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◀ &Pizza CEO Michael Lastoria believes in fresh ingredients, worker input, and paying above minimum wage

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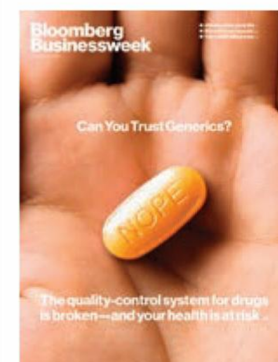

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By Benedikt Kammel

● After a week of political humiliations at the hand of the U.K. Parliament, Prime Minister Boris Johnson said he'll seek a new deal with the European Union to deliver Brexit. Leaving without an agreement by Oct. 31 became harder after opponents passed a law banning him from pursuing a no-deal Brexit—or calling a snap election to change the parliamentary math.

● Nissan ousted Chief Executive Officer Hiroto Saikawa, less than a year after the dramatic downfall of Carlos Ghosn from the Japanese carmaker. The company seeks a permanent replacement by the end of October as it grapples with job cuts and decade-low profits.

● "We're in a position to respond with many, many billions if indeed an economic crisis erupts in Germany and Europe."

German Finance Minister Olaf Scholz, unveiling next year's budget, said the government of Europe's largest economy stands ready to react should the country slip into recession.

● AT&T has come under pressure from activist investor Elliott Management, which disclosed a

$3.2b

stake and questioned its push into the media industry. President Trump also weighed in, saying he hoped the investment would end what he called Fake News from anchors at CNN.

● WeWork's initial public offering is in doubt after executives of the co-working company and SoftBank—its biggest investor—discussed shelving the plan, according to people familiar with the deliberations. The sale became contentious after WeWork revealed billions of dollars in losses and a corporate structure riddled with potential conflicts.

● The *Golden Ray*, a massive cargo ship transporting automobiles, tipped on its side in Georgia's St. Simons Sound while leaving port. The U.S. Coast Guard said it rescued all crew members trapped on the vessel.

● Saudi Arabia replaced Energy Minister Khalid al-Falih with Prince Abdulaziz bin Salman.

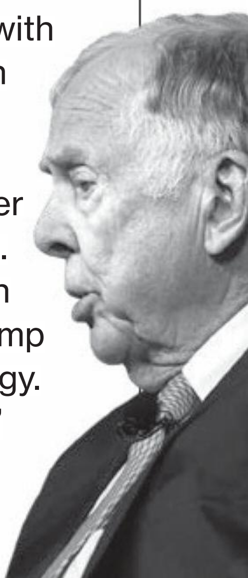
The half-brother of Crown Prince Mohammed bin Salman is the first member of the royal family to hold the critical job.

● Assets in mutual funds and exchange-traded funds that track U.S. equity indexes rose to $4.271 trillion in August, surpassing the $4.246 trillion in those run by stockpickers, according to Morningstar Inc. It's an historic shift, the first time so-called passive funds eclipsed active ones.

● British Airways was forced to cancel almost all of its departures and arrivals for two days because of a pilot strike over pay.

The action cost about £40 million ($49 million) a day and was the airline's first involving pilots since 1979.

● T. Boone Pickens, who weaponized oil wildcatter wealth and a Texas-size personality to terrify corporate America with takeover attempts in the 1980s, died at the age of 91 after a series of strokes over the past three years. He saw no conflict in supporting both Trump and alternative energy. "I'm pro-everything," he once said.



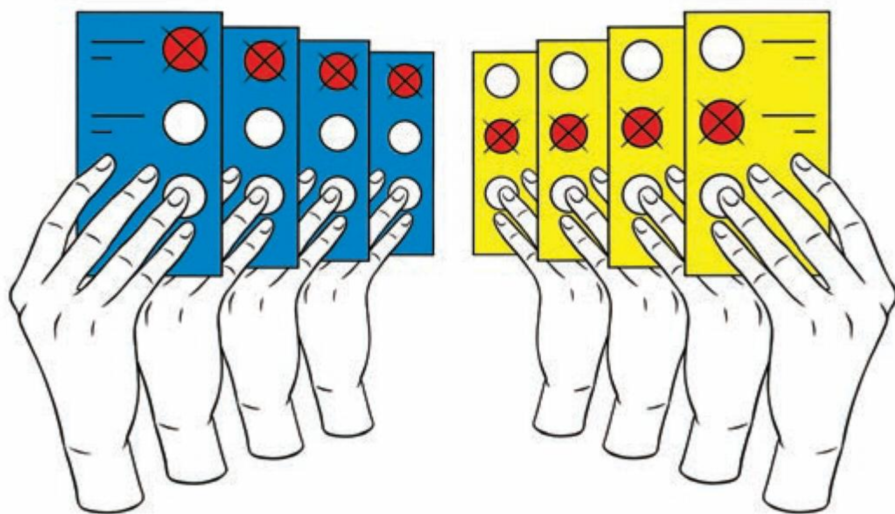
● U.S. President Donald Trump fired John Bolton, his third national security adviser, via Twitter. ▷ 33

● China scrapped a limit for foreign investors on stocks and bonds to lift the use of the yuan in international transactions.

● California is poised to transform the gig economy with a law that may reclassify many contractors as employees.

● India's space program saw a setback after scientists lost track of the *Chandrayaan-2* lunar lander just before touchdown.

JOHNSON: DANIEL LEAL-OLIVAS/AFP/GETTY IMAGES. SAIKAWA: TORU HANAI/BLOOMBERG. GOLDEN RAY: SEAN RAYFORD/GETTY IMAGES. PICKENS: PATRICK T. FALLON/BLOOMBERG



▶ Here We Go Again

Israel holds elections on Sept. 17 to choose the 120 members of the Knesset. After the previous general vote in April, Prime Minister Benjamin Netanyahu was unable to form a governing coalition, forcing him into a rerun against former military chief of staff Benny Gantz.

▶ Berlin is bracing for thousands of protesters on Sept. 20 at the landmark Brandenburg Gate, where they'll demand more action on climate protection.

▶ China unveils economic data, including industrial production and retail sales, on Sept. 16. The world's second-largest economy is struggling to reboot growth.

▶ On Sept. 20, Sotheby's holds an auction in a Portuguese beach resort of more than 130 vintage cars, including a 1931 Bentley Tourer valued at $773,000.

▶ The U.K. Labour Party hosts its annual conference on Sept. 21. Leader Jeremy Corbyn wants a general election to defeat Boris Johnson's Conservatives.

▶ The Swiss National Bank's rate decision comes out on Sept. 19. Interest is at -0.75%, a record low, but some economists are predicting another rate cut.

▶ Japan hosts the Rugby World Cup from Sept. 20-Nov. 2, the first time the tournament will be held in Asia. Twenty nations will compete for the trophy.

■ BLOOMBERG OPINION

The Wall Is Bad Defense

● Diverting Pentagon construction money defies Congress and hurts military readiness

Kudos to the Pentagon for shedding more light on an enduring mystery of Donald Trump's administration: Who will pay for a wall along the 2,000-mile U.S. border with Mexico?

The answer: not Mexico, as the president has frequently declaimed, but U.S. taxpayers—at the expense of the nation's defense.

The U.S. Department of Defense recently sent lawmakers a list of about $3.6 billion in military construction projects that would be deferred to pay for Trump's wall. This diversion comes on top of the $601 million the administration has redirected from the Treasury Department's forfeiture fund and an additional $2.5 billion hijacked from the Pentagon's other priorities.

This is worse than just budget gimmickry. Weigh the value of the wall against some of the programs Trump is deferring or potentially eliminating: updating the ground infrastructure for the Minuteman III ballistic missile, training and equipping Afghan security forces, dismantling chemical weapons, or improving radar for airborne warning planes. The $3.6 billion in construction funds would have gone to building or improving facilities such as a cyberoperations center in Virginia, small-arms firing ranges and combat training sites in a half-dozen states, ammunition storage bunkers, aircraft and vehicle hangars, and military clinics, as well as expanding missile defense in Alaska. More than half of the funds would have hardened aircraft shelters, extended runways, and built fuel storage facilities and schools for military families at bases overseas.

