to a report from North Carolina State University.

"The majority of refining and petrochemical capacity is in a region susceptible to not only hurricanes but also freezes like the one we had," says Robert Handfield, a professor of supply chain management who wrote the report. "This episode was a humbling experience, and if variants in weather due to global warming continue to occur, companies need to look at alternative ways to manage their plastics and materials supply chains."

A first step companies can take to fight extreme weather's effects is to map their supply chains to better understand exactly where risks lie, whether that's a supplier on the Gulf Coast subject to hurricanes or a transport hub vulnerable to flooding. "Companies don't even know the locations of their first-tier suppliers, let alone who their suppliers are buying from," says MIT's Jay. "And many times these supply chains are four or five steps deep."

Making those assessments and retooling entire supply networks doesn't come cheap. "You don't reduce risk for free. It costs money to have these inventory buffers, changing your strategy–all of that costs money," Handfield says. "So I think we're going to see higher operating costs for supply chains in general."

Government policies designed to combat climate change may create additional costs in the short term, including legislation set to be approved by the European Parliament this year that would require businesses to carry out environmental due diligence along their entire supply chain. A report in October from HSBC Holdings Plc and Boston Consulting Group estimates global supply chains will need $100 trillion in investment to reach the goal of net-zero carbon emissions over the next three decades.

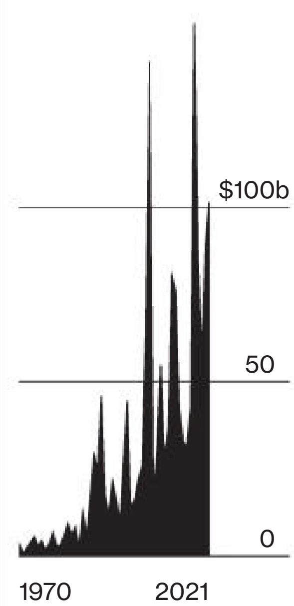
The push to curb emissions of greenhouse gases can cause unexpected disruptions. An instance of this took place in China a few months ago, when the closure of coal plants triggered an energy crunch that forced factories to shut down or reduce schedules. "I do think that there are some big challenges ahead that have just been swept under the rug for decades," says Ethan Harris, head of global economics research at Bank of America Corp. "And the consequences of that are growing."

▲ An Amazon fulfillment center in Kentucky damaged by December's tornadoes

No sector is more vulnerable than agriculture. Droughts or floods have claimed a large portion of Brazil's coffee crop, battered rice production in India, and led California farmers to uproot their almond trees. Global crop yields could fall about 30% because of climate change in the coming decades, and food demand is expected to climb 50%, according to estimates from the United Nations.

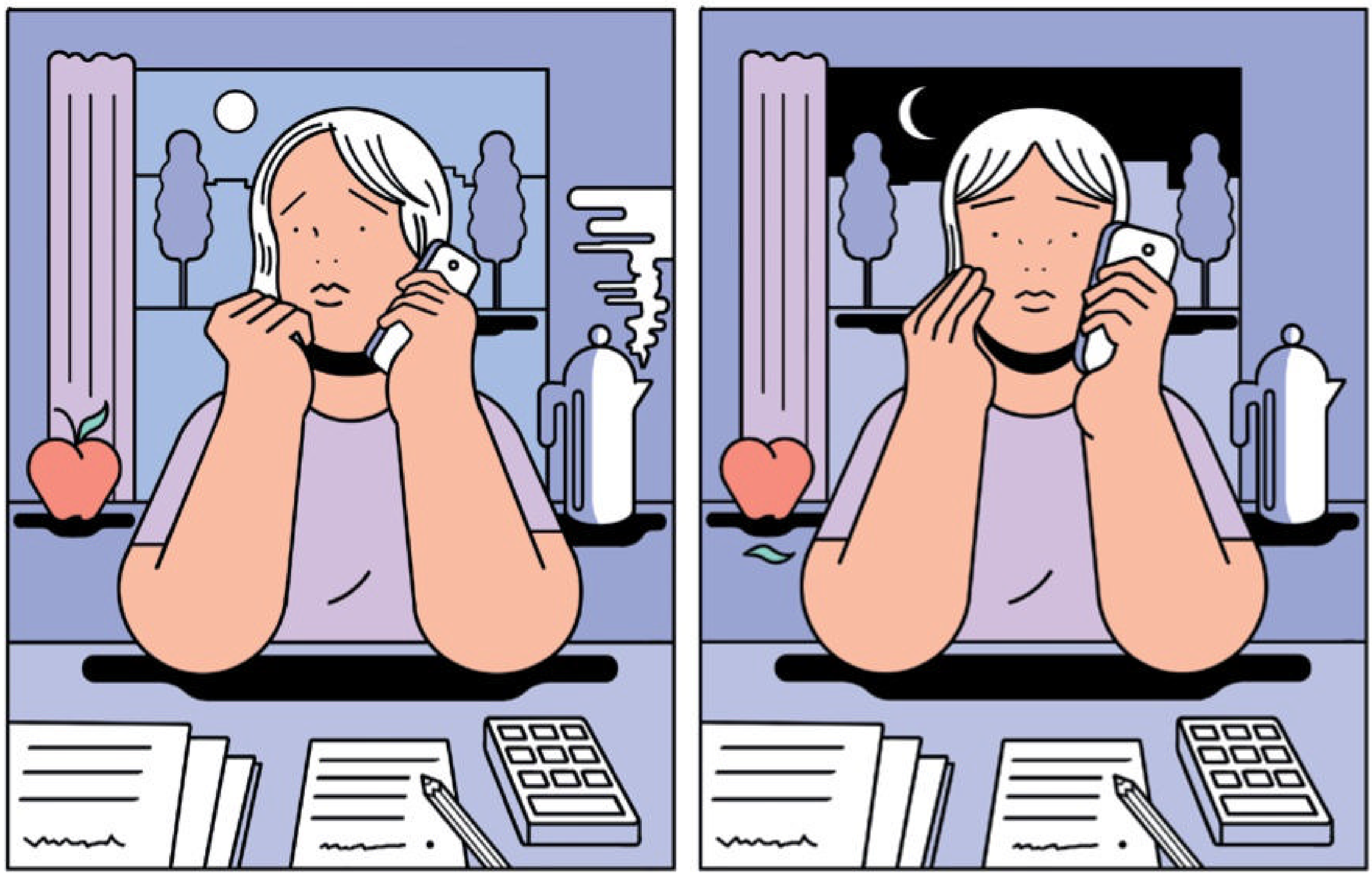
Hotter than usual temperatures make construction, landscaping, and other outdoor jobs more dangerous. In countries where air conditioning isn't widespread, even indoor work can become unbearable during an unprecedented heat wave, such as the one that forced some businesses and schools in France and Spain to close in June 2019. Research findings published recently in the *Proceedings of the National Academy of Sciences* showed that city dwellers around the globe experienced an almost 200% increase in extreme-heat days from 1983 to 2016. "High-heat days are actually the climate impact that sort of worries me very significantly," Jay says.

▼ Weather-related insured losses, in 2021 dollars



This year may not bring "this level of profound disruption we saw in 2021 from the pandemic, but the challenges are going to continue to build over time," says Mekala Krishnan, a partner at the McKinsey Global Institute who specializes in climate risk. "Assumptions of a stable climate are built into every aspect of our daily lives in ways we don't appreciate." —*Olivia Rockeman*

THE BOTTOM LINE Companies need to invest time and money to assess the risks that shifting weather patterns pose to their operations and then mitigate them.



Got a Tax Question? Don't Call the IRS

Customer service has cratered at the short-staffed, underfunded agency

Edited by Amanda Kolson Hurley and Bernie Kohn

ILLUSTRATION BY NADIA HAFID. DATA: TAXPAYER ADVOCATE SERVICE

Tax preparer Jan Roberg rang what she calls the "bat phone": a dedicated customer service line at the U.S. Internal Revenue Service that's supposed to connect professionals like her to a human right away. She was put on hold, as she figured she would be. So she went to the Burger King next to her office to pick up lunch.

She was still on hold when she got back. "Even five years ago, I would get through right away," says Roberg, of St. Louis. Now it typically takes more than an hour.

Reaching the IRS has always been an exercise in patience. But years of budget cuts have pushed the agency to the limit. Its customer service workforce has shrunk more than 40%, to 11,027 full-time employees, since 2010, according to the most recent data, and the agency is struggling to fill vacancies amid a labor shortage—handcuffed by a federal pay scale that starts college graduates at little more than fast-food wages.

IRS representatives answered fewer than 1 in 10 phone calls during the 2021 tax-filing season, according to National Taxpayer Advocate Erin Collins, who heads an independent arm of the agency designed to help taxpayers resolve problems. Even in off-peak periods the agency is answering only about 4 in 10.

The main role of the IRS is, of course, to collect taxes. But during the Covid-19 pandemic it was also put in charge of doling out billions of dollars in direct checks and advance payments on the child tax credit. The agency received 24.6 million calls related to stimulus payments from when they were authorized in March 2020 to Nov. 28 of that year, according to the IRS's internal watchdog.

Last tax season's call volume was almost four times what it was in the 2018 filing season. During one spike in March 2021, the agency says, it received as many as 1,500 calls per second.

The prospects for this filing season don't look much better: Many Americans will have to reconcile their child tax credit payments on their 2022 returns, for example, which will likely generate a lot of calls. And not only has the number of calls soared, but it's also taking employees longer to handle some issues over the phone because of the complexity of recent tax law changes.

The pressure on the agency prompted President Joe Biden to include call center changes in a Dec. 13 executive order aimed at improving customer service across a dozen federal departments. He instructed the IRS to give taxpayers the option to schedule customer support callbacks.

In Congress a provision in the Democrats' Build Back Better package would give the IRS $80 billion in additional funding over the next 10 years. The proposal has top agency officials planning to hire more employees and roll out new technologies.

Just adding funding is unlikely to translate into filled seats at call centers. In Austin, IRS customer service employees make a starting salary of less than $37,000 a year, says Eddie Walker, president of the National Treasury Employees Union Chapter 247 there. The figure reflects a 2.74% raise that just took effect, he says.

"At the starting pay level, we're competing with the fast-food industry," Walker says.

The job is "way more involved" than fast food, with high stress and "unreasonable expectations," says Jason Sisk, president of the NTEU Chapter 97 in Fresno, Calif. "It makes it hard to get up to where [the agency needs] to be and sustain the number of employees that they need."

Funding for the agency to boost enforcement and hiring has bipartisan support in Congress, improving the chances it will survive if Build Back Better negotiations progress in 2022.

Senator Rob Portman, a Republican from Ohio, says the agency's customer service improved for a few years in the early 2000s. "But then we fell off over successive years because of a lack of commitment to taxpayer service and a lack of funding," he says.

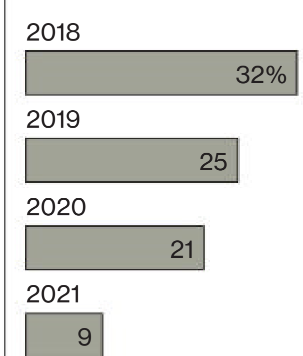
Maryland Senator Ben Cardin, a Democrat, says ramping up enforcement while simultaneously improving customer service is a challenge. "We're focused on trying to collect the taxes that are due. There's as much as a trillion-dollar tax gap every year," he says. "So it's a twofold problem."

A newly opened IRS call center in Puerto Rico employs 400 people, and the agency plans to open more if Congress increases its funding. IRS officials are also planning to roll out changes in existing centers this year, including using natural-language bots to walk taxpayers through frequently asked questions on the phone. The changes are designed to drive traffic to the agency's website, says Darren Guillot, commissioner of collection for the IRS's Small Business and Self-Employed Division.

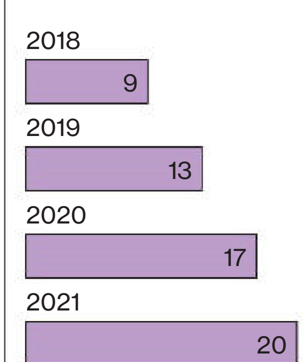
The phone issues are such that some tax professionals are paying for robots to hold their place in line. A startup called EnQ Inc. offers a service, starting at about $100 a month, that makes robocalls to the agency's special practitioner line (i.e., the bat phone), waits on hold, and then, when it makes a connection, puts the client through to an IRS agent. Andrew Valiente, the founder and chief executive officer of EnQ, declined to comment for this article.

A bipartisan group of senators urged the IRS in November to investigate the company's ▶

▼ Share of calls to the IRS answered by a customer service representative during tax season



▼ Average time it took the IRS to answer a call during tax season, in minutes



◀ practices, saying that by "flooding the IRS lines" it may be exacerbating the poor response rate.

"It doesn't look that good that you can pay to get heard by the IRS and Joe on the street has to wait in line for four hours before they get their 'courtesy disconnect,'" says Bill Smith, a managing director at the accounting and business services company CBIZ Inc., referring to a euphemism for when the overloaded switchboard hangs up on a caller.

More money "would go a long way toward helping that situation," Smith says of the potential for new resources. "Is it going to happen immediately, even with the funding? I don't think so."

Using the IRS website is far more efficient than waiting on the phone, Guillot says. "When you want to reach the IRS, you expect us to answer the phone," he says. "We know we want to do better, but we only have so many people to answer so many phone calls." *—David Hood, Allyson Versprille, and Kaustuv Basu are reporters for Bloomberg Tax*

THE BOTTOM LINE The IRS's response rate is so low that even tax professionals struggle to get a representative on the line. More funding could help ease the crunch, if Congress approves it.

Standing Alone in The Midterm Throng

● Josh Shapiro is the one and only Democrat running to be Pennsylvania's next governor

▲ Shapiro

GENE SMIRNOV

In U.S. politics, all eyes will be on Pennsylvania this year: Democrats hope to pick up retiring Republican Pat Toomey's Senate seat so they can hold on to their slim majority in the chamber. And as term-limited Democrat Tom Wolf retires, Republicans have a shot at the governor's mansion in a state where they firmly control the legislature.

These and other races have attracted a swarm of candidates. In almost every statewide primary field, there are more than enough aspirants to suit up a football team—with one exception.

The Democratic candidate for governor, Pennsylvania Attorney General Josh Shapiro, doesn't face a single primary opponent.