Congress has rightly and repeatedly refused to provide most of the $13.3 billion Trump has requested for a wall that promises to be a boondoggle. Building a barrier on that scale would waste tax dollars, invite legal challenges, trample on property rights, and create a standing monument to American intolerance. It would do next to nothing to prevent illegal immigration while siphoning funds from other measures—such as new technology and added staffing at high-traffic border crossings—that would. There's simply no justification for it.

In his desperation to get the wall built anyway, Trump has attempted an end run around Congress's power of the purse by declaring a bogus national emergency in February and now diverting funding that lawmakers explicitly appropriated for other purposes. Congress should foreclose this avenue once and for all by ensuring that the final version of the 2020 National Defense Authorization Act forbids the use of such funds for border barrier construction. And Republicans in the Senate, who've intermittently opposed this charade, should now be able to unequivocally condemn it.

Defending the border shouldn't come at the expense of U.S. military readiness, let alone the welfare of the brave men and women on whom it depends. Ⓑ

Written by the Bloomberg Opinion editorial board

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REMARKS

A Trade War of Unintended Consequences

● The growing animosity between the U.S. and China is resulting in a world that will benefit neither

● By Peter Coy

It's tempting to laugh off the U.S.-China trade dispute as a soap opera featuring men with big hair and bigger egos. Presidents Donald Trump of the U.S. and Xi Jinping of China once professed close friendship; now both feel jilted. The two countries are said to be "consciously uncoupling," like Gwyneth Paltrow and Chris Martin. Xi's just not that into Donald, you know?

Except the consequences of this uncoupling—or decoupling or disengagement or whatever it's called—are deadly serious. The world's two largest economies, still heavily interdependent, are systematically chopping away at the ties that bind them. There is less trade, less investment, fewer students crossing borders to study, and fewer contacts between militaries.

The only question now is how much more contentious the relationship is likely to get. In a worst-case scenario, the U.S. and China split the world economy in two, each tugging a group of trading partners into its own orbit. That would be reminiscent of the 1494 Treaty of Tordesillas, in which Spain and Portugal agreed to split the New World, or like the Iron Curtain that divided Europe between the West and the Soviet bloc after World War II.

A deepening division between the U.S. and China would further disrupt trade, investment, and movement of people, which together are a source of innovation and prosperity. "The result of forcing Europe and the rest of the world to choose between the United States and China cannot yet be discerned, but it will be costly for all involved," Jacob Kirkegaard, a senior fellow at the Peterson Institute for International Economics, wrote in a policy brief this month.

The consequences for global safety and security are potentially even greater. True, there's no guarantee that countries with a dense web of contacts will be friends. But countries that wall themselves off from each other are invariably rivalrous, if not outright hostile, says Jeffrey Bader, a Brookings Institution senior fellow who was director for Asian affairs on President Barack Obama's National Security Council.

The main reason for thinking things might get worse is that trust, once broken, is hard to repair. (Ask any divorce lawyer.) There will be no "just kidding" moment in which Trump and Xi laugh off the whole episode as a silly misunderstanding. For instance, now that the U.S. has slapped restrictions on the sale of American-made chips to Chinese telecommunications giants Huawei Technologies Co. and ZTE Corp., it's impossible to imagine that Xi will ever again regard the U.S. as a reliable source of critical components. The companies are redoubling in-house research and development. Huawei's HiSilicon chip subsidiary is on track to become one of the world's largest makers of core processing chips, according to Sanford C. Bernstein (Hong Kong) Ltd. analyst Mark Li.

Another reason to expect worse to come is that a trade war tends to feed on itself. Each act of retaliation by one side is taken as a fresh affront by the other. Trump's tariffs began small in January 2018, with levies on washing machines and solar panels imported from all countries, not just China. By this December, according to each side's stated plans, there will be punitive tariffs on almost all products sold by each country to the other.

Finally, some of Trump's advisers view China not just as a rival but as an implacable and fundamentally alien foe. The *National Security Strategy*, published in 2017, said China and Russia seek to "shape a world antithetical to U.S. values and interests." Secretary of State Mike Pompeo said in June, "China wants to be the dominant economic and military power of the world, spreading its authoritarian vision for society and its corrupt practices worldwide." Peter Navarro, the White House's director of trade and manufacturing policy, wrote a book called *Death by China*.

Last year at Bloomberg's New Economy Forum in Singapore, Henry Paulson, who was President George W. Bush's secretary of the Treasury, warned of an "Economic Iron Curtain" dividing the world if the U.S. and China fail to resolve strategic differences. Paulson blamed China for a good deal of the impasse but said the U.S. needs to tone down the rhetoric. "If we treat China like an enemy, they might become one," he is fond of saying.

The dissolution of what used to be called Chimerica has already begun. Michael Scicluna, chief financial officer of Shyft Global in Provo, Utah, says his small outsourcing company used to arrange for all of its clients' manufacturing to be done in China, but over the last year it's switched 15% of production to lines in Taiwan, Thailand, and Vietnam, with more likely to come. "We understood the Chinese culture quite well. We built a relationship with factories. It's just a good system for us," he says. But, he adds, the tariffs are making China far more costly.

The tariffs are also inadvertently making the U.S. a more costly place to do business. Troy Roberts, chief executive officer of Qualtek Manufacturing Inc. in Colorado Springs, Colo., says steel tariffs have made the U.S. into an island of high steel prices, harming companies like his that buy American steel as an input. He says he recently lost a customer for tire-chain parts to a competitor sourcing its steel from Austria. Roberts, who is chair of a trade group called the Precision Metalforming Association, says, "I applaud their efforts to try to deal with China. It's just their method is not working."

Trump is right, of course, that China has committed theft of intellectual property, forcible tech transfers, and (in the past) currency manipulation, among other sins. But the most effective way to deal with such violations is concerted international pressure exerted through multilateral bodies such as the World Trade Organization. The goal with China should be fairer trade, not less trade.

Trying to force apart the interconnected U.S. and Chinese economies with the blunt instrument of tariffs is fraught with ▶

DAMIR SAGOLJ/REUTERS

◀ problems. "For each intended consequence of the tariffs, you probably get 10 unintended consequences," says Stephen Myrow, managing partner of Beacon Policy Advisors LLC in Washington, who worked in Bush's Treasury Department.

The rationale for Trump's trade war isn't always clear. At times, he justifies tariffs as a temporary measure to force China to the negotiating table; at other times he sees them as a force for bringing jobs and production back to the U.S. The latter ambition is a mirage. Self-sufficiency sounds like a good thing, but in practice it's a recipe for slow growth or worse. No economy, even one as big as the U.S.'s, can do everything well. Free trade allows each country to specialize in what it's best at and to buy the rest from others.

There's always been a security angle to free trade. In 1860, France and Britain signed the first modern trade pact, known as the Cobden-Chevalier Treaty. That was less than half a century after the end of the Napoleonic Wars and arose from the brilliant observation that trading is better than fighting. Many nations that weren't a party to Cobden-Chevalier adhered to its spirit. That lasted until the Great Depression, when nations raised tariffs in a fit of beggar-thy-neighbor rivalry. After the Depression came the even deeper breakdown of World War II.

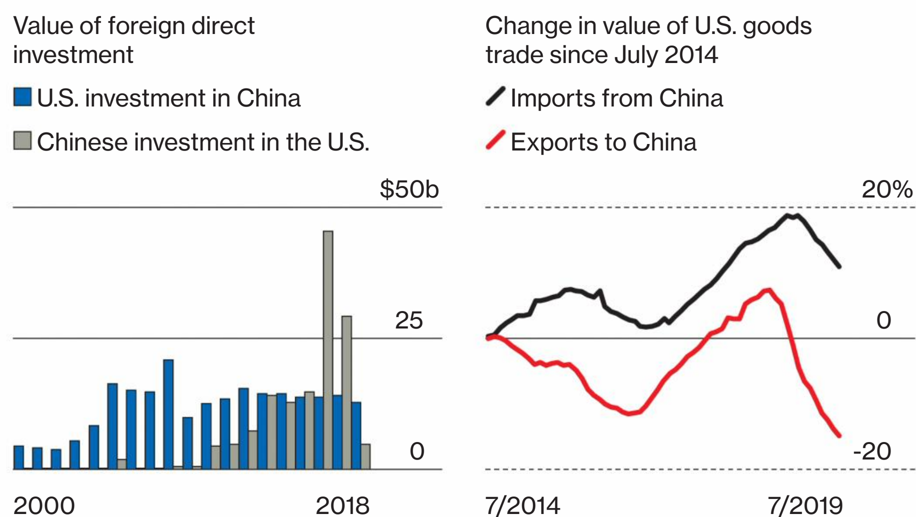
Those twin catastrophes renewed interest in promoting free trade in the name of prosperity and security. In October 1947, two years after the war's end, 23 nations signed the General Agreement on Tariffs and Trade. But the Soviet Union opted out, forming a rival trading bloc with its Eastern European satellites called the Council for Mutual Economic Assistance. That self-isolation, combined with the pernicious effects of communism, sowed the seeds of the Soviet bloc's demise by retarding technological progress and economic growth.

A high point for free trade came in 2012, when Russia joined the GATT's successor, the WTO. But now, a couple of decades after the Soviet Union's dissolution, the world may be sliding back into a bipolar trading regime.

Some of Trump's advisers, including Navarro, appear to regard the rivalry with China as a replay of the long twilight struggle with the Soviet bloc. China is successful only because "they steal stuff," Navarro said in a discussion last year at the Center for Strategic and International Studies. The Chinese "take the technology of the world and avoid the 10, 20, or 30% R&D expenditures that other companies have to spend every year," he said. Deprived of free access to Western technology, he said, China "would be left with an economy that would effectively lose its edge."

But hawks like Navarro may be underestimating China. It is a more productive, more competent player in technology than the Soviet Union ever was. It's also more integrated into global supply chains, meaning that the rest of the world needs China almost as much as China needs the rest of the world.

Trump is trying to get China to abandon its Made in China 2025 program, a 10-year government plan to make the country a world player in 10 key sectors from aerospace to artificial intelligence. Trump argues accurately that China has broken free-trade rules to advance the project. But getting Xi



to stop working on the 2025 project altogether is unrealistic.

While it's easy to imagine the trade war worsening, there are grounds for hope that it will return to something nearer the status quo ante bellum. David Jacks, an economist at Simon Fraser University in Vancouver, says influential U.S. businesses may push back harder against Trump's agenda. He expects "pretty significant lobbying on the part of very large U.S. corporations that have made very significant investments in terms of fixed capital in global value chains over the past 30, 35 years."

One reason for corporate pushback would be that the U.S., in trying to isolate China, could isolate itself instead (page 34). That would happen if other nations choose to keep doing business with China on favorable tariff terms, leaving only the U.S. to pay high prices for Chinese goods without any concomitant benefits. "I don't see how one can set up global supply chains excluding China if companies from other countries include them," Brookings's Bader wrote in an email. "We are not going to persuade the Europeans and Japanese to exclude them. That puts a ceiling on how far decoupling can go."

Another cause for hope is that Trump or more likely whoever succeeds him in the White House will take notice that China has on many fronts performed as a responsible world citizen. Yes, its record on human rights is inexcusable, and its militarization of the South China Sea is destabilizing. On the other hand, it stopped manipulating its currency. It's become a world leader in renewable energy and, unlike the U.S., has joined the Paris climate accord. The Chinese, far from being inscrutable, have the same hopes and aspirations as Americans. "Chinese society is more similar to American society than Soviet society ever was," Yale historian Odd Arne Westad writes in the latest issue of *Foreign Affairs* magazine. America's relationship with China can be positive, not purely a zero-sum game in which one side's gain is the other's loss.

Writing under the pseudonym "X" 72 years ago, American diplomat George Kennan laid out a plan for the U.S. to compete with the Soviet Union. As Westad writes, Kennan stressed that the U.S. needed to "create among the peoples of the world generally the impression of a country which knows what it wants." Self-knowledge is equally key today. The alternative is blundering into a bitter divorce that's in no one's best interest. Ⓑ

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The Oh-So-Slow Greening Of Cruises

● Shipowners seeking to clean up their emissions are finding it's hard to quit carbon

After a 13-deck cruise liner crashed into a quay in Venice this summer, residents took to the canals and bridges chanting, "*No grandi navi*," or "No big ships," and local officials vowed to bar large vessels from the city center. Concerned about overtourism and pollution from smoke-belching liners, Barcelona—Europe's most popular cruise destination—and the Croatian city of Dubrovnik, where much of *Game of Thrones* was filmed, are planning limits on the number of ships that can visit. Southampton, Britain's top passenger port, wants liners to run on shoreline electricity so they can turn off their engines while docked. "Communities find it difficult to see the benefits of these big cruise ships," says Christopher Hammond, leader of the Southampton City Council. "It's a very visible thing: a big funnel chucking out black soot and smoke. People think, I'm breathing all that in."

With their brochures and websites brimming with photos of pristine blue waters and unsullied shorelines, cruise companies are profoundly aware of the importance of a spotless image. The biggest players—Carnival, Royal Caribbean International, and Norwegian Cruise Line—say they've made sustainability improvements such as banning some single-use plastics and increasing use of locally sourced foods, but cutting emissions is more complicated. Most ships burn a thick, sulfurous mix of the goo that's left over after gasoline and other higher-value fuels are refined. Although some smaller boats can run on electricity, batteries can't yet fully power a cruise liner that might spend several days at sea.

So far, the most popular alternative is liquefied natural gas, which can reduce sulfur oxide and nitrogen oxide emissions by 90% and carbon dioxide output by 20%. Carnival, the industry leader, launched the first LNG liner this year, and about three dozen more are being built, according to shipping auditor DNV GL. But environmentalists say those engines can leak methane, a far more harmful greenhouse gas, and because a ship's life span is measured in decades, it's unwise to depend too heavily on the technology. "They're walking into being committed to LNG for the next 30 or more years," says Marcie Keever, oceans and vessels director at Friends of the Earth. "We don't have that much time to deal with the issues facing our climate."

To clean up their current fleet, cruise lines are

Edited by
David Rocks and
Rebecca Penty

adding scrubbers that capture sulfur fumes from ship smokestacks. About half of the 268 vessels operated by members of the Cruise Lines International Association have installed such filters as they seek to comply with global rules taking effect next year aimed at cutting sulfur emissions by 85%. Yet environmentalists aren't fans of those devices because they produce acidic water that gets dumped into the ocean. "Scrubbers effectively turn air pollution into water pollution," says Kendra Ulrich, senior shipping campaigner at Stand.earth, an environmental group that researches maritime issues. Dozens of cities, including Singapore and all of China's ports, have banned vessels with the technology.

Over the past few decades, the big players have been fined tens of millions of dollars for polluting. In June, Carnival agreed to pay $20 million to settle charges in the U.S. that it had dumped plastic into waters in the Bahamas and concealed environmental violations. These broke a probation agreement from 2016, when the company was hit with a $40 million penalty after admitting to illegally discharging oil-contaminated waste into the sea. Mike Kaczmarek, Carnival's marine technology chief, says the two cases and the company's environmental record haven't affected bookings. He cites the industry's investment in scrubbers as evidence of its commitment to cleaning up the seas, and calls bans on the technology unfair. Opponents "can't point to any particular science," he says. "It's just a reaction to some of the noise they hear in the marketplace."

Norway has already imposed sulfur rules that are far more stringent than the new global guidelines. The country has pledged to make the fjords zero-emission zones by 2026, leaving those waters open only to electric vessels. In March the Norwegian Maritime Authority fined a Greek fleet owner almost $80,000 for violating sulfur regulations.

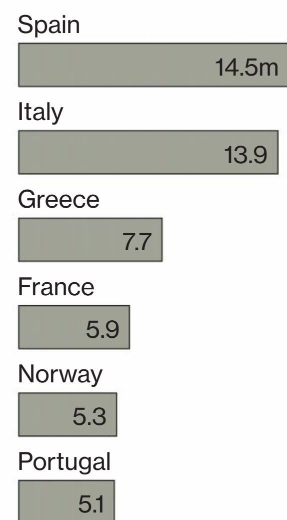
Norwegian cruise company Hurtigruten says it can point the way to the future with ships such as the *MS Roald Amundsen*, which in July set out on its maiden voyage from Tromso, Norway, 200 miles north of the Arctic Circle. Hurtigruten says the 530-passenger vessel is the world's first hybrid ship, running on batteries with an LNG engine for backup, so it emits 20% less carbon dioxide. The company plans to convert 11 of its 16 ships to hybrid power in the next two years.