"It is striking that the marquee Democrats in the state have all lined up to run in the Senate race," says Dan Hopkins, a political science professor at the University of Pennsylvania. Prominent Democrats contending to replace Toomey include Lieutenant Governor John Fetterman and Representative Conor Lamb. That race "is almost overcrowded at the same time that Josh Shapiro has the gubernatorial primary on the Democratic side all to himself," Hopkins says. On the Republican side, there are more than a dozen candidates vying for the nomination.

Shapiro, 48, made his name with lawsuits against the Catholic Church for sexual abuse cover-ups and against drug companies and doctors for fueling the opioid crisis. His pitch to voters in the swing state—which Joe Biden won with a 1-percentage-point margin over Donald Trump—is that he'll protect abortion rights and elections from the Republicans in the Harrisburg statehouse while hewing close to the political center.

As attorney general, Shapiro embraced some traditional rituals of the office. He held press conferences framed by tables laden with ill-gotten firearms and drugs confiscated by the pound. But he also prosecuted businesses for wage theft and sued one of the state's leading health-care providers to preserve insurance coverage for western Pennsylvania residents, efforts supported by progressives.

With the future of *Roe v. Wade* in doubt, Shapiro frequently proclaims his pro-choice stance, emphasizing that the governor's veto pen is all that stands between Pennsylvania and a Texas-style abortion ban.

"We see attacks every single year in the legislature, and right now both chambers are controlled by anti-abortion legislators," says Signe Espinoza, executive director of Planned Parenthood Pennsylvania, which endorsed Shapiro as soon as he announced his run for the governorship.

Even with Republicans in charge of the statehouse, Democrats believe it's the GOP that's out of sync with Pennsylvania opinion on abortion access and political norms. Some of the Republican candidates in the gubernatorial primary have refused to disavow Trump's lie that the 2020 presidential election was stolen from him. A few are fully embracing the falsehood.

Shapiro argues that a vote for him will be a vote for the integrity of future elections. After some legislators supported Trump's attempts to overturn the state's Electoral College results, and as some Republicans have maneuvered to restrict ballot access in Pennsylvania, he says it will be essential to have a Democrat in charge. And the only Democratic option is him.

Being the governor of Pennsylvania is "a position where you can help protect our democracy from the very significant threats we're facing," Shapiro says. Some governors "are going to find themselves in a position—if Washington fails to deliver meaningful election reform—where they're going to be the brick wall that has to stand to defend our democracy."

Shapiro hails from a Philadelphia suburb in Montgomery County, and he's been involved in politics for most of his adult life. After working on Capitol Hill as a congressional staffer in his early 20s, he was elected to the state legislature in 2006, where he helped then-Governor Ed Rendell engineer a political sweep that briefly gave Democrats complete control of Harrisburg.

As Republicans came to power at the state level in 2010, Shapiro got elected to the Montgomery County Board of Commissioners, taking the helm as Democrats won a majority there for the first time since the Civil War. In 2016 he became AG even as Hillary Clinton lost Pennsylvania. In 2020 he won reelection with more votes than Biden.

It is partly this track record that has so far cleared the field for Shapiro, along with his strong name recognition from winning two statewide races. Without a primary foe, he won't have to tack left in coming months and can conserve his campaign war chest, which stood at more than $10 million in late October.

At a time when some Democratic politicians have sought to distance themselves from police unions, Shapiro embraces more conventional law-and-order policies. He's clashed with Pennsylvania Democrats to his left, such as Fetterman and Philadelphia District Attorney Larry Krasner, on criminal justice issues. As progressive politicians struggle to hone their messaging around violence, Shapiro's middle-of-the-road approach may appeal amid a surge in homicides.

"I'm proud of the fact that I've been supported by local police, and I think we need more policing in our communities," Shapiro says. He argues that it's Republicans, with their austerity-minded budget priorities, who seek to defund the police. Republicans in Harrisburg "love to proclaim their support of law enforcement in their press releases, but when it comes time to match that with action, they fail miserably," he says. "We have a real crisis brewing, not just in places like Philly, but in Lancaster and other communities where we can't recruit and retain enough police."

"I'm proud of the fact that I've been supported by local police, and I think we need more policing in our communities"

Mark Harris, a GOP consultant working for the gubernatorial campaign of state Senate President Jake Corman, says being the state's lead law enforcement official during a crime wave is hardly grounds for bragging rights. He says Shapiro coming from the Philadelphia area, which has more in common culturally with New Jersey than the rest of Pennsylvania, is a point of vulnerability, as is his long career in politics.

"His negatives have never really been litigated," Harris says. "He's going to have to defend his actual record against a well-funded, well-resourced opponent," whoever GOP voters choose.

In what's predicted to be a brutal year for Democrats, Shapiro says he likes his chances. "I've won tough races before in tough environments," he says. "In 2020, I earned more votes than anyone in the history of Pennsylvania running for any office at any time. And it was largely on the strength of winning Republican and independent voters in rural parts of our state." *—Jake Blumgart*

THE BOTTOM LINE Shapiro says his defense of abortion rights and election integrity as well as his centrist approach to criminal justice will withstand the headwinds Democrats face in November.

Selling Jessi

How the pop star lost her billion-dollar fashion empire—and spent two years clawing it back

By Stephanie Clifford and Eliza Ronalds-Hannon

ica Simpson

“We’ll borrow against our homes.

Of all the ways Jessica Simpson had imagined taking back control of her fashion empire, lying on a hospital bed with severe bronchitis, on a breathing machine, while 34 weeks pregnant with her third child, a daughter, was not one of them. “Her oxygen levels were dropping. I couldn’t breathe,” recalls Simpson of the harrowing, rather impractical moment in early 2019 when she and her mom, Tina, president of the business, decided to initiate a takeover bid. “I was 260 pounds. She was a very big baby. We were like, ‘Just take her out.’ ”

Her daughter Birdie didn’t end up being delivered that day (doctors were able to stabilize her), but that moment did mark the beginning of a two-year battle for control of Simpson’s namesake brand, the rare celebrity line to break $1 billion in sales. “We’ll borrow against our homes,” says Simpson of her resolve. “Even if I have to go live in a little, tiny place in Ireland, I will.”

When Simpson started the line in 2005, she was an improbable apparel mogul. The gospel-singing daughter of a Baptist pastor, she first surfaced on the pop-music scene in the 1990s, a new breed of sexy teen blond belters alongside Britney Spears and Christina Aguilera. Although she had the vocal chops, it was the pioneering 2003 hit MTV show *Newlyweds*, a voyeuristic romp through the then-23-year-old’s new marriage to her boy-band husband, Nick Lachey, that vaulted her into the pop-culture firmament. Those who’d written her off as merely a ditzy entertainer became converts. Her viral malapropisms, frank charm, and sexy Texas style drew an Instagram-like following years before the social platform even existed.

Almost two decades later, Simpson had reached the stage of celebrity where she was mostly famous for being famous. After a divorce, she’d married former NFL player Eric Johnson, but over the years she’d developed an alcohol addiction. By 2017 the mother of two young children was carrying a glittery tumbler of vodka and flavored Perrier everywhere, sipping from it mornings before school drop-off. After a drunken *Ellen* appearance, followed by a blackout at a family Halloween party, she finally got professional help. In 2019 she was sober and had millions of actual Instagram followers, but she hadn’t recorded an album in almost a decade.

Throughout all of this, Simpson’s business had been one of the few constants. She didn’t have the can’t-stop-won’t-stop drive in her bones, hatching companies and making investments the way Jay-Z eventually would. She wasn’t going to build a wellness empire like Gwyneth Paltrow with Goop Inc. or court venture capital investors like Jessica Alba with her baby-products line. She wasn’t going to introduce a tequila brand like George Clooney, who sold it to Diageo Plc for some $700 million after four years. And she certainly wasn’t going to cycle through businesses as if they were shoes like Kim Kardashian, who seemed to unveil a new line or deal every year or so until finally building cosmetics and shapewear companies now worth a combined $2.6 billion.

Simpson, though, predated all of them, in 2005 taking one swing at a very conventional business with a very conventional strategy: She’d introduce a clothing brand for Middle America. Teens and their moms who wanted to shop at Macy’s or Dillard’s so they could dress like Jessica Simpson could suddenly afford to do so—some $80, these days, for a leopard-print sweater or $110 for wedge ankle boots. Rather than build a company that actually made the stuff, she’d license her name to the best manufacturers out there, which would then design and produce the Jessica Simpson Collection’s products, including apparel, perfume, and handbags. Tina, who’d largely been a stage mom, would run the company, with the help of a shoe-business whiz who oversaw the licensing and took a stake in the business in 2005.

Oddly enough, the formula not only worked, it outlasted the fashion lines started by many other celebrities—Mandy Moore, David Hasselhoff, even style maven Sarah Jessica Parker. Eventually, the brand did $1 billion at retail, with Simpson appearing on the cover of *New York* magazine as “The $1 Billion Girl,” surprising everyone that the seemingly not-too-bright singer was actually a very clever businesswoman. “To put that figure in context,” the article read, “it means Jessica Simpson is doing roughly the same volume in sales as Michael Kors.”

But soon after her brand’s ascent was being hailed publicly, a slow unraveling began in boardrooms, on earnings calls, and on profit and loss sheets. In 2015, after the Simpsons’ business partner had died from cancer, they cut a deal with a different kind of company with a charismatic young chief executive officer who intended to expand the line into a “$2 billion to $3 billion operation,” as *Women’s Wear Daily* reported at the time. But the company, Sequential Brands Group Inc.—more of a licensing financial middleman than creative partner—was soon in over its head. By 2019 it had become clear to the Simpsons that Sequential was actually in deep financial trouble and had no intention of expanding their business. They were watching their empire slowly die.

In that hospital bed, Simpson had finally had enough. The way Sequential was structured, the whole point was to tap a brand until there was nothing left. The business wasn’t unlike the celebrity game in so many ways, a different version of what she had experienced her entire life, like when her dad pushed her to switch from gospel to pop or when a record executive instructed a teenage Simpson to lose 15 pounds, so she took diet pills. “My name was on it,” Simpson says of her business. “I don’t ever move away from my name.”

So Simpson told Tina and another Collection executive to approach Sequential to buy back the brand. It would require two years of negotiating with the company, which eventually filed for bankruptcy and was forced to sell everything it owned for parts. “We’re ready to go into the trenches,” Simpson says over Zoom this fall, sitting on a cheetah-print chair in front of her fireplace in Los Angeles, waiting for the deal to finally go through. “Pay it all back and earn it ourselves.”

PREVIOUS SPREAD: RAMONA ROSALES/AUGUST

Even if I have to go live in a little, tiny place in Ireland, I will"

Ten years before Simpson fired him as her manager in 2012, her father, Joe, pitched MTV a docuseries about his famous daughter. Growing up, Simpson had moved 18 times as her parents hustled for work. Joe, a Baptist preacher, sold postage meters for Pitney Bowes Inc., while her mom ran Heavenly Bodies aerobics classes at churches—that is, until Joe realized it was their little blond girl with a big voice who could bring in cash. Tommy Mottola, the powerful record executive who later signed Simpson, told *Vanity Fair* she was different than the new crop of teen-girl pop stars in that she could actually sing. "I was about to become the family business," Simpson wrote in her 2020 memoir, *Open Book*.

When *Newlyweds* made its debut in 2003, it was supposed to run for only six episodes, but it ended up becoming a three-season cultural phenomenon. At a time when the most intimate you could get with a celebrity was on the pages of *Us Weekly*, Simpson did something radical. Instead of wearing layers of makeup and midriff-revealing getups, she would wander around her house in a Juicy Couture sweatsuit or throw a gigantic fringed scarf over her shoulders while attempting to cook. In a moment that went viral before viral was viral, Simpson plopped onto a couch, poking at a bowl of something with tuna. "Is this chicken what I have, or is this fish?" she asked her new husband, Lachey. "It said 'Chicken by the Sea.'"

Simpson got publicity—bad, good, everything in between—transforming her from a fading pop star into a relatable comedienne. Her debut album years earlier had charted at No. 25, and the follow-up fizzled; when she put out an album mid-*Newlyweds*, it went triple platinum. Simpson was flooded with appearance requests and endorsement deals. (Meanwhile, the couple divorced in 2006.) Suddenly stay-at-home moms, tweens, everyone seemed to see themselves in Simpson: "I *am* you," they'd tell her at her appearances.

Then Simpson noticed something—they started dressing like her, too. "People would be coming in a shawl," she says. "And everybody was definitely wearing the Juicy sweats." For the first time, her fans were responding to her, not to some image that managers or executives had engineered. Simpson and her mom, who'd handled the pop star's styling and photo shoots, wondered if they could translate that popularity into a fashion brand. "I said to Jessica, 'Hey, why don't we just make your own line?'" Tina says. "'Everything you're wearing is selling out.'"

They knew enough not to manufacture and sell products themselves—it was too expensive and complex. The Simpsons were familiar with licensing through music merchandise, such as tour T-shirts, where they'd lend out Jessica's name for a fee. It's a model best known in the entertainment industry (think *Star Wars* characters on everything from Legos to watches), but licensing became a vastly bigger business in the 1990s when fashion labels wanted to move into categories they didn't already dominate. So while design houses such as Calvin Klein or Ralph Lauren were experts in clothing, when they wanted to expand into eyeglasses or home goods, they would license their name to various manufacturers who'd then make the products and sell them to retailers branded with the designer's name.

Depending on the arrangement, the brand owner might have a lot of control over the licensed goods—input into design, approval over all finished products—or very little, essentially handing out their name and receiving revenue in return. It's not uncommon for brands over time to develop an entire ecosystem of licensees, paying one to produce socks and another to make duvet covers. Licensing allows for low-risk product expansion, but with a smaller return, the deals usually route only 7% to 8% of sales to the owner of the name or brand.

Simpson, at 5 feet 3 inches tall, was known for her soaring heels. After her film debut—as Daisy Duke in the 2005 *Dukes of Hazzard* movie—"everybody was hyperfocused on the Daisy Duke [jean shorts] and the cowboy boot," Simpson says. The Simpsons knew their first product line had to be shoes.

In the shoe-licensing world, there was one towering figure: Vince Camuto. The son of a seamstress, Camuto had been in the shoe business for more than 50 years, starting as a shoe repair clerk. A founder of Nine West in 1978, he eventually hatched the Camuto Group, a powerhouse that had its own lines of shoes, acted as a licensee for other brands, and, eventually with Simpson, licensed out her name to manufacturers making other products. Although many designers chased the high-end customer who'd pay $700 for Christian Louboutins, Camuto had mastered the stylish, midpriced shoe. Known for translating runway looks into mass-market fashion trends, he'd created commercial juggernauts such as the Tory Burch Reva flat, which sold for a little less than $200.

When the Simpsons first reached out to Camuto, he didn't know much about Jessica. "Really, his son watched *Newlyweds*, and he was the one that said, 'Dad, you need to look at Jessica Simpson, and I think that should be your next licensee,'" Simpson says. Camuto ended up with a 25% stake in the Simpson brand, along with the master license. Their first shoe together was a red high-heeled "Daisy" cowboy boot, a replica of the one she wore in *Dukes*—and it became an instant hit. "He could pick a bestseller every time," Tina says. "And they remain our bestsellers," Jessica adds.

After making a splash with the shoes, they wanted to crack clothing. Camuto's vision for the Jessica Simpson Collection was approachable clothes with a fashionable edge sold in midrange department stores. The collection had flashes of Simpson's signature flair—fabrics with no animal pattern too noisy and high heels that often hovered at 4 inches—but the overall aesthetic was suburban mall clothes, such as fringed jeans and tightly fitting floral dresses. By 2014, Camuto still produced the shoes in-house, licensing almost ▶

◀ 20 more product lines, including perfume and jeans, to other manufacturers.

The brand was steered out of LA under Tina's direction, with Jessica's involvement in the business varying depending on what else was going on in her life. Simpson hired close friends, including one of her future bridesmaids and her fifth-grade dance teacher, while ceding the day-to-day to Tina, who divorced Joe in 2013. "There is a boss, and it's my mom," Simpson says. "She'll be pinching my arm in a meeting if I'm saying the wrong thing."

Retail executives were impressed with Tina's work in the nonglamorous parts of the business, such as analyzing sales figures. "It's not like some licensees where it's just basically giving a brand to someone and that licensor collects a check," says Jack Gross, CEO of One Jeanswear Group Inc., a licensee for Simpson's jeanswear line. One former designer at a licensee says Tina required written approvals over every style detail, so a minuscule change, such as the finish on a shank—the metal button on a jean's fly—would mean weeks of holdup as they waited for her sign-off. "As much as the process bogged us down," says the designer, who asked to speak anonymously given exit-agreement terms, the business succeeded compared with other celebrity brands "because of Tina."

Simpson was the brand frontwoman, always up for promoting it, whether in meetings or in-store appearances. The most unusual thing about her was that there was virtually nothing she could do wrong. A major risk for a celebrity brand is that the celebrity will do something dumb or repugnant—there's a morality clause in pretty much every licensing contract, industry lawyers say, for things like trashing hotel rooms or ending up in jail—but Simpson's reality-TV exposure meant she could hardly shock her customer base. "Quite frankly, Jessica, no matter what she did, even if she said something that some would say would be off-color or different, the consumer never responded negatively, which was an amazing feat," Gross says.

In less than five years, the Simpson-Camuto team managed to build a booming brand that spanned nearly three-dozen categories. In 2010 the Jessica Simpson Collection brought in $750 million in sales, hitting $1 billion in 2014.

But signs of trouble began to appear around that time. When Tina visited Camuto that fall, his usual high energy seemed flagging, and Tina, who describes Camuto as "a father-mentor type of a businessman to me," asked him to give her advice about the future of their business as if she were his daughter. "He's like, 'If I was you,'" Tina recalls him telling her, "'I'd get a little money on the table for Jessica, because retail is unpredictable.'" The Simpsons, still owning 75% of the business, began meeting with potential suitors.

Camuto's funeral, January 2015: A who's who of fashion filled the wooden pews of St. Ignatius Loyola church on Park Avenue in New York City. Garmentos mixed with executives, designers with financiers—the CEOs of Macy's and Theory; the president of Lord & Taylor; Tory Burch, Steve Madden, and Tina and Jessica Simpson, with Jessica providing a quote for the funeral's program: "I will forever walk in your shoes...you made them."

While Camuto was eulogized as a brilliant merchant, some in the crowd studied the Simpsons, who were reeling from Camuto's death at 78; a private man, he'd never told them he had cancer. Camuto had built the Jessica Simpson Collection into one of the most successful celebrity-licensing empires in the world—so much so that other Hollywood types had approached him. "They all want to be another Jessica," he told a trade publication about a year before his death, but "it would be very difficult to duplicate."

The Simpsons, too, wondered what they would do next. In the music business, the talent was only as successful as their star producer; for Tina and Jessica, Camuto had been theirs. "Sometimes you get a hit song and sometimes you don't, and Vince was our hitmaker," Tina says.

As Camuto steered the Simpson brand to new heights, another model of brand management had gained popularity, shaped by a financier named Robert D'Loren. Historically, apparel brands had only a few paths to survival. If you were considered valuable, you would plan an initial public offering or get scooped up by an apparel conglomerate such as Nike Inc. or VF Corp. If your brand was distressed, you end up the target of a leveraged buyout by private equity, which would pledge to cut expenses and fund growth—only to bury the company under the weight of its own debt, as happened famously with Limited Stores and Neiman Marcus Group LLC. In some instances, as with J.Crew Group LLC, a company would briefly go public, only to still be swallowed up by a private equity firm.

D'Loren had worked on Wall Street, where he played around with alternative financial models. He structured the first bonds where the assets were intellectual property, like music or films, helping David Bowie raise $55 million by selling bonds backed by future album royalties. Later he did the same with apparel trademarks and future licensing revenue. Then, around 2000, he had an idea for a new type of retail business, modeled on entertainment royalties, and deployed it at

"Jessica's message since I've been 'I want my name. I want the

Simpson’s line selling in a Macy’s in 2011, a few years before it did $1 billion in sales

JAMIE MCCARTHY/WIREIMAGE FOR JESSICA SIMPSON COLLECTION

a company called Iconix Brand Group Inc. Iconix bought brands for cheap, licensed them out, and drew what revenue it could from them. Like music copyrights, the expectation was that these brands’ cash flow would decline without more investment, and that was fine, as long as Iconix kept acquiring fresh brands. “Don’t invest anything into supply chain, design, etc., and minimize marketing; just let the income streams naturally fade over time,” D’Loren says. “The key to the model being sustainable” is to keep buying new brands to replace those declining income streams.

That’s exactly what Iconix did, with Bongo, Rampage, London Fog, and other brands. Iconix’s stock soared, and competitors, including an upstart named Sequential Brands, run by Iconix defector William Sweedler, swarmed in. This new form of brand management company was a collision of the old-world Garment District and Wall Street—businesses often founded generations back by Jewish or Italian immigrant tailors making deals with slick bankers looking to squeeze money out of a brand name.

While at Iconix, Sweedler had encountered a hungry, young operator named Yehuda Shmidman, who joined the company barely out of Yeshiva University, after an entrepreneurial stint selling iPods loaded with oral Talmudic teachings to New York’s Orthodox commuters. By the time Shmidman was 23, he was Iconix’s director of licensing; within five years, its chief operating officer. Sweedler, chairman of Sequential, recruited him as CEO. As with just about every licensing pairing, Sweedler and Shmidman were an odd couple. Sweedler, the race-car-driving son of the founder of Joe Boxer (which Iconix had acquired years earlier), lived in Connecticut and summered on Nantucket, whereas Shmidman lived in the Bronx and worked 24/6; you could reach him at any hour of any day, except the Sabbath. For a while their partnership worked.

When Shmidman joined Sequential, the company had made only one recent acquisition, a little-known shoe company. In his first three years as CEO, he closed at least eight deals worth almost $1 billion. Even so, Sequential’s model was still a bottom feeder similar to Iconix’s. After Simpson approached him, Shmidman saw an opportunity to transform his company into something sexier: Rather than juice what was left of a distressed brand, Shmidman could buy a brand at the top of its game and pump it into a megabrand.

During trips to LA, he pitched the Simpsons—international growth, great partnerships with licensees, a sparkling website, cosmetics, home products—over lunches at Santa Monica’s Ivy at the Shore, a celebrity hot spot known for $44 lobster Cobb salads and paparazzi. “He had a lot of really amazing ideas,” Simpson says. “I didn’t meet with anybody else that believed in me quite like Vince until Yehuda.”

In April 2015 they closed the deal: Sequential would acquire a 62.5% interest in the Jessica Simpson Collection, for $117 million.

If buying Simpson was a coup for Shmidman’s new strategy, his next deal—for Martha Stewart Living Omnimedia Inc., two months later—was an all-out revolution. At $353 million the acquisition was Sequential’s largest by far. Wall Street loved the back-to-back Simpson and Stewart deals, ushering Sequential from a third-tier player into the big leagues alongside Iconix and Authentic Brands Group LLC, a growing competitor. People were calling Shmidman the pied piper of brand management.

But it didn’t take long to realize Sequential had gotten ▶

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"At the beginning of the business, it was a lot about people-pl

◀ ahead of itself. "I looked at the prices they were paying and thought, 'How in God's name are they going to make enough money through licensing to cover the costs?'" says Michael Stone, chairman and co-founder of brand licensing agency Beanstalk Group LLC. "I couldn't do the math."

Neither could D'Loren, who by that point had left Iconix. "When this all started, people didn't realize what the real model was about," says D'Loren, who now runs Xcel Brands Inc., the operating and livestreaming company behind Isaac Mizrahi, Halston, and others. The brand licensing model, he explains, was never a retail or wholesale strategy, but a "financial model."

To digest the acquisitions, Sequential had loaded up on hundreds of millions of dollars in debt, and the blockbuster Stewart deal was dragging down profitability. Stewart, who was paid $6.6 million in 2017 by Sequential, had a board seat and the title of chief creative officer. She insisted on maintaining her New York headquarters and her team. (Stewart, who owned 10.9% of Sequential stock as of August, declined to comment.) The Simpsons were a small-scale version of the Stewart problem, keeping their several-person brand team and California office.

Despite having backed the generous deal terms and promises months earlier, Sweedler and the board, under pressure to meet ambitious quarterly earnings targets, squeezed Shmidman to cut the businesses' expenses. At the time, physical retail—being decimated by e-commerce—still accounted for 92% of Sequential's sales. But commitments Shmidman had made the Simpsons, such as a significant presence online, were never going to happen. "It's hard in this industry to do any investing in the brands," concedes Rick Platt, who was a division president at Sequential from 2013 to 2016 and now runs the licensing and development company Brand Matter. "If it's a public company, you're targeting 75% or 80% operating margins, and that's the board's biggest focus."

On a Paris shopping trip in early 2017, Tina Simpson got a call from Shmidman: He'd been fired from Sequential. "It was a real shock," she says. "I was like, 'Oh, what, wait, what happened? We're just getting started.'" No one else from Sequential bothered to tell them, the Simpsons say, or gave them much guidance on where their brand was headed.

Inside Sequential, Shmidman had lost a power play. Wall Street was spooked by the company's overloaded debt and its missed earnings targets, and the stock price slid. Shmidman had wanted more money to support expansion, but Sweedler objected; also, sources say, he may have disliked his CEO's perceived self-promotion, particularly a *Wall Street Journal* headline calling Shmidman "Martha Stewart's New Boss." In any case, the pied piper of brand management was out. (After Sequential, Shmidman founded his own brand management company, WHP Global, which now owns Anne Klein and Toys 'R' Us. He declined to comment on his time at Sequential.)

With Shmidman gone, the Simpsons felt "not protected," Jessica says, describing themselves as "little ladies yelling, jumping, and trying to get attention in a corporate world." They couldn't even get resources for basic things such as a website, and sales stagnated. "I'm like, 'Well, where is that percentage of money that you're getting going? Why is it not going toward my brand growing?'" Simpson says.

Simpson knew her customers but says Sequential executives wouldn't listen, brushing off her suggestions and calling her "irrelevant"—which cut to the core of her insecurities. "I think they wanted to blame me," she says. "They were making a lot of excuses, and I was the excuse because I didn't have a movie out."

By now, Simpson was also struggling with substance abuse problems, which peaked in 2017, including the widely mocked *Ellen* interview. (She later admitted she'd been drinking beforehand.) Getting treatment after her subsequent Halloween blackout, she focused on her health, figuring that she didn't matter to Sequential anyway. "When you're with a company that doesn't care or believe in you, it makes you really not want to earn them money," she says.

Tina was getting tired of waiting around. In 2017, Shmidman's replacement as CEO had touted that Sequential was building a Jessica Simpson e-commerce site; almost two years later there still wasn't one. "I was like, 'How can we be a brand this big and we don't have a website? This is crazy.' So I said, 'Just give it to me,'" Tina says. She hired a designer who put up a website via Shopify. The move awoke something in Simpson, who started putting products online that retailers didn't pick up—and they were selling. Tina was left wondering what, exactly, Sequential brought to the table. "Seeing what we could do with the website, that we did that on our own, made us really realize, more than ever, like, 'We've got to buy this brand back.'"

In early 2019, with Simpson giving her approval from the hospital, Tina reached out to Sweedler about a takeover. Jessica says Sweedler "gave us a number," and the Simpsons put together a financial model and a proposed deal, but Tina says the price kept increasing. (Sweedler declined to comment.)

Sweedler had his eye on a bigger sale. Desperate for cash, Sequential reached a deal in April 2019 to sell the Stewart business for less than half what it had paid, receiving the bargain-basement price in part because of the stink of desperation. Its debt was largely held by a lending arm of KKR & Co., the $450 billion

COURTESY JESSICA SIMPSON

Tina (left) went from teaching church aerobics classes to running Simpson's business

leasing. Then we realized we actually are the leaders"

private equity firm. The whole market knew of Sequential's dilemma: If it couldn't pay its debt, KKR wouldn't hesitate to put it into bankruptcy. "The writing was on the wall, honestly," Tina says.

Then Covid-19 hit. Although Sequential could continue to try to sell assets to stay afloat, no one was going to bid today for what they could get tomorrow in bankruptcy for a lot cheaper. Sequential cut budgets as it scrambled to find a lender other than KKR to finance it, but no one bit.

This time the Simpsons were going to wait out Sequential's collapse.