That's possible because Hurtigruten's ships are relatively small, topping out at just over 500 beds. It would be much more difficult to use hybrid technology on many of Carnival's vessels, which can accommodate more than 5,000 passengers. Bigger ships need more power per ton of displacement than smaller ships do, and Carnival says the batteries required for one of its giant liners would leave little room onboard for anything else.

Hurtigruten Chief Executive Officer Daniel Skjeldam says the simplest way to cut the environmental footprint of cruises is to end the "megalomania" of ever-larger ships. "The industry needs to focus more on getting the total emissions from a cruise unit down to a sustainable level," he says. As more consumers, and even investors, start demanding greener vessels, "companies that don't take sustainability seriously, that don't change and don't invest in technology, I don't think they'll be around in a decade." —*Greg Ritchie*

THE BOTTOM LINE Concerns about pollution have prompted some smaller cruise lines to invest in hybrid vessels, but it's tougher for the industry's leaders to shift away from oil.

● European countries with the greatest exposure to sulfur oxide emissions from cruise ships, in kilograms, 2017



The Gambling Addiction That's Upset Beijing

● Chinese bettors are fueling a $24 billion digital gaming boom in Asia. The Communist Party is hard-pressed to stop it

It's 6:30 on a Monday morning in China, and the Guangdong Club online gambling platform is humming as a stream of wagers placed in Chinese yuan flows through the portal. The club, which lists its place of registration as Costa Rica, hosts operators offering hundreds of sessions for such popular games as baccarat and blackjack, lotteries, and sports betting–many of them in Chinese. A single baccarat table can draw betting volumes touching 75,000 yuan ($10,500) in a 30-second game.

This is gambling with a digital twist, and it allows Chinese to bet without traveling to Macau or Las Vegas. It's also a growing problem for China's Communist Party, which says the transactions are draining hundreds of millions of yuan from the country. Beijing views betting as a vice that fuels social unrest, and Chinese law prohibits gambling on the mainland–including online. But the anonymity the internet affords has Chinese bettors flocking to digital gaming halls. They're fueling growth in Asia's online gambling sector, which is expected to reach $24 billion in sales this year, according to market researcher Technavio.

Beijing has begun lobbying jurisdictions that permit online gambling–including the Philippines and Cambodia–to shut down the industry, an ambition made more urgent as China's economy slows and ▶

ILLUSTRATION BY PATRIK MOLLWING. DATA: TRANSPORT & ENVIRONMENT

◀ it grapples with an escalating trade war with the U.S. Yet stopping the businesses is proving difficult, because there's little incentive for these countries to hamper a lucrative industry. "It's become a cross-border business, and it's very difficult for China to prosecute," says David Lee, a partner at Taipei-based law firm Lin & Partners.

The Guangdong Club hosts virtual casinos operating out of Cambodia as well as others licensed in the Philippines, countries where gambling sites catering to international players are permitted. Costa Rica, where the club's website says it's registered, doesn't have an industry regulator or laws banning online casinos that provide gambling services overseas. The Guangdong Club didn't respond to emailed requests for comment, and its website lists no phone numbers. "Many online gaming companies operate under the radar," says Ben Lee, a Macau-based managing partner at Asian gaming consultant IGamiX. "There are so many of them. It's like China's trying to whack a mole."

The Chinese government has tied a number of problems to online gambling, including telecommunication fraud and citizens being lured to work illegally in the Philippines. The websites allow wagers of as little as 10 yuan, making them within reach of lower-income bettors. Online gaming halls also threaten to lure bettors away from Macau, the only city under Chinese control where casinos are allowed (though online gambling is still prohibited). The Guangdong Club has a logo that resembles that of a Macau junket operator called Guangdong Group, but the Macau company says it has no relationship with the online platform.

Gamblers on the Guangdong Club platform can deposit money and receive their winnings via accounts at several Chinese banks, including some of the country's largest, such as Bank of China Ltd. and Industrial & Commercial Bank of China Ltd., according to the club's website. The banks declined to comment.

Many platforms also allow gamblers to use popular online payment systems from Tencent Holdings Ltd. and billionaire Jack Ma's Ant Financial Services Group. The payment systems have been willing to talk about how they're helping the government's effort to curb online gambling. In recent weeks, some virtual operators have warned gamblers that Tencent's WeChat app and Ant Financial's Alipay have tightened controls. In a statement, Tencent said it takes measures to help identify transactional risks and act against those attempting to use its system for illegal gambling. Ant Financial says it uses an AI-powered risk engine to intercept suspicious transactions and has zero tolerance for online gambling. When a merchant is confirmed to be engaged in gambling, Alipay limits its ability to collect payment, stops working with it, and reports the case to police.

China is winning some concessions from its neighbors. In response to pressure from Beijing, Cambodia has said it won't issue any new online gambling licenses and won't renew existing ones when they expire.

Most of China's pushback has been directed at the Philippines, where online betting sites have contributed to a small economic boom. Following China's calls for a crackdown, the Philippines has said it will stop accepting applications for new licenses at least until the end of the year. That's short of the full ban China wants to see. President Xi Jinping brought up online gambling in August when he met Philippine President Rodrigo Duterte, who's since rejected the call for a ban. The Philippines isn't interested in drastic steps that will have an adverse effect on the economy and will instead regulate the sector, Chito Sta. Romana, the Philippine ambassador to China, said in a Bloomberg TV interview on Aug. 30.

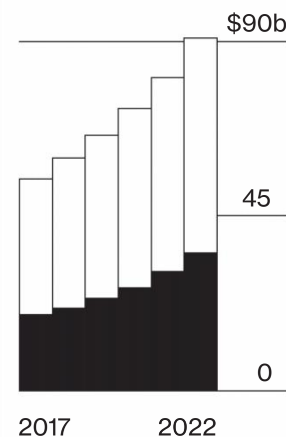
Meanwhile, work continues in Manila on two multimillion-dollar online casino hubs intended to house operations and workers. "We are legal, we ensure fair play," Andrea Domingo, head of the Philippine gaming agency, said in a recent speech at an industry event, adding that online casinos "are here to stay."
—K. Oanh Ha, Jinshan Hong, and Andreo Calonzo, with Siegfrid Alegado, Lulu Yilun Chen, and Jun Luo

THE BOTTOM LINE China says online gambling is draining hundreds of millions of yuan from the country. But it's finding it hard to stop websites registered and operated abroad.

● Value of online gambling market, estimates and projections

■ Asia

❒ Other regions



A Big Kick for Women's Soccer

● After this summer's World Cup, pro teams around the world are aiming to woo new fans

When Manchester City and Manchester United opened the English women's soccer season on Sept. 7, the crosstown rivals took the field before a crowd of 31,000. That afternoon, Bristol City traveled to Brighton for a match in the 27,000-seat Ashton Gate Stadium, and the next day Chelsea took on Tottenham at Stamford Bridge in London, where more than 24,000 fans showed up.

But many tickets for those matches were given away, and the teams will spend most of the season

Manchester City players celebrate a goal vs. Manchester United on Sept. 7

in more modest digs, where they'll be lucky to get a few thousand spectators.

With the resounding success of the World Cup this summer, women's soccer is hoping for a resurgence worldwide. The four-week tournament packed stadiums across France while millions of fans tuned in on TV, and the victorious U.S. squad was feted with a ticker-tape parade in New York. For the nine-team National Women's Soccer League in the U.S., the attention has led to record turnout for early season matches and new partnerships with ESPN and brewer Anheuser-Busch InBev. In Brazil, the biggest sports channel will broadcast a women's league match every Sunday, and Uber Technologies Inc. has signed up as a sponsor. Spain's Real Madrid—the club that transformed the men's game with its lavish spending on superstars—has bought a women's team and is scouring the globe for top talent. "When it comes to endurance and teamwork, women's football has caught up with men's," says Jean-Michel Aulas, president of France's Olympique Lyonnais.

Still, by most measures, soccer's women trail far behind their male counterparts. In England, matches among the dozen teams in the nine-year-old Women's Super League last year averaged just 996 spectators. Although the clubs expect to double attendance this year, they'll attract less than 5% as many fans as the men's Premier League does.