A few years ago, Simpson signed a lucrative book contract about being a billion-dollar boss. But she didn't write it. (Also, for the record, she was never a billionaire. At the height of the business, *Bloomberg Businessweek* estimates, the Simpsons would've gotten $13 million or less the year the brand brought in $1 billion in sales. The Simpsons declined to comment on their personal finances.)

Instead, Simpson decided to be candid with her fans, writing about her early sexual abuse, alcohol problems, and her strained relationship with her father in *Open Book*. The memoir became a No. 1 *New York Times* bestseller, which, Simpson says, she cried about for five straight hours when she got the news. For almost her entire career, she'd been told how and who to be: Lose weight, gain weight, sing like this, don't say that. "I just was like, 'Oh, wow, people do want to hear my voice,'" she says.

With Sequential circling the drain, the obvious next move would be to team up with another brand management company in its place. But Simpson didn't need a producer anymore; she was ready to be her own producer. "At the beginning of the business, it was a lot about people-pleasing," she says. "Then we realized we actually are the leaders."

In January 2021 the Simpsons hired boutique investment bank Threadstone Capital LLC to arrange financing so they could buy back the Jessica Simpson Collection. "Jessica's message since I've been involved has been very, very clear: 'I want my name. I want the control of my company.' She views it very much as part of her identity," says William Susman, managing director at Threadstone.

The Simpsons weren't worried that another party might outbid them. Whatever the world had thought of Jessica's business sense, or Tina's, for that matter, the duo had made a shrewd move when they signed their initial operating deal with Sequential—inserting a clause that didn't allow the company to sell the brand from under them without their consent. Sure, another bidder could make an offer, but without the Simpsons' blessing, it would be pointless.

Sequential filed for bankruptcy in Delaware in August and began selling off its brands. In November a bankruptcy judge approved the Simpsons' $65 million bid for Sequential's majority ownership stake, financed largely by the Simpsons themselves with two additional lenders. The business was supposed to be doing billions in sales by now; instead, its valuation had decreased by almost half since they sold it to Sequential. (Although Tina says the brand was on track to sell $725 million to $750 million in 2021, potential bidders who reviewed the collection's financials say sales were about $500 million in 2020. Asked to elaborate on the dramatic uptick, Tina says the brand "experienced tremendous growth coming out of the pandemic.")

The Simpsons are sketching out plans for life as independent owners. Jessica is now 41; Tina turns 62 this month. They intend to keep all of its 20 or so licensees in more than 30 categories and are expanding into all those areas Sequential never did, plus more: face rollers, yoga mats! Pet accessories, which Jessica's 9-year-old daughter is helping design! They're also thinking about hatching their own licensing company, applying lessons learned from the Sequential years. "We want to build our own IP platform, so that we can sign other people under us, and our umbrella, and we will take good care of them," Tina says.

But the retail and celebrity moguldom landscape they're reentering looks radically different from when the Simpson brand was at its peak a decade ago. Chains such as Macy's and Dillard's, where the collection sells, are being hammered by online competition. Supply chain disruptions are making it difficult to get products into stores. And Simpson's original business model, in which she licenses her name for just a small portion of sales, has been replaced by more lucrative models for celebrities. Simpson says she admires Kim Kardashian, a neighborhood mom friend (it *is* LA) who holds majority stakes in both of her billion-dollar businesses. "She reminds me of myself in a lot of ways: She's very vulnerable, very honest, self-deprecating, and driven," Simpson says. "I wish I had a little bit more of her confidence."

Since the sale went through, a whiff of that confidence is starting to surface. On Instagram, where Simpson now has 5.7 million followers, she recently posted, along with a new song she released without a record label, a photo of herself wearing what one might imagine a Jessica Simpson-fashion generator would do to boardroom attire: snug white T-shirt, silver chains, a pile of ponytailed blond hair, and a black bell-bottomed power suit. "Working on lots of ideas to bring into the line for you: skincare, furniture, or maybe some health and wellness products I'm passionate about," she wrote to her fans. "What are ya thinkin' would be exciting to see me creating for y'all?"

In less than 24 hours, there were close to 90,000 likes and no shortage of focus group insight: shorter heels for tall girls, a plus-size line, even a suggestion for Simpson-branded probiotics for gut inflammation. "After 16 years, stepping into that role of ownership of my name and myself," Simpson says. "It's about time." —*With Matt Townsend and Lauren Coleman-Lochner*

Purity and Lucy at the safe house in Narok County, Kenya

the lost

For 25 years, girls in developing countries have been on a remarkable trajectory of progress. The pandemic is reversing it

girls of covid

By Jill Filipovic
Photographs by Nichole Sobecki

At the girls' rescue house down the quiet end of a dusty road in Narok County, Kenya, there are girls who are friends, and then there are Purity and Lucy. *Sisters*, they both say. Purity is 17; Lucy, 19. Where Purity is soft-spoken and shy, Lucy is gregarious and funny, with expressive eyebrows and a sardonic affect. When she smiles—and she smiles a lot—the corners of her mouth turn almost vertical, and her cheeks, still freckled with teenage acne, go full and flush. Purity is slender as tall grass, with glowing skin and a gap in her lower teeth that she habitually pokes her tongue through. Both grew up in traditional Masai communities, in different areas that are within striking distance of Masai Mara National Reserve, a game park that, in normal times, draws hundreds of thousands of visitors a year. Neither one's parents went to school; Purity and Lucy were set to be among the first generation of girls in their communities to graduate from high school, maybe even from college.

Lucy wants to study the moon and become an astronaut. Purity has dreams, too, but she doesn't talk about them much anymore. Both girls left their homes years ago, fleeing forced marriages and, for Lucy, the genital mutilation that traditionally precedes matrimony in their communities. Purity was cut when she was 10. (For privacy reasons, I'm identifying them and some others in the story only by first name or a pseudonym.)

When Covid-19 led the Kenyan government to shutter schools and ban large gatherings, the operators of the rescue house—a nonprofit shelter that offers girls a base where they can live and from which they can go to school—had little choice but to comply. The risk that a deadly disease could rip through the crowded dormitories and infect scores of girls with little access to health care was too high to do otherwise. The operators secured promises from the girls' families that they would be treated well and sent them home. Purity and Lucy left in March 2020, returning to homes where their fathers drank heavily, often became violent, and routinely kicked them out, forcing the girls to sleep in the bush. Each felt lucky when a man from the community approached her, offering a little food, shelter, and money. Almost a year after leaving the rescue house, Purity and Lucy returned, both just weeks away from giving birth.

Lucy hoped she could leave her baby with her mother and continue going to school. Purity didn't have a relative who could help, but she was determined to give her child resources and an education she hadn't had. "I don't want him or her to be like me," she says. So she'd need to make money. Her plan was to become a tailor; she'd start by sewing tidy school uniforms for other people's children.

Kenya, like most countries in sub-Saharan Africa, has so far been spared the worst of Covid. As of Jan. 3, the country of about 55 million people had seen more than 285,000 confirmed cases and nearly 5,400 deaths. These numbers are almost certainly undercounted, but for comparison, Spain, with about 47 million people, had recorded more than 6 million Covid cases and nearly 90,000 deaths. The reasons for the discrepancy aren't fully understood, but age seems to be a significant factor: The median Kenyan is 20 years old, while the median Spaniard is almost 44. Kenyans are also less likely to suffer from other Covid risk factors, such as cancer, diabetes, or respiratory illness. The country is among the least urbanized in the world, decreasing the potential for close-quarters transmission, and its weather allows people to spend more time outside, where the risk of infection is lower.

On the other hand, more than a third of Kenyans live in poverty, and the country has a fragile health-care system that could easily be overwhelmed by the virus. That led the government to proceed with abundant caution, closing schools from March 2020 through January 2021 and instituting a series of strict curfews, international travel bans, and county-specific lockdowns. The measures helped keep infection rates low, but they brought their own perils, including widespread food insecurity, rampant domestic violence, and surging unemployment. The disruptions hit women harder than men, and girls harder than boys.

"Covid was the most difficult thing we had to face and that we still face," says Kakenya Ntaiya, an educator who grew up in a Masai community and was engaged by the time she was 5 years old. Decades ago, Ntaiya persuaded her father to let her defer her engagement and continue her schooling, eventually going to college in the U.S. When she returned to Kenya, she started a nongovernmental organization called Kakenya's Dream, which runs a boarding school for at-risk Masai girls, similar to the school Purity and Lucy attend.

"For the first time, our students were home for nine months or more without that safe space," Ntaiya says. "When you look at a girl going from having a place where she can jump rope and play and her only responsibility is to go to class, to back home where she's now responsible for cooking for the others, taking care of the family, collecting firewood, getting water, and in the evening she doesn't have her own space, there's a bedroom with the little siblings, she's not invited to sit in the big house, which is the father's house, she's in the kitchen—that was really harsh."

The extent of the indirect damage Covid has brought is difficult to measure. What's known so far, though, suggests that it could outweigh the disease's direct effects in Kenya and many other African nations. The economic and social fallout of shutdowns is concentrated among the young, and almost a quarter of Kenya's population is between 10 and 19. Purity, Lucy, and their peers have been hit by a shadow epidemic ripping through developing countries—pushing girls out of school, decreasing their earning potential, putting them at greater risk of violence, and potentially shortening their lives and those of their children.

The question now is whether there's still time for recovery, or whether the pandemic has set girls' progress back a generation. "Very simply, we know that adolescence is a critical moment in life for girls: It's when many health problems either emerge or are averted, and many social ones, too," says Lauren Rumble, a principal adviser for gender equality at Unicef. This, she says, is the time to get it right, because "if we get it wrong, we know they are going to live poorer, shorter lives."

Before Covid, the story of girls' progress over the past quarter-century was largely a positive one. Although only about half the world's girls were enrolled in school in 1998, 25 years later that proportion had surged to 2 in 3, and the gender gap in education, which reflects the stubborn parental preference to invest in a son's education but not a daughter's, had closed in most countries. It's no longer the case that young men are significantly more likely than young women to be literate. Rates of child marriage and female genital mutilation remain disturbingly high—about 1 girl in 5 is married before her 18th birthday, and some 200 million women and girls have undergone genital cutting—but

Purity, Lucy, and their peers have been hit by a shadow epidemic ripping through developing countries

they've been steadily decreasing, with drastic declines in many of the regions where these practices are most prevalent. Adolescent pregnancy, the leading killer of young women in the developing world, is down as young people gain access to modern contraceptive methods. A girl born today will live, on average, eight years longer than one born 25 years ago.

As the girls who benefited from these shifts become adults, the gains are magnified. Women with a secondary education are more likely to delay marriage and plan their family and less likely to be stuck in an abusive relationship and poverty. The children of these better-educated women are more likely to survive infancy and childhood, to go to school themselves, and to live longer, healthier lives. And as women break down long-standing barriers and assert their independence from men who disrespect or mistreat them, they become role models to girls and boys alike, expanding their idea of what's possible for women and what's acceptable for men. Countries with better-educated girls see so many tangible economic benefits that former World Bank economist and U.S. Treasury Secretary Lawrence Summers argued that educating girls "may well be the highest-return investment available in the developing world."

Evaline Wanjiru has spent many of her 26 years riding the wave of improvement. Her own mother didn't go to school, but Wanjiru did, and she was good at it. She went through Form 2 (roughly 10th grade in the U.S.), and though she dropped out when she had her daughter, Blessing, and stayed out after having her son, Miguel, she was able to get a good job, in sales and marketing for Safaricom Plc, Kenya's largest telecommunications provider. She ▶

The Trans Mara region of Kenya, where Purity and Lucy are from

◀ still lived in a family compound in Huruma, the low-income neighborhood in Nairobi where she grew up, but the 15,000 shillings (about $130) she made each month let her put both her kids in school. At 7, Blessing was "brilliant at school," Wanjiru says, noting with pride that "she was No. 3 out of 19" in her class. Maybe she'd be a doctor one day, Wanjiru imagined. And maybe, once Wanjiru's kids were a bit older, she could go back to school, too.

The pandemic defeated those hopes. With Kenya's schools closed and Blessing and Miguel suddenly home all day long, Wanjiru began the struggle of working parents the world over, trying to make sure the kids were physically safe and intellectually engaged. She quizzed Blessing in English to keep her language skills sharp and tried to help her with math and reading. But at-home learning in Kenya is much different than it is in wealthier nations. While the ministry of education tried to distribute learning materials via mobile phone, radio, and television, just 1 in 5 Kenyan adolescents had access to those tools for their schoolwork, according to a report from the office of the country's president and the international nonprofit Population Council. More than half of those studied said their home didn't have consistent electricity.

Wanjiru's struggles were compounded early in the pandemic, when Safaricom shuttered her office and laid her off along with the rest of her colleagues. The story was the same all over Kenya, with parents suddenly losing their livelihoods and the ability to feed their families. Kenya's already thin safety nets were failing. With schools closed, many Kenyan children joined the 350 million kids worldwide who lost their most consistent meal of the day. By the summer of 2020 almost 75% of Kenyan adolescents were regularly missing meals.

When parents don't have money coming in, they can't afford the fees and uniforms that are a fixture even in primary schools in many poor countries. That's what happened to Wanjiru: As the return date for school approached, she was already so far in arrears that the school wouldn't give her Blessing's last pre-Covid report card. It was unclear whether they'd let her daughter through the doors when classes recommenced. "No mother can let her kids stay at home, not going to school," Wanjiru says. Blessing was able to return, but the family is still struggling to pay the fees.

Across town from the Wanjirus, inside a small building with gray concrete walls and dim lighting, a half-dozen girls flounce and cackle as they pick through a stack of gauzy tutus. This is Project Elimu, the premier ballet school in the neighborhood of Kibera. Community programs like this one dot the area and other dense sections of Nairobi, creating havens away from the violence and drugs that can make the streets dangerous for girls, and from the abuse and instability found in some homes. For the many children in Kibera who have loving but poor families, Project Elimu and

Evaline and Blessing Wanjiru

programs like it also provide basics, from shelter to snacks to sanitary pads. And they open up possibilities—they can be one of the few places a child hears that she is in control of her life or interacts with an adult who encourages her to dream big.

Covid gutted Project Elimu: Kenya's pandemic rules barred indoor gatherings of more than a handful of people, and donors sent their funds elsewhere. But Mike Wamaya, the 36-year-old former professional dancer who founded the program ("I'm the dance teacher, I'm the cleaner, I'm everything here," he says), has managed to keep the doors open, at least until the nightly curfew. Wamaya works with a lot of kids, but he sees particularly striking results with girls. "I saw, getting a bit of power, how powerful they get," he says.