For the game to really take off, clubs must get serious about boosting salaries and treat female players as well as they do men, says Rebecca Smith, a former defender for the New Zealand national team who's now an executive director at Copa90, a producer of soccer videos. The U.S. women's success in France prompted calls for the players to earn as much as the men's national team, which failed to qualify for the World Cup last year, let alone win it. At the club level, the difference is stark: WSL players take home about 1% of the £2.6 million ($3.2 million) average salary in the Premier League, according to researcher Sporting Intelligence. And Chelsea women's home of Kingsmeadow, a 30-minute drive from the men's venue, seats fewer than 5,000. Shifting more matches to the main stadium would "show the world that the club knows the women's team deserves to play there," Smith says.

The easiest way to boost salaries would be to increase revenue—from sponsorships, ticket sales, merchandising, and TV exposure. The Premier League earns more than £3 billion annually from broadcast rights, whereas women's competitions take in a tiny fraction of that: The Spanish league has a €3 million-per-season ($3.3 million) rights deal, and the WSL in September announced an agreement to show matches in Latin America and Scandinavia, but it will receive less than £1 million per season.

More broadcasts would help raise the profile of female players, which could increase jersey sales and endorsement contracts. U.S. bathroom-fixture manufacturer Kohler Co. says it wanted a team that embraces diversity and inclusion when considering a soccer sponsorship. In the end, the company signed with Manchester United, and "the women's club was the deciding factor," says Chief Executive Officer David Kohler.

A publicity stunt along the lines of Billie Jean King's 1973 tennis match against Bobby Riggs could give the sport a lift. In that contest, dubbed "The Battle of the Sexes" and broadcast live during prime time, King (29 then) beat Riggs (55), helping boost the profile of women's tennis. While the greater physicality of men's soccer would make a full match difficult, a penalty-kick shootout—where the emphasis is on technical skill—could work, says Vincent Chaudel, a sports consultant in Paris. "Women's soccer," he says, "needs to raise awareness around big personalities." *—David Hellier and Angelina Rascouet, with Mario Sergio Lima and Eben Novy-Williams*

THE BOTTOM LINE By virtually any measure, soccer's women trail their male counterparts. For the game to take off, clubs must get serious about boosting salaries and filling bigger stadiums.

MATT MCNULTY/MANCHESTER CITY/GETTY IMAGES. DATA: LEFT: TECHNAVIO. DATA, RIGHT: CHELSEA FC FOUNDATION, PREMIER LEAGUE, TRANSFERMARKT.COM

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Reinventing Alibaba

● Daniel Zhang says he's determined to blow up his own business before rivals or the trade war can

PHOTOGRAPH BY YUYANG LIU FOR BLOOMBERG BUSINESSWEEK

Edited by Jeff Muskus

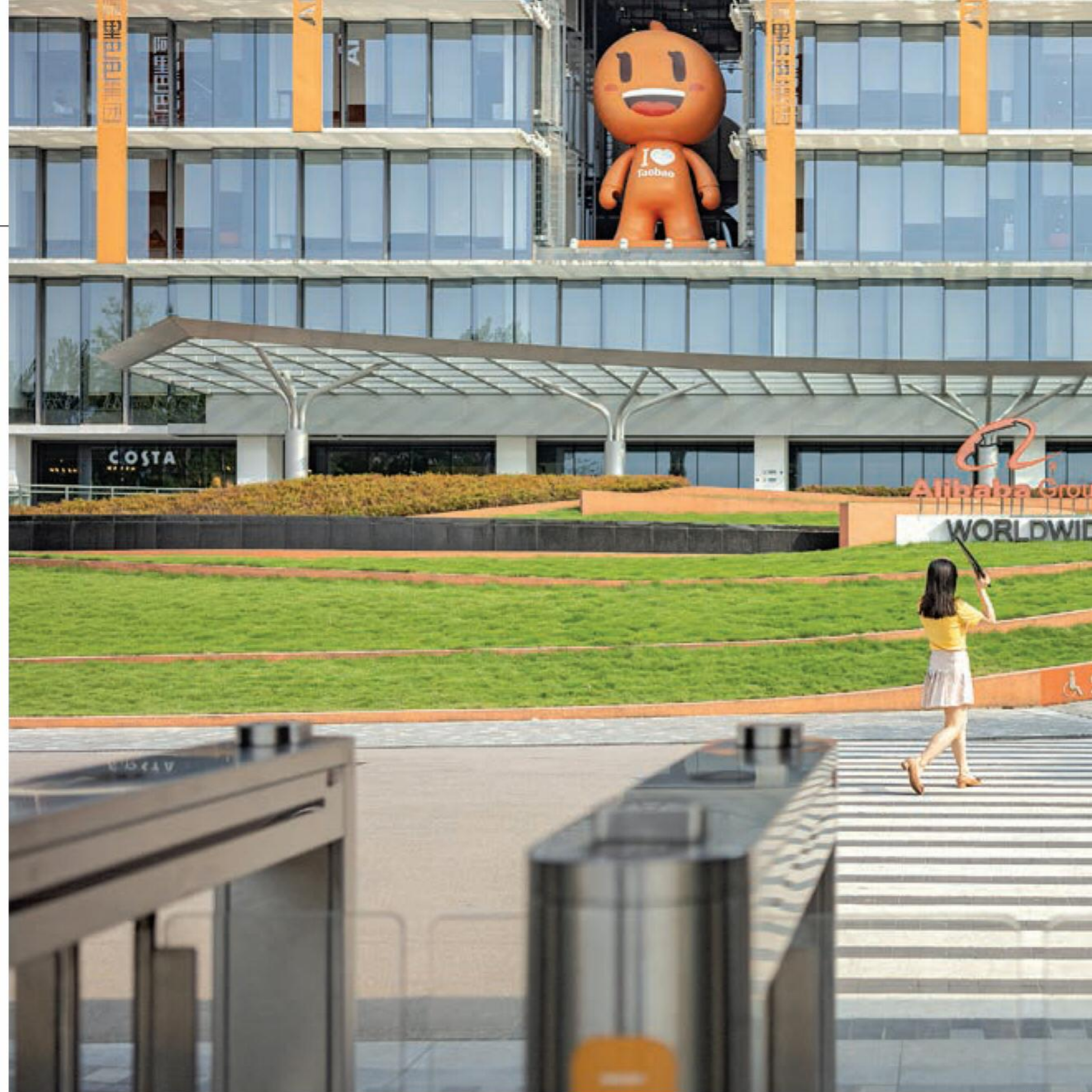
For months, Daniel Zhang huddled with a small team in an underground garage in Shanghai. Alibaba Group Holding Ltd.'s chief executive was working on a secret plan that would sound crazy even to many of his own colleagues 100 miles away in Hangzhou. Zhang wanted to build a startup inside the e-commerce giant that would combine a grocery store, a restaurant, and a delivery app, using robotics and facial recognition to speed up logistics and payment.

That project, Freshippo, has since become a major part of Zhang's blueprint for Alibaba's future, with 150 stores and counting across 17 Chinese cities. On a recent weekday afternoon at a store in Hangzhou, plastic bins shuttled automatically along tracks in the ceiling, collecting goods from around the store for online orders. Deliverymen stood by to transport those goods anywhere within a 1.9-mile radius in as little as 30 minutes.

Zhang is the little-known 47-year-old with the unenviable task of stepping into the shoes of China's most famous businessman. On Sept. 10 he added the title of chairman at Alibaba after assuming the CEO role in 2015. He's the first person since co-founder Jack Ma to hold both positions at the same time. Ma is a global celebrity known for hobnobbing with heads of state and for his fiery speeches at gatherings such as the World Economic Forum. Zhang is slight and soft-spoken, often proceeding haltingly in English during calls with investors. Even in China, he's largely unknown. At Alibaba headquarters, an employee's parent mistook him for the janitor.

Yet in his understated way, Zhang is as radical as his predecessor. He says Alibaba is uniquely positioned to pull together the online and offline worlds in groceries and beyond, and dozens of his initiatives are leading Alibaba deeper into fields including finance, health care, movies, and music. Especially in the U.S., where the company's shares trade, these efforts have baffled some investors, who worry about overreach. In Zhang's view, the moves are a matter of survival. "Every business has a life cycle," he says during an interview at Alibaba's Hangzhou headquarters. "If we don't kill our existing business, someone else will. So I'd rather see our own new businesses kill our existing business."

Alibaba's online marketplace made it China's largest public company, with a market value of about $460 billion, but recent months have revealed several signs of strain. China's economic growth is slowing, squeezing consumer and ad spending. Investors have pushed down the share price. And protests in Hong Kong forced the delay of a stock offering that could have raised $20 billion. "He's got to find new seeds for revenue growth," says Mitchell Green, managing partner of Alibaba investor Lead Edge Capital. "He's planting a lot of seeds."

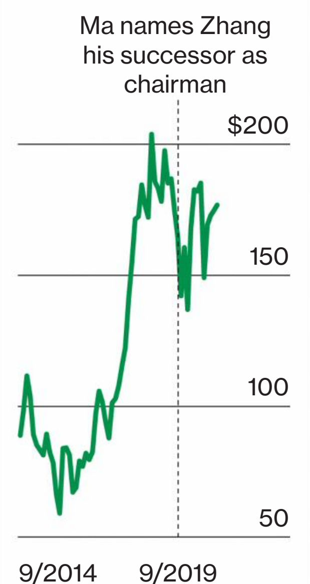


▲ Alibaba headquarters

Born and raised in Shanghai, Zhang followed the path of his accountant father to Shanghai University of Finance and Economics. Early in his career, he saw up close how quickly established institutions can vanish. He was interviewing at Barings Bank when one trader lost more than $1 billion and took the 233-year-old institution under. Instead, he became an auditor at the Chinese affiliate of Arthur Andersen. While he was working in Andersen's satellite office, the company went down in connection with the Enron accounting fraud scandal.

Zhang later became chief financial officer at game developer Shanda Interactive, at the time the largest internet company in China. That's where Alibaba Vice Chairman Joseph Tsai, the most influential co-founder after Ma, discovered him in 2007. "Daniel really understands business," says Tsai, who recently paid $3.5 billion, about a third of his wealth, to buy control of the Brooklyn Nets. "You can't disrupt unless you really understand what you're trying to disrupt."

● Alibaba's share price



It was at Alibaba that Zhang truly distinguished himself. When he joined, the company's hottest website was Taobao, an EBay lookalike that was full of phony goods and losing money. "When I looked at the financial statement, oh, Jesus," Zhang says. "Revenue? Zero. Bottom line? A lot of losses. Then I moved to the balance sheet—even worse."

Starting in 2008, Zhang took over the development of Tmall, an online marketplace more like Amazon.com Inc. that's now Alibaba's most lucrative operation. To attract brand names to the site,

PHOTOGRAPH BY YUYANG LIU FOR BLOOMBERG BUSINESSWEEK. DATA: COMPILED BY BLOOMBERG

he furnished top merchants with new levels of information on their customers: who was buying what, where they lived, which kinds of ads worked best. Sales boomed, and Zhang slowly coaxed global brands such as Procter & Gamble Co.'s Tide and SK-II into selling online in China. He showed that Alibaba was serious about fighting fakes by installing software to detect copycats and giving companies a hotline to report violations. P&G estimates that only about 1% of goods carrying its brands on Alibaba sites are counterfeit, though Taobao remains on the U.S. government's list of "notorious markets" rife with copyright infringement.

In 2009, Zhang and his team created Singles' Day, an annual dealfest that coincides with a relatively obscure Nov. 11 celebration of singlehood. Zhang spent months pushing merchants to get on board, then oversaw sales, promotions, and items to be featured on key web pages. Sales hit $135 million the second year and $5.8 billion by Year Five. Last year they hit $31 billion, far beyond the U.S.'s big shopping holiday, Black Friday.

The momentum from Tmall and Singles' Day "basically made the company the retail giant that it is today," says Duncan Clark, author of *Alibaba: The House That Jack Built*. Jerry Yang, an Alibaba director and co-founder of Yahoo! Inc., says Zhang's low-key style is a plus. "Daniel's results speak louder than words," he says. "He's all about execution."

Subsidiaries such as Freshippo are part of what Alibaba is calling "new retail." The combo stores were conceived by Freshippo CEO Hou Yi, who was planning to create the company on his own when he met with Zhang in 2014. Over coffee, Zhang persuaded him to join Alibaba instead and gave him $100 million to start, with no expectations of profit for the first two years. "Then I knew how determined he was," says Hou. "This is the equivalent of Daniel's second startup. He said after so many years, he finally saw a project that could surpass Tmall." Only now is Hou working out a path to profitability.

"Daniel's results speak louder than words. He's all about execution"

Freshippo is far from a guaranteed success. Margins are woefully thin in the grocery business, and several well-funded startups are competing with Zhang's effort. An Alibaba delivery venture called Ele.me is also bleeding money in its battle against Meituan. Wang Xing, Meituan's founder, told *Bloomberg Businessweek* earlier this year that Alibaba couldn't keep up the fight into 2020 at current spending levels. Zhang says he's wrong. He says Alibaba is determined to take at least 50% of the market in food delivery to obtain an advantage in related businesses, such as digital payments services.

Expansion abroad may be the biggest challenge. Ma pledged that Alibaba would one day generate at least half its revenue from outside China, a target Zhang says he'll pursue. But foreign sales are far from the goal, and gains are proving expensive. Alibaba has already sunk $4 billion into Singapore's Lazada Group to expand in Southeast Asia, but it's struggled in key markets such as Indonesia. In March, Lazada got its third CEO in nine months.

While Alibaba's spending raised few questions as consumer demand surged in China and capital markets rallied, it's looking tougher to maintain. The company's shares more than tripled from the time Zhang took the CEO role in September 2015 through June of last year. Since then, they've lost about 15% of their value.

The new initiatives take a toll on Zhang, too. Even by the standards of China's tech industry, which views working "996" as normal—9 a.m. to 9 p.m., six days a week—his schedule is intense. During the week in Hangzhou, it amounts pretty much to work, eat, and sleep, according to a former colleague. On weekends, Zhang usually meets two or three CEOs. Besides trying to out-hustle his rivals, he's got to contend with the memory of Ma; successors to iconic chief executives often get pushed aside when the business hits a rough patch and nostalgia sets in. "It's always hard to follow founders," says Jeffrey Sonnenfeld, senior associate dean for leadership studies at the Yale School of Management. "It's even harder when you're following someone with global stature." —*Peter Elstrom and Lulu Chen, with Philip Glamann*

THE BOTTOM LINE Zhang has been a driving force behind some of Alibaba's biggest successes. Now, in the midst of the trade war, he's pushing his team to blow up the business and remake it.

Your DNA Test May Not Be in the Best of Hands

● Former employees say Orig3n routinely processed contaminated tests, doctored results, and Googled conclusions

About three years ago, Orig3n Inc., a small genetic testing company in Boston, discovered a big problem with its DNA analysis, according to two former managers, a former lab technician, and another former employee. Its various tests ($29 to $298) are supposed to help you figure out which kinds of food, exercise, and beauty products are right for your particular genetic profile. They're even supposed to identify your "superhero traits," meaning whether you're genetically predisposed toward, say, intelligence or strength. The problem was that its test results were prone to errors. A person taking the same test twice could get radically different results.

Rather than try to solve the underlying problem, Orig3n's coders employed a quick fix, the former workers say. The separate nutrition and fitness tests, for example, analyzed some of the same genes. The former workers say that if two Orig3n analyses of a particular gene didn't match, software plugged in the earlier result. A spreadsheet *Bloomberg Businessweek* viewed shows 407 such errors that the former lab tech says were logged over three months.

Seventeen people employed by Orig3n as managers, lab technicians, software engineers, marketers, and salespeople from summer 2015 to fall 2018 say the company habitually cut corners, tampered with or fabricated results, and failed to meet basic scientific standards. They say marketers tasked with giving consumers personalized advice based on their genetic profiles at times simply Googled advice that could be generic (wear sunscreen, eat kale) or had no basis in science (one report told a customer to eat a mix of sugar and almond oil to reduce stretch marks). "Accurate science didn't seem to be a priority," says the former lab tech, who, like the other former employees, spoke on condition of anonymity because of nondisclosure agreements with Orig3n and fears of retaliation. "Marketing was the priority."