One girl who hangs out at Project Elimu is Esther, a 16-year-old with neat braids and the charisma of a newscaster—something she aspires to be someday, if she makes it to someday. She attempted suicide during the pandemic, driven to

"No mother can let her kids stay at home, not going to school"

desperation by an abusive mother who stabbed her with a knife. Esther was one in a sea of young people suddenly confined at home with adults who hurt them, with no school or other place to be in contact with adults who might recognize something was wrong.

Shutting down recreational community programs to prevent the spread of a deadly illness is, on its face, an obvious step. But the cost to adolescent girls can be particularly high. A study of the 2014-16 Ebola epidemic in Sierra Leone, for example, found that girls experienced some of the most significant negative effects from the nation's strict and broadly lifesaving policies of banning travel and closing schools. It also found those negative effects were lessened by community-based programs aimed at supporting and encouraging adolescents. Girls who'd participated in these programs prior to the epidemic were less likely to get pregnant during the lockdown period and more likely to return to school when it ended.

The Sierra Leone study provides some of the best data we have on how the response to a deadly contagion affects girls, and it helped to create a baseline for some of the first predictions about the effects of Covid shutdowns. Early on, Unesco warned that as many as 11 million girls might be pushed out of school permanently because of Covid. The United Nations Population Fund, the UN's family-planning arm, predicted that six months of lockdowns could mean some 47 million women wouldn't get the contraceptives they need, resulting in 7 million unintended pregnancies. Child marriages, which had been steadily decreasing, were predicted to reverse course, with 13 million more girls getting married by 2030 than would have if Covid had never happened. ▶

Two Project Elimu students walk in Kibera after an online ballet class

◀ Some of the consequences clearly haven't been as dire as predicted. Contraceptive interruptions, for example, happened early in the pandemic and then dissipated. Still, the outcomes have been objectively bad: The UNFPA estimates that 12 million women were left without reliable birth control, resulting in 1.4 million unwanted pregnancies. Pre-Covid, the World Bank projected that 31 million people would escape extreme poverty in 2020. Instead, because of the pandemic, as many as 124 million people slipped below this bar that year, and the bank estimates that up to 163 million more may have followed suit in 2021. Researchers at the University of Denver forecast that it will take until 2030 for the number of women and girls living in extreme poverty to return to pre-pandemic levels.

In Kenya, according to government statistics released in June, school shutdowns disrupted the education of 18 million students. When schools reopened in January 2021, 92% of boys reenrolled, compared with 84% of girls. The consequences of girls not attending school, past research has found, include increased chances of adolescent marriage, female genital mutilation, and pregnancy. Girls who become pregnant are much likelier than adult women to die in pregnancy or childbirth and to have babies who are sicker and less likely to survive into adulthood.

According to aid groups, teen pregnancy rates in some Kenyan counties tripled in the first few months of the pandemic. And early numbers indicate that adolescent maternal deaths and stillbirths increased during that same period. When researchers asked girls in Kenya why they hadn't returned to school, the most common reason was that their family couldn't afford the fees. The second most common was that they were pregnant.

Other long-term effects, though, are less clear, in part because of a long-standing dearth of data, and in part because Covid has prevented in-person information-gathering, the gold standard. "You can't have someone at a household survey level, going into a household to speak to someone directly," says Megan O'Donnell, assistant director of the Center for Global Development's gender program. "If you're thinking about now only being able to rely on a mobile phone survey or an internet survey, you've just excluded, unintentionally, the most vulnerable." Social isolation has also made it harder for researchers to rely on their usual adult proxies for adolescent problems: teachers, community organizers, church leaders, coaches, mentors—people like Project Elimu's Wamaya.

That's all left precious little information about the impact of Covid on girls like Esther. She lives in Kibera, the oldest girl in her family. With schools closed and her mother stressed and out of work, her duties were laid out: chores, cooking, tending to the younger children. Esther has a younger brother, Sam, but boys aren't typically expected to do the same kind of household work as girls. According to Unicef, girls as young

Kids at Project Elimu in Nairobi

as 5 spend 30% more time on household chores than boys; by the time they're 14, the disparity has grown to 50%. That expectation, experts and educators say, is part of what keeps girls out of school. Covid—and the sudden, expanded need for full-time caregiving that it brought—made the situation worse.

Sick of feeling like a maid, pushed to the physical and psychological brink by her mother's abuse, and with no school to occupy her days, Esther began spending more time with her boyfriend. Within a few months, she was pregnant. He abandoned her, and she gave birth alone in the hospital; her baby, who had the umbilical cord wrapped around his neck, was delivered via emergency C-section. Esther wasn't allowed to leave the hospital until she'd paid for the cost of her treatment and stay, a common practice in Kenya. The only person who showed up to help was Wamaya, the community dance program organizer. He paid her bill, got her home, and encouraged her to spend more time at the ballet school. It didn't matter, he told her, if she didn't want to dance.

Esther spends most of her time at home, caring for two babies: her son and the brother her mother gave birth to around the same time. Maybe, Esther says, something will change and she can finish her education. But she has a hard time imagining how. "Who will take care of my child when I go to school, and who will take care of her child when she goes to work?" she asks.

The best ways to get girls and women back on track, says O'Donnell of the Center for Global Development, are "cash, care, and data." Rich countries should immediately put money into people's pockets; they should prioritize paying for child care and encouraging men to share the burden; and they should strengthen data collection and analysis, to bring problems into clearer focus. If one thing is apparent, O'Donnell says, it's that "the economic impact of this crisis is going to long outlast the direct health effect."

In May, the Group of Seven publicly affirmed "a commitment to placing gender equality and the empowerment of all women and girls at the heart of our work to build back better." It also declared: "Nowhere is our resolve stronger than in addressing the global setback in girls' education." But the girls who are out of school now need more than commitment and resolve.

> "I saw, getting a bit of power, how powerful they get"

The Kenyan government is aware of the issues. "The Covid-19 protocols that were put in place by the Government unmasked the gaps that need to be addressed," Julius Jwan, principal secretary for the Department of Early Learning and Basic Education, said in a written statement. The government's strategies for girls' education, he wrote, include "ensuring implementation of re-entry guidelines, provision of sanitary towels and other school kits, psychosocial support for the affected girls, parental empowerment on their roles and responsibilities, and review of policies and plans to ensure they are gender responsive." Jwan said the pandemic also opened lines of communication and collaboration between the government, NGOs, educators, and religious groups, which could help address problems in the long term.

What seems to work best to keep girls in school even during a crisis is a network of dedicated adults who have the resources required to help students and their families. Dorcas Adhiambo, principal of a 240-student secondary school in Western Kenya run by the nonprofit Wiser, was able to keep almost all her girls attending class by coordinating on-campus distribution efforts and home visits to issue smartphones so girls could learn via WhatsApp. The educators also brought necessary items—sanitary pads, soap, maize, beans, sugar—to ease the pressure for girls to contribute to the family's income at the expense of their education. This was possible because Wiser is a private program with limited scope, funded by donors who stepped up to meet specific and rapidly changing needs. It only works "if there's heavy funding and heavy follow-up from all quarters," Adhiambo says. "When it is a big scale, the size of Kenya, if you have a school with over 4,000 students and you don't have access to a platform where you can meet regularly, then you leave it to chance."

Ntaiya, the Masai educator, says that her organization did house-by-house outreach in the community to keep girls safe, and that by and large, her students are coming back. But they're often returning wounded and traumatized. "We know that [female genital mutilation] increased," she says. "We know teen pregnancy increased. And child marriages—it's just on the rise. We are hoping that we can change this narrative and figure out a way of protecting girls and protecting communities and helping them thrive. But all the work we've done, you're seeing it's going backward." She pauses and takes a breath. "It's a tough topic to talk about."

At the time this story was published, Kenya was dealing with a sharp rise in Covid cases attributed to the omicron variant, but the government hadn't announced any new curfews or shutdowns. Lucy and Purity were caring for their newborn sons full time, with Lucy hoping to resume classes in May and Purity planning to return to a tailoring training program, if they could find sponsors to pay their fees.

In Kibera, Esther slips into the dance studio when things get especially rough at home. Some days she still feels helpless. But once in a while, she can imagine something better. Her own mother had no formal education, instead spending her younger years working as house help for her stepmother. Esther may not have graduated from secondary school, but she did better than her mom, and she hopes that her son will do better than her—and maybe even lift her up as he rises. "I see my son as a strong guy," she says. "I feel like he will dream more than me. I may not get raised now. But he will raise me." Ⓑ

THE DRUGS ARE WORKING

The first step toward fulfilling a New Year's resolution just might be a class of prescription weight loss pills and shots. The next steps: Getting patients and doctors to trust them and insurers to cover them

By Emma Court **Illustration by Steffen Ullmann**

Obesity is a disease. The American Medical Association said so almost a decade ago, and experts convened by the National Institutes of Health did the same when Bill Clinton was president. But it bears repeating, because the conventional wisdom still holds that obesity is a choice. From paleo to Pilates, get-fit-quick schemes revolve around willpower and the assumption that weight loss is entirely a function of diet and exercise. Successful weight loss is partly a function of behavior, yes, but research suggests that genetics and environmental factors can make it extremely difficult or even impossible for some people without outside help. Today, outside help often means surgery, but there's a much less invasive option quietly sitting on the shelf.

That would be prescription drugs, especially a group of drugs known as GLP-1 receptor agonists, or GLP-1s. These compounds were designed for people with diabetes but have also been shown to cause patients to shed pounds. They simulate a hormone known as glucagon-like peptide 1, the chemical that helps people feel full after they eat. Many people taking a newer GLP-1 drug for weight loss known as Saxenda, for example, lose at least 5% of their body weight, according to one study by the manufacturer. Older generic medications can cost patients as little as $15 a month, while new, brand-name GLP-1s run about $1,400 for a month's supply of weekly injections.

Over the past several months, pharmaceutical manufacturer Novo Nordisk A/S has twice increased its annualized financial estimates, each time citing high early demand for Wegovy, its next-generation weekly obesity shot recently approved by the U.S. Food and Drug Administration, among other factors. Clinical trials showed patients losing an average of about 15% of their body weight, and the company says the longer-term goal is to make drugs that can produce results comparable to surgical options, which generally yield weight loss of roughly 30%.

Many overweight people and all obese people are candidates for a prescription. Yet no more than 3% of qualifying Americans are taking weight loss medications, and most haven't even heard of them. The American Board of Obesity Medicine has certified 5,242 obesity medicine doctors in total, up from 587 in 2013. So far, though, most doctors simply aren't prescribing the medications.

Obesity Medicine Association President Ethan Lazarus, who's worked with companies that sell such drugs, says part of the reason is that these shots and pills aren't the miracle insta-svelte elixirs of our dreams. Patients still need to eat healthily, work out, and keep in touch with a professional who can monitor their progress and tweak their program. The U.S. medical system isn't exactly set up for that kind of personalized medicine, and doctors aren't immune from biases about weight gain. "I think you've got a multitiered problem where, at the end of the day, most doctors and most people with obesity still believe it's just the person's fault," he says, "and you know, 'if they could just eat a little bit less, it would solve the problem.' "

Absent a major influx of interested doctors, a handful of startups are offering an in-between option: apps that can coordinate remote patient visits and coaching and dispense prescriptions for on- and off-label meds regularly prescribed by obesity doctors. The question is whether these approaches can start to change the conversation around weight loss. Fatima Cody Stanford, an obesity doctor at Harvard Medical School and Massachusetts General Hospital who's advising the startup Calibrate Health Inc., says the emerging models can help bridge the gap between the drugs and their potential beneficiaries. "Patients aren't being made aware that medications are even an option," she says. If she withheld such treatment information from her patients with diabetes or hypertension, she adds, "I would lose my medical license."

Obesity is called a comorbidity for a reason: It raises the risk of diabetes, heart disease, Covid-19, and straight-up death from any cause. Drastic upswings in weight over the past 40 years of increasingly processed foods and sedentary lifestyles have left approximately 3 in 4 Americans, an estimated 245 million people, either obese or overweight. In that time frame, scientists have also learned a great deal about the whys.

In 1986, when Louis Aronne created the Comprehensive Weight Control Center at Weill Cornell Medicine in New York, the gold standards were low-calorie diets and meal-replacement programs. (Think SlimFast.) For the most part, short-term successes seemed to lead to long-term disappointment, as the weight crept back on. "The thought was that you have to just keep people excited and interested" in keeping the weight off, says Aronne. At the same time, scientists were learning more about how hormones trigger hunger and satiety in the body. Through the 1980s and into the 1990s, Aronne's peers were conducting research that eventually led them to the hormone leptin, which tells the brain how much fat the body has stored; the hormone ghrelin, which stimulates hunger; and the gut and satiety hormone GLP-1.

Taken together, these discoveries helped illuminate just how much of eating and weight gain are hard-wired. This insight seemed to support an earlier hypothesis that each person's body has its own "set point" for weight, like a thermostat keeping a room at a particular temperature, and that the body acts to maintain that equilibrium. "Yes, you have to lift the fork," ▶

◀ says Rudolph Leibel, an obesity researcher and professor at Columbia who was involved in the discovery of leptin. “But your drive to eat is physiologically regulated.”

In the gut, GLP-1 prompts the pancreas to release insulin after meals and bring down blood sugar. The big problem with the hormone, from a pharmaceutical standpoint, is that it doesn’t last long—in the human body, its natural half-life is only about 90 seconds. In the 1990s, researchers at the Veterans Affairs Medical Center found that Gila monsters carry a similar, longer-lasting hormone in their venom. Drug companies began developing synthetic GLP-1s, and in 2005 the FDA approved one to help control the blood sugar levels of patients with Type 2 diabetes.

By then, studies with lab rats had made it clear that injecting the hormone GLP-1 into the brain could also make animals feel sated, according to Mads Tang-Christensen, who conducted such studies as a medical student and is now corporate vice president for global obesity and liver disease research at Novo Nordisk. “Lo and behold,” Tang-Christensen says, “the animal stops eating, even if it’s very, very hungry.”