Orig3n said in a statement that the accounts of its former employees are "grossly inaccurate," and broadly dismissed the workers as disgruntled. "In some cases, former employees are former employees for a reason," Chief Executive Officer Robin Smith said in an interview at Orig3n's glossy offices on the outskirts of Boston's Seaport District. "We've found after employees are gone that they have not done things appropriately." In its lab, Smith said, the company follows standard federal protocols for analyzing samples and manually reviews results to ensure their accuracy. He said Orig3n now uses lab techniques that don't require retesting genes already on file, and he believes there were no errors when the company still employed the older testing method under which the former lab tech claims to have logged the 407 errors in a sample of fewer than 2,000 tests. He said that what the lab tech described reflected the use of software meant to prevent employees from manipulating results.

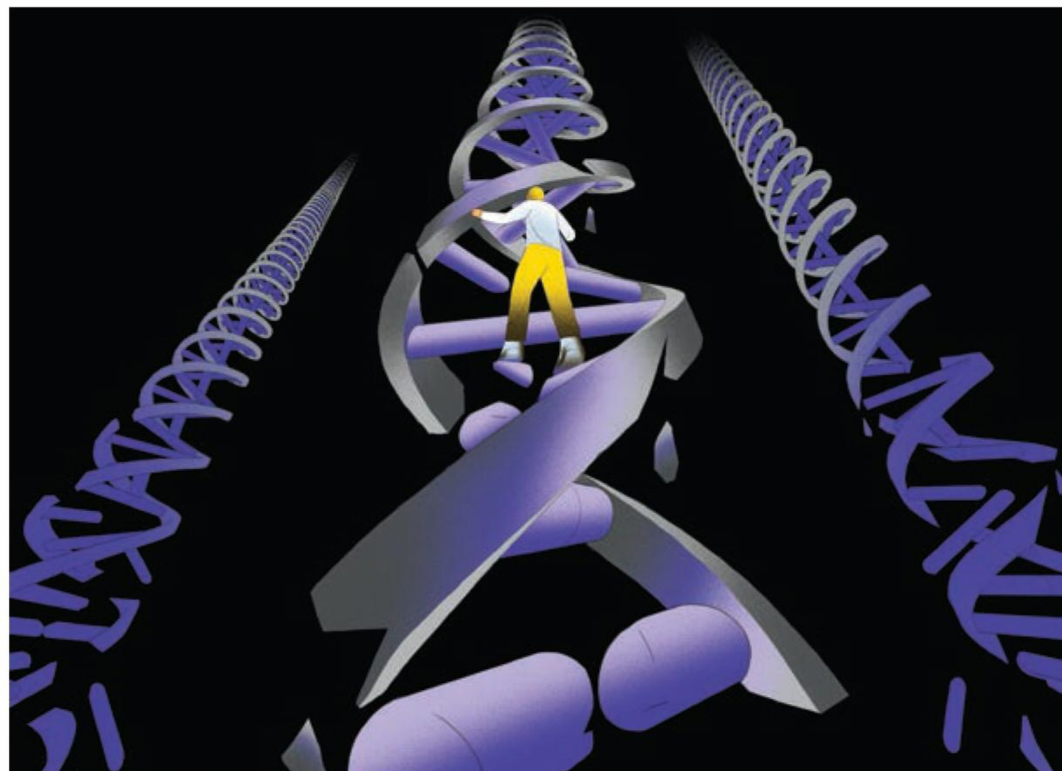


ILLUSTRATION BY WENKAI MAO

Orig3n isn't a major player in the $300 million (and growing) market for consumer DNA testing led by 23andMe and Ancestry.com. But it's raised more than $50 million in five years from big names in the field—including LabCorp, a leading clinical testing company. It also sponsored sports teams such as the San Francisco 49ers. And because it stops short of claiming its tests could diagnose disease

risks, Orig3n has been subject to little regulatory oversight and few consequences. Unlike 23andMe, which has received approval from the U.S. Food and Drug Administration to assess customers' risks of cancer and other diseases, lifestyle DNA tests like Orig3n's have "the accuracy of a Magic 8-Ball" even at their best, says Laura Hercher, director of student research at the Sarah Lawrence College Human Genetics Program in Bronxville, N.Y.

In the interview, Smith said the tests "gave me a little instruction manual for how to treat my body." He'd assumed his shortness of breath limited his exercise, but the tests showed strong muscle efficiency and cardiac output, so he changed what he ate and how he worked out. (A personal trainer helped with that.) He said he can now complete trail runs he couldn't have imagined before, including a recent 8-kilometer run in California's Santa Cruz Mountains. LabCorp declined to comment for this story beyond confirming its investment, and the 49ers didn't respond to requests for comment.

Founded in 2014, Orig3n first billed itself as a regenerative medicine company that planned to build the world's largest stem cell bank. By 2016 it had shifted its focus to consumer DNA testing. It doesn't need FDA approval to claim it can assess how well people metabolize fats, what hair products are best for their genes, or whether they're likelier than the next person to become addicted to drugs or alcohol. The scientific community's understanding of the genetic underpinnings of complex areas such as nutrition and fitness remains tentative at best, says Robert Green, a Harvard Medical School professor who also oversees a genomics research program. "Because DNA is hot, it is imbued with a kind of aura of scientific verisimilitude that people market these lifestyle products with," Green says.

Orig3n Chief Scientific Officer Marcie Glicksman says the genes the company includes in tests are all rooted in peer-reviewed science. She says the results can help flag health issues that may need attention.

Smith, who has a background in scientific data management, has poured money into high-profile sponsorships and marketing events, setting up a demo test center where the 49ers play and becoming a headlining sponsor of San Francisco's annual Bay to Breakers footrace. (Runners, like the 49ers fans, got free test kits.) Orig3n tests are sold widely at Target and CVS stores, and the company has attracted mainstream investors including Hong Kong's Haitong International Securities Co., an arm of a major Chinese brokerage. "We knew them to be passionate, innovative, and, most importantly, of high character," John Kane, CEO of Bay to Breakers organizer Capstone Event Group, says of Orig3n. Haitong didn't respond to requests for comment.

A 2018 investigation into home DNA tests by NBC Chicago found that Orig3n mistakenly processed a dog's DNA, failing to recognize it wasn't human when other test-kit makers reported that the samples were unreadable. Former employees say the Orig3n lab was sloppy: Multiple samples might be labeled with the same bar code; DNA and blood samples for the stem cell bank could get mixed up or misplaced; the lab didn't employ controls to ensure accuracy; handling methods could invite contamination; and when a result wasn't clear, the former employees sometimes made one up. They also say Orig3n ran tests without proper authorization in its lab at the 49ers' stadium, and that managers regularly compelled them to write positive reviews of Orig3n's tests on Amazon.com and Google to offset waves of negative feedback.