Two areas of the brain in particular appear to account for why GLP-1 drugs such as Novo’s Wegovy aid with weight loss, says Tang-Christensen. The first is the hypothalamus, an almond-size area in the middle of the brain. The other is the hindbrain, a region located exactly where you’d expect. The hindbrain works to activate the hypothalamus, where the arcuate nucleus hosts groups of neurons that control energy regulation, including eating. This is the part of the brain that lights up when you’re really hungry, thanks to neurons that increase appetite. When GLP-1 reaches and binds to receptors on other neurons, including the neurons that suppress appetite, they release chemicals that tell other parts of the brain to stop eating. GLP-1 side effects can include nausea, and, as with other obesity medications (and the SlimFast diet), patients who stopped taking the shots regained weight.

Novo said last month that contractor issues will limit supplies of Wegovy through mid-2022. It’s now working on a combination treatment: Wegovy and an experimental drug called cagrilintide, which replicates another satiety hormone called amylin. In an early-stage trial, the two drugs together helped patients taking the highest dose lose an average 17% of their body weight. The company is working on a pill version of Wegovy, too, and Pfizer Inc. is developing its own oral GLP-1 medications along similar lines. Pfizer is also researching obesity treatments that could be derived from genetic data, according to Senior Vice President Morris Birnbaum. Eli Lilly & Co., one of Novo’s rivals in the field of diabetes treatment, is refining an experimental drug called tirzepatide, part of a new class of treatments that Lilly scientists think will replicate the effects of GLP-1 and another hormone, glucose-dependent insulinotropic polypeptide or GIP, possibly helping to reduce nausea and harmful fat deposits. Early studies done by Lilly in rodents have suggested that GIP “works together with GLP-1 better than GLP-1 alone,” says Nadia Ahmad, Lilly’s medical director for its late-stage obesity program.

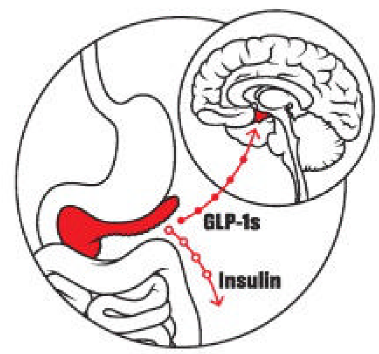
One challenge treatments face when they are initially being developed is that losing weight isn’t always a good thing, and it can be tough to tell in early research trials whether lab mice have stopped eating because they feel sated, they feel nauseous, or they just generally feel like hell, says Pfizer’s Birnbaum. (Mice are rotten at filling out surveys.)

On the human side, the biggest constraint on weight loss drugs remains buy-in from the broader medical industry. In the minds of the public, obesity medications have had risky reputations at least since the 1990s, when the drug combination known as fenfluramine/phentermine, or fen-phen, was pulled from the market after cases of heart damage in some patients. The studies on GLP-1s show no such concerns, but Medicare still doesn’t cover weight loss drugs, despite the lobbying from Big Pharma, and private insurance coverage is patchy. Insurers classify the drugs as lifestyle medications, a category that also includes pills for erectile dysfunction. Barring wider coverage, the coming wave of more expensive drugs, including some of the latest GLP-1s, will probably price many patients out.

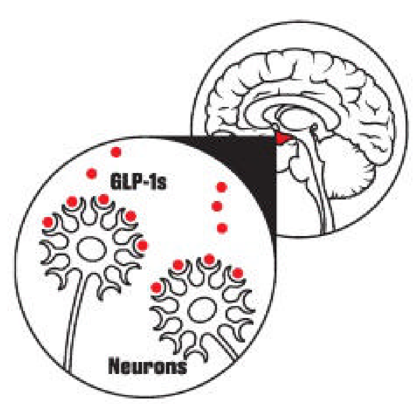
Traditional approaches make it easy to see where ideas about weight loss are failing dieters, and how much that costs. Americans spend $70 billion a year on pounds-shedding, including gym memberships, apps that count calories and track exercise, and the often-grisly premade diet meals and shakes. Coaching programs like WW (formerly Weight Watchers) and Noom charge about $20 and $60 a month, respectively, for digital programs that don’t include meals or exercise regimens. Meal plans

What They Do

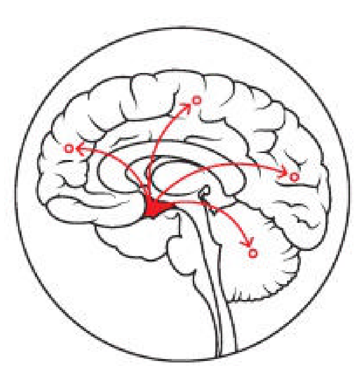
GLP-1 receptor agonists, frequently used to treat diabetes, can also help patients feel full



1. In the gut, GLP-1s prompt the pancreas to release insulin after meals and bring down blood sugar. They also travel to the brain through the bloodstream.



2. In the hypothalamus, GLP-1 reaches and binds to receptors on neurons that suppress appetite.



3. These receptors then release chemicals that tell other parts of the brain to stop eating. Side effects can include nausea.

ILLUSTRATIONS BY CHRIS PHILPOT

Americans spend $70 billion a year losing pounds, including on gyms, apps that count calories and track exercise, and often-grisly diet meals and shakes

such as Nutrisystem and Jenny Craig run into hundreds of dollars a month. Far pricier are in-person programs such as Hilton Head Health, on the ritzy island off the coast of South Carolina, which starts at thousands of dollars a week.

People who struggle with their weight are often alums of many of these programs, paying the full price without seeing long-term results. That's because the body fights dieting through a process called metabolic adaptation—thought to be an evolutionary defense against starvation—and by disrupting the natural balance of a person's hormones. All this makes weight regain far more likely.

The science underpinning weight gain and loss remains a bit squishy. Researchers haven't conclusively proven that the body even has a set point for weight, let alone how to adjust it. It is, however, widely believed that the theoretical set point can be tweaked by increasing physical activity and sleep, reducing stress, and undergoing bariatric surgery. The common thread is long-term behavioral changes. A week of good sleep isn't going to do it.

Experts in search of nonsurgical options better than Lean Cuisine or Jenny Craig say they're optimistic about personalized medicine. In this case, that essentially means repeated face time with someone who can tailor the course of treatment, including coaching through lifestyle changes and possibly prescriptions, to the individual patient. "Obesity is a disease, and so it needs therapy," says Caroline Apovian, a member of Novo's scientific advisory board and the co-director of the Center for Weight Management and Wellness at Brigham and Women's Hospital in Boston.

Startups are trying to fill in the gaps for people without ready access to a doctor who can attend to those needs in person. They're charging about $100 a month out of pocket for remote coaching that includes consultations with doctors and dietitians via an app. In New York, Isabelle Kenyon created Calibrate, which is focused on GLP-1s and is the early leader in the field, in 2019, after her mom was diagnosed with pre-diabetes. "She was like, 'How can it just be diet and exercise? I've been doing that my whole life,' " Kenyon recalls. Eventually, a doctor told them that medication could help. Kenyon's mom, who remembered the fen-phen recall, was wary about it, but she began taking a GLP-1 through Calibrate.

Found Health Inc., another of the startups, offers a wider range of scrips; Form Health Inc. says it prioritizes drugs approved by the FDA as weight loss tools. None of the young outfits have released much data on outcomes, especially when it comes to long-term weight loss. (Calibrate says that 437 of its customers between July 2020 and November 2021 lost an average of 11% of their body weight after six months of using the app and that 68 averaged a 15% loss at the one-year mark.) Lazarus, the Obesity Medicine Association president, says he's skeptical that the startups' customers are getting the best possible treatment, though he allows that "any treatment is better than no treatment."

Anecdotally, however, customers mostly say that the services are costly but worth it. Several report medication-assisted weight loss of 10 to 55 pounds. All say doctors had long told them to lose weight without giving them any real help.

Calibrate customer Veronika Miller-Eagleson says she hadn't heard of satiety drugs until last year, and in the meantime, she'd tried everything else. Miller-Eagleson, the CEO of Modenus Media LLC, a marketing company in Lancaster, Pa., has struggled with obesity since high school. She can vividly recall being rejected from a job at a Florida theme park in her 20s because of her weight. Since then, she's tried WW. The Jenny Craig program. Low-carb diet upon low-carb diet. The Noom app. She almost got bariatric surgery, but decided against it. (Her insurance wouldn't cover the $20,000 price tag.) In her first month taking a GLP-1, she says, she got rid of 10 pounds, and she has consistently felt fuller while eating less.

Miller-Eagleson says that with the help of moderate exercise, reasonable dieting, and the Calibrate app's guidance, the pills have yielded a détente in her decades-long battle with the scale that more fanatical approaches couldn't. Her new status quo is the way things ought to be, she adds: "You shouldn't have to fight to be healthy."

These treatments come with their own risks. Jenny Wesley Thompson, a 42-year-old project program manager in Charlotte, was losing weight with the Found program until an increase in her dosage was followed by a severe anxiety attack. She was switched to another drug, but she ended up quitting the program last February. "It is disappointing to hear that someone had a bad experience, and I wish we had the opportunity to work more with her," says Found CEO Sarah Jones Simmer. Another customer, Megan Hilt, spent months taking an antiseizure medication as an off-label weight loss treatment and got rid of only about 10 pounds. Hilt, who is 31 and works in data entry in central Florida, found the health coaching so rote and so obvious that she wondered if it was coming from a bot. She also says she hadn't been informed that the drug she was taking, zonisamide, wasn't FDA-approved for weight loss. Screenshots of her communications with Found providers viewed by *Bloomberg Businessweek* confirmed her account. Rekha Kumar, the company's chief medical officer, says that the medications the company offers are "within the realm of what's accepted in obesity medicine." Found employs human coaches, Jones Simmer said.

As the drugs keep getting better and more powerful, there will likely be more edge cases, cautionary tales, and plain old disappointed customers, but access will remain the biggest test. Getting prescriptions into the hands of the other 97% to 99% of the potential market will require new ways of thinking about obesity and weight loss—among doctors, insurers, and the rest of us. Ⓑ

Where To Go in 2022

An optimistic peek at trips you'll want to plan this year, all with an eye toward places you can enjoy with your loved ones

Singapore's National Orchid Garden

January 10, 2022

Edited by Nikki Ekstein

We miss the world. Although 2021 brought some encouraging cracks in the pandemic's barriers to travel, there were still too many places we couldn't go. And painfully, seeing everyone we missed was impossible. When planning group trips, attempting to reach distant loved ones, or trying to attend social events abroad, we faced obstacles at every turn. The current wave of the omicron variant has us feeling we may never again get together the way we once did.

So for this edition of the most interesting places to visit in 2022, we focus on new ways to gather. Whether it's a villa in the lush mountains of Portugal that caters to groups, a cruise in the Galápagos that matches families with kids the same age, or a hotel in Thailand that encourages drinking games, these recommendations intend to conjure a feeling of joyful reunion, no matter your risk tolerance. A glamping expedition in the Argentine wilderness is made all the more memorable with family at your side, and a whisky-tasting adventure in Wales wouldn't be the same without friends, would it? Here, ideas to inspire you to enjoy the world—and one another—again.

Pico do Arieiro, Madeira's third-highest peak

Explore as a Unit

WALK AMONG ELEPHANTS IN ZAMBIA

Several new safari lodges are perfectly sized for familial takeovers, generally with three or four tents apiece. Green Safaris, for instance, has intimate and eco-sensitive properties such as Chisa, whose solar-powered accommodations look like stilted nests hovering over the Busanga Plains. The area, known as "the mini-Serengeti," stands out for its converging ecosystems, which host diverse and unusual species including the black-maned lion. At Chisa, groups can ditch the traditional Jeeps and explore by bike, foot, or hot air balloon and join local organizations such as the anti-poaching group Panthera for talks and nature walks. Also ideal for intrepid families is Shawa Luangwa, Green Safaris' five-tent camp in South Luangwa National Park, which offers "silent game drives" via electric Land Cruisers; and Shoebill Island Camp, a four-tent outfit in Liuwa Plains National Park's Bangweulu Wetlands run by the conservation nonprofit African Parks. Walking expeditions there focus on avian species: Among the most colorful highlights are rare shoebill storks and endangered gray crowned cranes.

CAMP OUT IN RURAL ARGENTINA

Only Harry Hastings, founder of Plan South America, could dream up an experience in which the remote Andes and windswept Pampas are the backdrops for multiple generations to gather in luxury. The company's new Nomadic Camp deploys leave-no-trace glamping sites, which can accommodate as many as 100 guests in the most far-flung pockets of the country, be it the high puna desert or Los Glaciares National Park, with amenities that include Malbec-paired *asado* dinners. Base yourself in the Lakes Region, and you can take helicopter safaris to a high-altitude winery in Salta or visit a ranch in Corrientes to ride with gauchos. Connect it all with a few nights at the recently opened, all-inclusive Explora el Chaltén, a 20-room, estancia-inspired adventure lodge within the 14,300-acre Los Huemules Natural Reserve in Argentine Patagonia. An all-female guide team leads excursions ranging from mountain ascents to overland trips to see the Perito Moreno Glacier. End the day in one of five open-air Jacuzzis overlooking the snow-capped peaks of Río Eléctrico valley—a worthy reward for your rugged endeavors.

BOOK A VOLCANO-FACING VILLA IN MADEIRA

Want the trappings of the Mediterranean with only a fraction of the visitors? Try the volcanic island of Madeira, a remnant of Portugal's colonial empire off the northwest coast of Africa. There you'll find beach bars, Michelin-starred restaurants, and lavish *quintas* (as private villas are called). And it's all newly accessible via direct flights from Boston and New York on Sata Azores Airlines. Make time to hike through an intricate system of historic *levadas*, or irrigation channels dramatically dredged and terraced into the rocky mountain faces, to see stunning canyons and waterfalls. Then treat yourself to the island's famed fortified wine: At shoreside Fajã do Padres, accessible only by cable car, tasting tables are set in the sand at the bottom of a precipitous cliff. And don't miss the intimate, convivial dinners at the Wanderer. Its chef doubles as a forager, gathering edible flowers and seaweed to pair with locally farmed and fished proteins. The flavors on the five-course "discovery" menu, which changes constantly, are as explosive as the island's caldera once was.

TREK THROUGH FORESTS IN... SINGAPORE?

While Hong Kong self-isolates and Japan closes itself off to tourists, Singapore is setting up a vast network of travel corridors and establishing itself as a Covid-resilient city of the future. That means doubling down on green spaces—a boon for mental and physical well-being as well as sustainable development. You and your crew will be immersed in nature the moment you set foot in Changi Airport's Jewel terminal, which features the world's tallest indoor waterfall and a terraced forest. Likewise, the zero-waste Pan Pacific hotel, with a profusion of lush balconies and terraces, will soon open in Orchard Road's upscale shopping district. It will have a junglelike entrance, followed by a sandy beach and lagoon, then a manicured garden, and finally a rooftop lawn with mirror pools. Only a few minutes away by taxi is the family-favorite Montane Orchidetum at the National Orchid Garden, which showcases bromeliads, rhododendrons, and 50 varieties of the namesake flower. Cap it off with a few nights at the Raffles Sentosa Resort & Spa, an all-villa hotel perfect for small groups. The 61 Yabu Pushelberg-designed houses (from two to four rooms) sit on an island teeming with native flora.

OPENING PAGE: MINDY TAN FOR BLOOMBERG BUSINESSWEEK. MADEIRA: JACKSON GROVES

Casona Sforza's vaulted arches overlook the Pacific

Plan a Big Reunion

GATHER YOUR FAVORITE FRIENDS IN OAXACA, MEXICO

Flavorful moles, epic surf breaks, ancient craft traditions—they're reason enough to visit culturally diverse Oaxaca, home to 16 indigenous languages. This year add spectacularly designed hotels to that list. The region's Pacific coast now claims a pair of architecturally striking retreats, Casona Sforza and Monte Uzulu, both capable of competing with Cabo's best. The former is the passion project of entrepreneur Ezequiel Ayarza Sforza, who hired Mexican architect Alberto Kalach to create 11 light-filled suites under a series of contemporary vaulted arches in the laid-back surf town of Puerto Escondido. An hour's drive to the southeast takes you to the fishing village of San Agustinillo, where Monte Uzulu's 11 ocean-facing rooms have thatched roofs and handmade wooden furnishings. Both hotels are small enough to take over with a group, and they offer exciting excursions to pre-Hispanic archaeological sites and bioluminescent lagoons.

SPLASH AROUND THE COACHELLA VALLEY

Crowd surfing is back in 2022, with Coachella's namesake music festival slated to return in April, but now you can go Kelly Slater–style surfing in the desert, too, thanks to a 3 million-gallon wave pool at the soon-to-open Palm Springs Surf Club. Even couch surfing is glamorous in this 303-square-mile architectural haven, where the latest rentals include the fully staffed Kempa Villa, with a private helipad and vineyard among its 9,000 acres of party-ready amenities. More lowbrow thrills can be had at the sprawling, newly renovated JW Marriott Desert Springs Resort & Spa, which includes an old-school arcade, duckpin bowling lanes, mini golf, and electric boat rides on 18 acres of lakes. But even rock stars need to decompress. For that, there's the standard-setting L'Horizon Resort & Spa—which in 2022 is almost doubling in size with 24 new suites and an 80-foot-long pool—and Sensei Porcupine Creek, opening this fall in Rancho Mirage as the second outpost of Larry Ellison's opulent wellness resort brand. As for Slater, he has news, too: In 2022 his Coral Mountain project will break ground, with a resort, residences, and plenty of man-made waves.

ALEX KROTKOV

CHARTER YOUR OWN CRUISE IN ALASKA

In 2021 you could barely cruise Alaska at all. Now you can make your trip a fully private family affair via the 12-passenger *Kruzof Explorer*, a Bering Sea crab boat that the Alaska Native-owned Alaskan Dream Cruises has turned into a comfy expedition vessel. Its kayaks and paddleboards get unloaded into the pristine waters of Glacier Bay National Park & Preserve or Misty Fjords National Monument with a 5-ton crane that formerly hauled in crustacean pots. The boat has also been granted the rare privilege to bring visitors to tiny communities such as the remote Tlingit village of Klawock (on the western side of Prince of Wales Island) for rare meetings with master totem pole carvers. Renting out a whole ship is a pricey endeavor, at $89,100 per week for a full-crew charter, but it's one of the most intimate ways to see the Last Frontier state, which is primed to welcome a record-breaking 1.5 million cruise visitors on 38-plus ships this year. Other notable newcomers include Hurtigruten Group's hybrid-electric, 530-passenger *Roald Amundsen* and two 4,000-passenger Norwegian Cruise Line ships equipped with the ultimate teen amenity: go-kart racetracks.

An Alaskan Dream ship navigates right up to glaciers

COURTESY ALASKAN DREAM CRUISES

See Familiar Faces in Familiar Places

JOIN URBAN ESCAPEES IN NEW YORK'S CATSKILLS

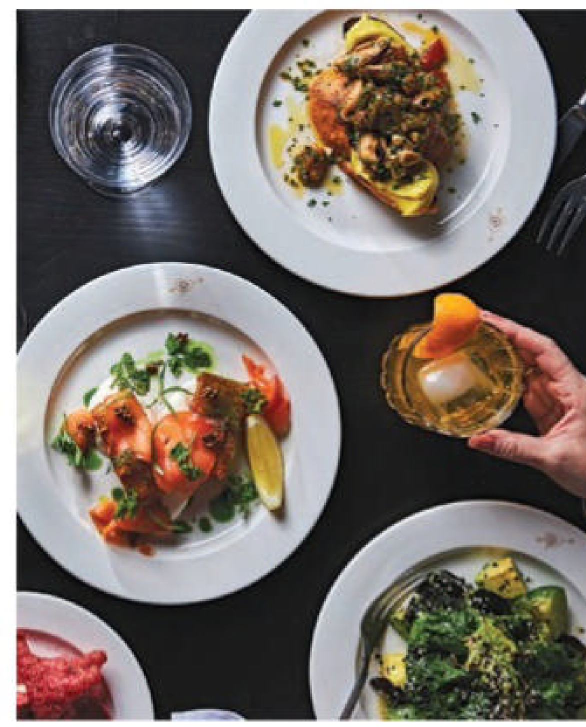
Even after two years of pandemic-induced homebuying and unprecedented development, the towns of the Catskills and neighboring Hudson River Valley aren't slowing down. The upstate New York region encompasses about 6,000 square miles of maple forests, fertile farmland, and pretty hamlets. In the Hudson Valley, Auberge Resorts Collection's Wildflower Farms will soon turn 140 acres of woodland overlooking the Shawangunk Ridge into a retreat with 65 bungalows, cottages, and suites—the first five-star brand in the area. It will join Chatwal Lodge, a spinoff of the Midtown Manhattan hotel, set to open in April with 10 chalet-style suites, plus a restaurant, lounge, and croquet lawn on 30 protected acres on the edge of the Toronto Reservoir. Others have been bringing a big-city approach to the country by introducing members clubs, such as the farmhouse-style resort Inness, in Accord, which offers a nine-hole golf course from the same team that designed cult favorite Sweetens Cove in Tennessee. All the buzz should give a new platform to the many small shops and producers that have long made this area so special. ▶

HANG WITH YOUR GRANDPARENTS IN SUDDENLY COOL BOCA RATON

Is it a retirement haven or an extension of Miami's party scene? Boca Raton is looking more like the latter these days, luring a younger, permanent crowd during the pandemic and spurring the development of dinner spots that don't trade in early-bird specials. Exhibit A: the Boca Raton resort and club, where membership has risen among forty-something professionals with kids. The historic Addison Mizner-designed resort is fresh off a renovation that transformed it into a complex with five swanky hotels and a water park. It also has restaurants from New York's culinary wunderkinds Major Food Group, including a retro-cool takeover of the old golf clubhouse, now called Flamingo Grill. Within a few miles are similarly sophisticated openings: Amrit Ocean Resort & Residences is expected to start serving guests in April with a four-story spa and 184 rooms on a barrier island called Singer; a Mandarin Oriental is also due by yearend as part of a new, $334 million multiuse retail complex on Via Mizner.

REVISIT A FAMILY-FRIENDLY CLASSIC IN NEWPORT, R.I.

By the time Julian Fellowes's period drama *Gilded Age* makes its debut on HBO in late January, its backdrop—Newport—will be toasting a new golden era of its own. First came the Brenton and Hammetts hotels, a pair of nautical boltholes that arrived downtown just in time to welcome droves of East Coast residents looking for a drivable getaway. They joined the Wayfinder, a boho-chic hotel owned by several local chefs that has 197 pet-friendly rooms and rainbow floaties in the pool. In the second half of 2021, Auberge Resorts Collection took over the Vanderbilt, a stately historic hotel in need of a face-lift, and infused it with handsome interiors and a restaurant with dishes created by April Bloomfield. (Its 33 redesigned rooms will be unveiled in early 2022.) The Sailing Museum opens on the waterfront in May; one of its interactive exhibits will let you test your strength on the grinders that power the America's Cup boats. It was once considered a little old-fashioned, but the City by the Sea now has something exciting for everyone.



Dinner at the Vanderbilt

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Bask in the Sun With Friends

DO HONEYMOON NO. 2 ON ITALY'S AMALFI COAST

It's hard to think of a more romantic place to celebrate (your last two, three?) anniversaries than the sparkling Amalfi Coast, with its dramatic cliffs, picturesque villages, and Hollywood regulars. Those enduring draws notwithstanding, until 2021 the entire Amalfi region hadn't seen a single new luxury hotel in almost two decades, thanks in part to the allure of its iconic grande dames—Il San Pietro di Positano, Hotel Santa Caterina, and Le Sirenuse. Suddenly there's some welcome competition. Borgo Santandrea opened last summer in the fishing town of Conca dei Marini, with elevator access to a private beach and 45 rooms and suites that showcase handmade Italian ceramics. And Capri's Hotel La Palma reopens as part of the Oetker Collection this April: A renovation by Rome's Delogu Architecture and interior designer Francis Sultana is expanding all 50 rooms and suites and upgrading them with marble and bronze bathrooms. The property dates to 1822, making it both Amalfi's oldest hotel and its latest seduction.

CATCH A FEEL-GOOD BEACH BREAK IN COSTALEGRE, MEXICO

The name Costalegre translates to "happy coast," and considering the history of the region, it fits. Stretching 93 miles along the Pacific, its 43 beaches, capes, and bays are blissfully removed from the mass tourism of nearby Puerto Vallarta and have been a secret retreat for well-heeled families since the 1960s. That's when a former banker from Italy named Gian Franco Brignone established

AUBERGE RESORTS COLLECTION

The presidential suite at the Ritz-Carlton, St. Thomas

Costalegre's first resort, Costa Careyes, on a 20,000-acre nature reserve that has since attracted cultural luminaries including Paul Matisse and Madonna. Soon enough, neighboring resorts Las Alamandas and Cuixmala joined with equally A-list-worthy amenities and conservation initiatives. This March the new Four Seasons Resort Tamarindo will carry that legacy forward by earmarking 98% of its 3,000 acres for an eco-reserve; the remaining beachfront land will feature 157 rooms and suites, mostly facing the Pacific or the jungle, plus miles of hiking trails and a traditional *temazcal* sauna. Although the area is exclusive, getting there will be easier: A new international airport is set to open in 2022, and freshly paved roads from Puerto Vallarta and Manzanillo are replacing the crude paths that previously made for long, bumpy journeys.

PLAY DRINKING GAMES IN HUA HIN, THAILAND

Bangkok's answer to the Hamptons has been drawing retirees and wealthy weekenders to its wide beaches and golf courses for decades. Yet during the pandemic, nature-starved Bangkokians snapped up luxury condominiums and beach villas en masse in Hua Hin, noticeably lowering the area's median age and increasing its cachet. The Standard has recently opened an outpost on the town's main beach, offering oceanside boot camps, communal "Thai *izakaya*" dining, and copious clinking of limoncello-filled glasses. It follows the late 2020 opening of the Peri Hotel, brimming with rattan and a colorful aesthetic that's as fun as it is inviting. Soon the in crowd will have its poshest watering hole yet: an offshoot of Teens of Thailand, Bangkok's hot-ticket cocktail bar, set to open right on the sand by the end of January.

TAKE IT EASY IN THE U.S. VIRGIN ISLANDS

The reputation of the U.S. Virgin Islands, better known for their busy cruise port than pristine waters or luxury offerings, is on an upswing. American travelers can book passport-free direct flights from more than a dozen mainland cities, with no need for a Covid-19 test on the way home—invaluable conveniences these days. A well-timed hotel boom is also under way. In late 2020 the owners of the beloved family-friendly Winnetu Oceanside Resort in Martha's Vineyard opened a beach club called Lovango on a private island right off St. John. More recently they've added a clutch of elegant treehouses to make it more of a full-fledged resort. Each one has indoor and outdoor showers, ocean-facing decks, and enough space for four. Across Pillsbury Sound, St. Thomas's fanciest property, the Ritz-Carlton, is fresh off a $100 million renovation; new amenities include a family pool with waterslide, a seaside spa cabana, and a 60-foot catamaran for private snorkel tours. And Noni Beach, from Marriott's Autograph Collection, with rattan-and-raffia décor and a quarter-mile stretch of sugary-sand coastline, is taking bookings for this summer. You can make the trip from your Midtown Manhattan office in five hours, door to door.

CLINK RUM PUNCHES IN THE GRENADINES

You don't have to win the lottery to go to the Caribbean island chain that includes Mustique—with its exclusive villas that command six-figure weekly sums—and Canouan, whose unofficial slogan is "Where the billionaires go to escape the millionaires." Laid-back options are now abundant on the 42-island archipelago of the Grenadines, where uninhabited coves and epic dive sites are as easy to come by as free-flowing rum punches and firsthand stories about the British royal family. On tiny Bequia, the Liming Hotel sits on a secluded stretch of private beach with gentle waves; it has nine villas with residential stylings and as many as four bedrooms, plus a grand mansion that easily sleeps 10. Petit St. Vincent, on its own island, has recently raised its flags again after a long Covid closure and a renovation that refreshed its 22 eco-friendly cottages. And a surprisingly affordable 40-room outpost of Soho Beach House has opened with barefoot luxury vibes in a burgeoning Canouan resort complex. Megayachts abound, but you can also charter a masted sailboat for as little as $350 a day with the esteemed local company Barefoot Yacht Charters. As a bonus, a gleaming airport has begun welcoming direct flights from Air Canada, American Airlines, and Virgin Atlantic.

COURTESY RITZ-CARLTON

Share an Epic Adventure

Outside the farming town of Salento, in Colombia's coffee triangle

MAKE A COFFEE PILGRIMAGE TO PEREIRA, COLOMBIA

Now that travelers feel comfortable venturing beyond Cartagena, Bogotá, and Medellín, the verdant Andean region around the city of Pereira is taking its turn to shine. Among its draws are Colombia's coffee triangle, inviting villages, and mind-boggling biodiversity. The metropolis is also becoming more accessible thanks to new nonstop flights from Miami. Think of Pereira as a gateway to all sorts of adventures, such as trekking among the world's tallest palm trees, rafting down lazy rivers, horseback riding through the rainforest, and hot air ballooning–Covid-safe pastimes that have catapulted the area's appeal. Stay at Hacienda Bambusa, a working cattle and cacao farm owned by the family of Juan Pablo Montoya, the country's most famous Formula One driver. Each of its eight spacious rooms has a veranda with a large hammock, and some face the property's tree-shaded pool. From its deck, you might spot some of the region's 1,000-plus bird species. Not to be missed are explorations of nearby towns, including Salento, famous for its multicolored homes, and Filandia, with its quiet plazas and charming colonial buildings.

BECOME CONSERVATIONISTS IN KWAZULU-NATAL

This unsung, malaria-free safari region halfway between Johannesburg and Durban in South Africa accidentally

RUSSELL MONK/THE IMAGE BANK RF/GETTY IMAGES wound up in the spotlight when the omicron variant was first sequenced in its nearby research labs—less an indication of relative risk than the trailblazing scientific contributions under way here. When Babanango Travellers Camp opens its 12 tented suites on the banks of the White Umfolozi River in May, it will offer a firsthand look at how conservationists create reserves. Its 54,000 rewilded acres, repopulated thus far with antelope and rhino, contain mist-shrouded grassland, golden savanna, and a riverine forest where 310 avian species have been spotted; reintroduction of more species is in the works. Farther west, in the 22,000-acre Nambiti Private Game Reserve, the Homestead will raise the already-high bar for eco-friendly design when it opens in April, with a dozen rooms that benefit from gray-water recycling, green roofs, solar energy, and an all-electric fleet of safari vehicles. Want to bring the kids? At And Beyond Phinda Vlei Lodge, new itineraries on set departure dates encourage teenagers to band together to compete in conservation-related challenges in collaboration with researchers. At night they join their family to share stories around a campfire and listen to Zulu drummers.

EXPERIENCE THE GALÁPAGOS THE LUXE WAY

Always the gold standard for wildlife viewing, the Galápagos Islands are getting a luxury upgrade when it comes to almost everything else. The fanciest ship to sail the archipelago, Silversea Cruises Ltd.'s 100-passenger, all-suite *Silver Origin* departed on its maiden voyage in June 2021, with a stargazing platform on its top deck and 24-hour room service that includes complimentary Champagne and caviar. For more intimate exploration, try Ecoventura's two 20-passenger Relais & Châteaux ships—a third vessel arrives in December 2022—and be pampered by a chef who trained in France. You can pick from themed family itineraries, such as one aimed at teens that guarantees your kids will find travelers of a similar age on board. Rounding out the triumvirate of new arrivals is Aqua Expeditions, known for vessels in the Peruvian Amazon and Mekong Delta that set standards for haute cuisine at sea. It launches the first superyacht in the Galápagos in May, the 164-foot *Aqua Mare*, with eight suites. Its Peruvian-Japanese Nikkei-inspired menus are by Lima-based "Jungle Chef" Pedro Miguel Schiaffino and feature ingredients from all across Ecuador.

GO FIFA CRAZY IN DOHA

The host of this year's FIFA World Cup is looking to roar long after the final goal has been scored. Of Qatar's estimated $300 billion in infrastructure projects and 100 new hotels, a majority are in the capital. Focus on the four-island, 23-square-mile development of Lusail City: The man-made archipelago will contain Doha's Foster + Partners-designed soccer facilities alongside a gleaming Rosewood hotel and a 10 million-square-foot luxury shopping complex. The shorefront Katara Towers, Lusail's main contribution to the urban skyline, were designed to resemble the crossed scimitars of the national seal; they will be filled (partially) with hotels from Fairmont and Raffles. Not as large but equally ambitious is Pearl-Qatar, with 1.5 square miles of pedestrian-friendly shopping and yacht-lined marinas. On the mainland is Doha Quest, the country's first theme park, which houses the world's tallest indoor roller coaster at about 200 feet tall. And near the Souq Waqif, where vendors peddle gold, spices, and falconry goods, is the National Museum of Qatar. It opened right before the pandemic in a Jean Nouvel-designed building that looks like a cubist rendition of a desert rose. Bonus: For 80% of the world's population, it's all within a six-hour flight radius.

SEE THE NEXT "IT" PLACE IN ROMANIA

With few well-known international touchstones beyond mythical bloodsuckers, Romania is touting its manageable size (similar to Utah's) to become an easy add-on for visitors to Croatia or Montenegro. There are painted monasteries in the Bucovina hills to the north, villages on the Danube River with storybook historic centers, and winemakers and chefs tapping into a rich heritage that was almost lost after 40 years of communist rule. In Bucharest faded boulevards are slowly being restored to their former grandeur; they're also home to five-star hotels such as the Corinthia and the Marmorosch, the latter of which opened last year in a belle epoque bank building. That sophistication extends to the countryside, where Bethlen Estates in Cris and Schuster Boarding House in Brasov make stylish departure points for day trips that can include truffle hunting or bear tracking. See it all with the help of Beyond Dracula, a travel outfit on a mission to rebrand its home turf as Europe's next great destination—instead of, you know, a place with counts and vampires.

Revolution Square in Bucharest

AUGUSTIN LAZAROIU/ALAMY

Break Bread With Locals

HAVE BRUNCH WITH ALL OF GOUDA

Under-the-radar Gouda has at least as many painterly canals and 17th century landmarks as Amsterdam, which is a mere 50-minute train ride north. But here you'll commune with locals more than tourists—especially if you visit over Easter, when you can join the yearly Paasontbijt, a massive, free-for-all breakfast with residents from all walks of life on the monumental Markt square. Bring the whole crew: At the newly opened Relais & Châteaux Weeshuis Gouda, which occupies a 16th century orphanage, the plushest accommodation is a velour-covered duplex family suite with side-by-side twin beds in the attic. Sint Janskerk cathedral, right across the street, will bear installations commemorating the city's 750th anniversary, including a temporary rooftop walkway with views of the historic inner city and a virtual-reality experience transporting visitors to Gouda's Golden Age in the 1600s. (Church has never been so fun for kids.) This being Gouda, there's also a cheese market: It takes place on Thursday mornings in the middle of town, alongside medieval reenactments by blue-eyed teens in wooden shoes.

JOIN A BIG DINNER PARTY IN JOSÉ IGNACIO, URUGUAY

The tiny, stylish fishing village of José Ignacio is popular with discerning travelers not just because it's a fashionable place to remain unseen. Its Francis Mallmann restaurants and discreet beach bars attract a cosmopolitan crowd to stay at boutique bed-and-breakfast spots tucked away amid the dunes. Choose your own foodie adventure: At the six-suite Luz, set on 35 acres of olive groves and vineyards, you can either go by horseback to a white-tablecloth picnic or join locals for a pop-up dinner served at communal tables in a pine forest. Posada Ayana, a new 17-room hotel with a stunning green marble pool, doesn't even have a restaurant—it throws dinner parties. Robert Kofler, the Austrian art buff behind the project, commissioned artist James Turrell to build one of his famous, monumental Skyspace installations, this one with a 16-foot roof aperture that reflects the brightest part of the Milky Way onto a circular piece of granite laid into the floor. Need even more social media fodder? The 75,000-square-foot Museo de Arte Contemporáneo Atchugarry, Uruguay's first contemporary art museum, opens this month with a retrospective honoring late artists Christo and Jeanne-Claude.

SHARE TRIPPY DINNERS IN MELBOURNE

After six lockdowns in almost two years, Australia's culture capital is preparing to show off a marvelous array of architectural and culinary tricks. West Side Place, a $1 billion mixed-use development in the heart of the central business district, is changing the city's skyline with four neck-craning condo buildings, one of which will include a Ritz-Carlton hotel with a sky lobby on the 80th floor to open in 2022. A gravity-defying set of towers called Sapphire by the Gardens, linked together by a floating gold bridge, will include another in-the-clouds hotel this year, the Shangri-La. And all of it is visible from the rooftop at Fable Melbourne on Lonsdale Street—one of Melbourne's best new bars, with its Greek-inspired mezze and mythology-inspired cocktails. (Get the Hephaestus Craft, with malt, cognac, and chocolate bitters that get set on fire—a nod to the blacksmith of the gods.) Local chef Scott Pickett is also going stratospheric, but in a different way. His Higher Order restaurant transcends the norms of dinner service with an experiential concept that's described as a "culinary hallucination"; it takes patrons through a series of theatrically staged rooms where food is presented by snow queens and robots. And though the W Melbourne will have a spectacular pool soaring over the city, its biggest thrill will be Curious, a subterranean bar and restaurant where the design scheme—all mirrored panels and geometric installations—is like walking into a kaleidoscope.

MEET THE MAKERS IN WALES

In the Celtic corner of the U.K. west of London, Brexit has brought an unexpected silver lining: an intense pride in local culture and a desire to protect it. Look no further than the Welsh Geographical Indication list, an initiative that aims to do for Caerphilly cheese and Anglesey sea salt what the French did for Champagne. It will make the products—and the artisans who produce them—sacrosanct. Single-malt Welsh whisky, which has a 1,700-year history, may be the most enticing; it's a lighter and more fruit-forward spirit compared with its Scotch counterpart. Enjoy it while hanging out with the friendly distillers at some of the 30 or so small outposts that have cropped

Cheese shop
't Kaaswinkeltje
in Gouda

GOUDA: TIM GRAHAM/ALAMY

up in recent years. Make Penderyn the priority; after winning seven gold medals at the 2021 *Spirits Business* World Whisky Masters, the brand's all-woman blending team is opening tasting rooms around Wales, including in its namesake town. Going there puts you near the majestic cliffside ruins of Carreg Cennen Castle and Hay-on-Wye, a town where every public building, from the church to the movie theater, has been converted into a bookstore. Browse and then move on to more active pursuits. The jaw-dropping Wales Coast Path stretches 870 miles along the country's entire coastline, offering epic strolls or bike rides. And for a dose of adrenaline, Wales now claims Europe's fastest seated zip line, with four side-by-side cables that let you race across the Cynon Valley at 70 mph.

GO ON A COOKIE CRAWL IN VIENNA

There's no better way to ease back into city travel than picking a small, walkable gem that has something in store for every season. This spring the Heidi Horten Collection, named for the Austrian billionaire whose Klimts and Warhols will fill it, opens in a 22,000-square-foot town house in the heart of Vienna. Accommodations are also getting a more contemporary twist: In summer a 99-room Rosewood will open in the former Erste Group Bank headquarters near Petersplatz in the old town. Come fall, guests in the Almanac's 111 lustrous rooms will have access to intimate literary events and helicopter trips to wineries right outside the city. Whether you're bringing friends or looking to make them, one option outshines the rest: small-group bread-baking and pastry-making classes booked exclusively through the recently opened Hotel Motto. A debut from Bernd Schlacher, a popular restaurateur and mentor to many of Vienna's best bakers and *pâtissiers*, the hotel offers 91 belle epoque-inspired rooms, a glassed-in rooftop restaurant, and predictably knockout tartes flambées. B

—Chris Bourke, Samantha Brooks, Jackie Caradonio, Sara Clemence, Jennifer Flowers, Fran Golden, Richard Holmes, Rebecca Jones, Jen Murphy, Chadner Navarro, Brandon Presser, Ramsey Qubein, Chris Schalkx, Kristen Shirley, Derek Wallbank

Get Ready for Another Big Year of Deals

By Brooke Sutherland

The pandemic's fits and starts had most people wishing good riddance to 2021. But for bankers it was a blockbuster year for mergers and acquisitions, and they'd love to repeat it.

U.S. companies were involved in \$2.5 trillion worth of takeovers in 2021, handily surpassing the previous record of \$1.96 trillion set in 2015, according to data compiled by Bloomberg. Unlike previous deal booms, which have been fueled by a handful of megasize transactions, this one was remarkably broad-based. There wasn't a single U.S. acquisition larger than \$50 billion in 2021, but there were more than 20,000 deals, according to Bloomberg's count, about two-thirds more than in 2015. Dealmaking smashed records in many sectors, including industrials, consumer goods, and technology.

That sets a high bar, but all signs point to another year of robust activity. Companies have plenty of financial firepower. Borrowing costs should remain low on an historical basis, even if the Federal Reserve follows through on expectations to increase its benchmark interest rate three times in 2022. And corporate balance sheets are generally in good shape, especially those of larger companies, thanks to a strong economic recovery in the U.S. that looks set to continue this year.

Bargains are hard to come by: U.S. takeover targets last year commanded a median price of 16.2 times their earnings before interest, taxes, depreciation, and amortization, their richest valuation in at least a decade. But stock buybacks aren't cheap right now, either. The S&P 500 index rose to a fresh record just before the end of 2021, closing out the year at a valuation of about 23 times this year's expected earnings. A smart deal that offers strategic benefits is a better use of cash for most companies than repurchasing their own highly valued stock.

Tougher antitrust enforcement under the Joe Biden administration may continue to keep a lid on megasize deals. Canadian Pacific Railway Ltd.'s \$30 billion takeover of Kansas City Southern—one of the largest transactions of 2021—only moved forward after U.S. regulators blocked a higher offer from rival Canadian National Railway Co., citing antitrust concerns.

Rather than buying competitors, corporate executives may instead focus on consolidating supply chains in-house after the pandemic disruptions underscored the risks of relying on third parties. This is already happening: Sherwin-Williams Co. last year agreed to buy paint-ingredient maker Specialty Polymers Inc., whose facilities in Oregon and South Carolina will help the company reduce its reliance on the hurricane-prone Gulf region. American Eagle Outfitters Inc. acquired a pair of logistics companies to help it offer faster delivery, and automakers are taking more control over the production of semiconductors and batteries for their vehicles.

It all adds up to another big year for dealmaking. Ⓑ

—Sutherland is a columnist for Bloomberg Opinion.

ILLUSTRATION BY GEORGE WYLESOL

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