● In five years, Orig3n has raised funding of

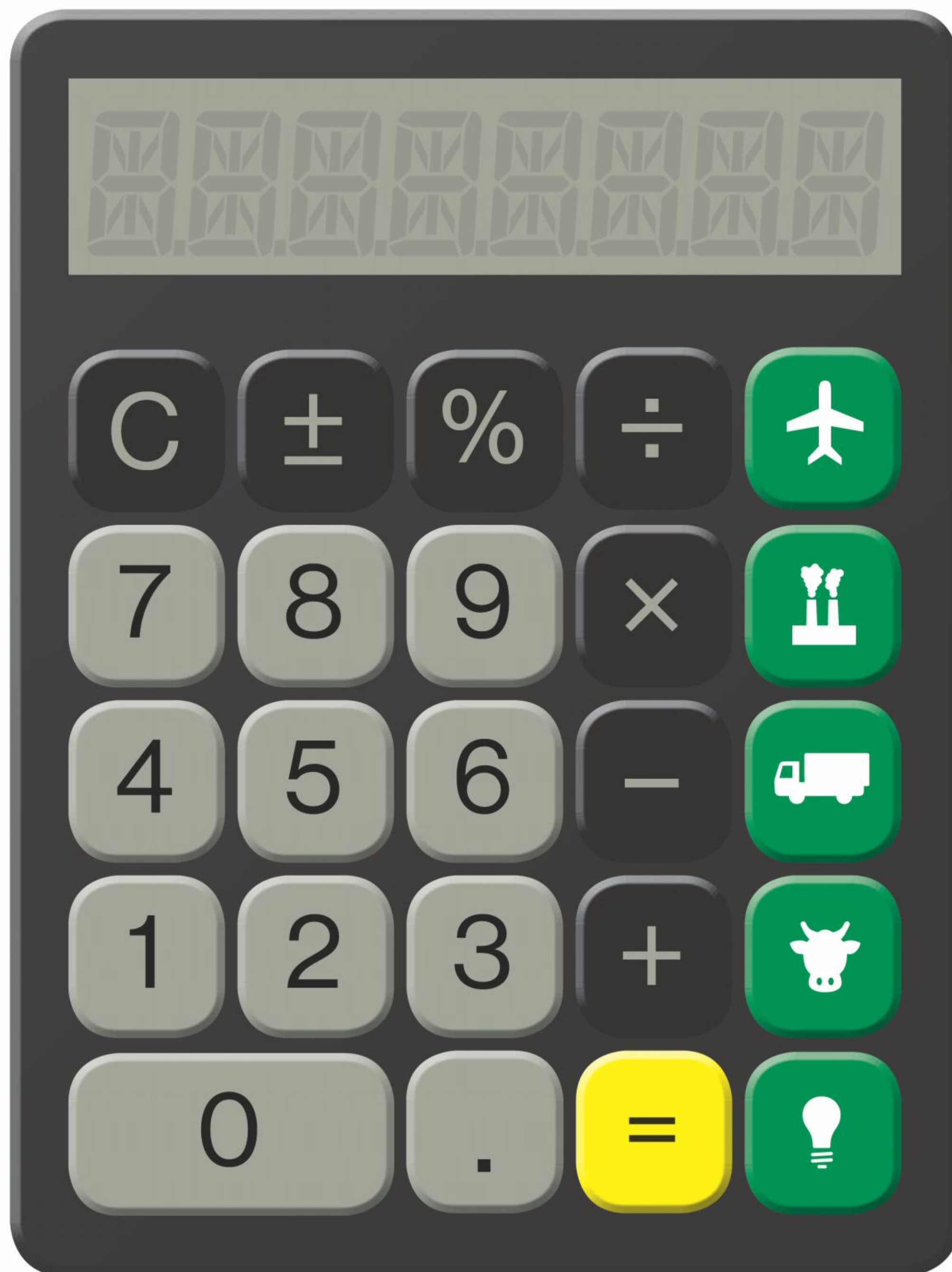
$50m

A federal survey of the lab found that after the dog DNA report, Orig3n changed its testing and quality-control methods. Smith says lab protocols have improved since the company acquired a federally certified lab in 2017 and that it's always abided by scientific standards such as using controls. Lab Director Gordon Siek says he's "more vigilant" than some of his predecessors. When a *Bloomberg Businessweek* reporter mailed in two different swabs of her saliva for Orig3n's superhero test, one after the company acquired a federally certified lab, it returned vastly different conclusions. Only 1 of 6 genes analyzed by both tests returned the same genetic results.

Smith said the company has issued corrections to inaccurate tests, and that he realizes Orig3n's advice on how customers should use its test results needs to get better. "Sometimes we look at the accuracy of things and go, 'Man, that's not working,'" he said. "Our approach and our philosophy is to constantly improve the products." He says the company never processed tests in its lab at the 49ers' stadium. Orig3n says it sometimes asked employees to solicit reviews from friends and family and that it also welcomed them from employees themselves.

If not outright regulating the genetic tests of companies such as Orig3n, the FDA might allow companies to voluntarily submit their tests to scrutiny for some sort of seal of approval, says Hercher, the Sarah Lawrence professor. "People want minimal regulation in direct-to-consumer genetic testing to open up availability to the broadest number of people," she says. "It's very much 'buyer beware.' It just seems like that is not sufficient at this point." *—Kristen V. Brown*

THE BOTTOM LINE Former employees' allegations about Orig3n's practices underscore how little protection consumers have in the emerging market for home DNA tests.



Putting Climate on the Balance Sheet

● How should banks account for their role in financing global warming?

Behind the scenes at some of the world's biggest banks, small teams of employees are busy trying to calculate what might prove to be one of the most important numbers any financial institution will ever disclose: how much the assets on their balance sheet are contributing to global warming.

One of those people is Kaitlin Crouch at ING Groep NV. For the past five years, she's been dissecting transactions—from corporate loans to residential mortgages—to test ways of measuring the Dutch lender's overall carbon footprint. It's an elusive figure. Data provided by the bank's clients, which range from automakers to energy producers, are often inaccurate, and it's possible to double or triple count the same emissions when different parts of the bank work with the same client. "It quickly becomes a very daunting and sometimes demotivating topic once you start to understand the level of complexity," Crouch says.

Doing the bookkeeping on carbon may not be glamorous work, but banks are slowly seeing the need for it. The United Nations last year warned

Edited by Pat Regnier

ILLUSTRATION BY 731

that without dramatic new limits on global temperature increases in the next decade, humanity could see food scarcity, mass migrations, and instability as soon as 2040. For banks, one concern is that if society ignores the problem and is later forced to transition quickly to a low-carbon economy, companies and assets that produce a lot of emissions might see a sudden collapse in value.

Bank of England Governor Mark Carney has warned that financial companies could face a "climate Minsky moment" unless they begin to disclose their exposure to global warming risks. He was referring to the economist Hyman Minsky, who argued that financial crises are caused by hidden risks building up on balance sheets. (Think dodgy mortgages.) The idea is that climate change could be one of those unaccounted-for vulnerabilities.

Now, after record-high temperatures ravaged Europe in July and California wildfires led to the January bankruptcy of utility PG&E Corp., dozens of global banks, insurers, and pension plans seem inclined to listen. They've announced plans to join other companies such as Walmart Inc. and Adobe Inc. in publicly setting targets for the first time to reduce their emissions in line with the international Paris Agreement on climate. (Michael Bloomberg, founder and majority owner of Bloomberg LP, which owns *Bloomberg Businessweek*, is chairman of the Task Force on Climate-related Financial Disclosures, an effort to encourage corporate disclosure of environmental risk.)

Banks' own operations, such as corporate offices and employee travel, aren't the main issue when it comes to their greenhouse gas footprint. Climate activists are focused more on the emissions that banks help make possible with their loans and other services to companies. "Unless banking fundamentally changes its lending and underwriting practices with high-carbon emitters, it's only paying lip service to Paris," says Louise Rouse, a U.K.-based consultant to nonprofit campaign groups on climate change and finance. Many banks, reluctant to declare hefty carbon footprints, contend they shouldn't have to shoulder responsibility for their clients' emissions.

Financial institutions have trailed other industries in emissions disclosure, and they must catch up quickly, says Olaf Weber, a professor at Canada's University of Waterloo who studies the financial industry's impact on sustainable development. He predicts emissions data could be a key performance indicator "within just five years." In the U.S., where activists say President Trump's 2017 withdrawal from the Paris accord gave U.S. banks license to drag their feet, progress has been slow. French and Dutch banks have been the first to act.

ING is among a group of European banks that have said they will align their lending with the goal of keeping global warming below 2C (3.6F). Crouch is a Florida native based in the Netherlands—two places at risk from rising sea levels. She leads a five-person team within ING's global sustainability unit. Her group examines clients' physical assets, their output, and future production capacity. Then they calculate the emissions those businesses generate relative to the amount of financing the bank has provided them.

Beyond the challenge of tallying emissions, there's the much more daunting task of cutting them. About 45 financial institutions globally, including the U.K.'s HSBC Holdings Inc. and France's Société Générale SA, have committed to taking part in the Science Based Targets Initiative, a voluntary effort that sets reduction targets. Only four U.S. companies have made the commitment: insurer MetLife, asset manager Principal Financial Group, Hannon Armstrong, an investor in clean energy projects, and FullCycle Energy, a private equity firm.

"It quickly becomes a very daunting and sometimes demotivating topic"

Reporting should be mandatory, says Den Patten, a professor at Illinois State University's college of business who focuses on corporate social responsibility and environmental disclosure. "The evidence suggests that voluntary disclosure regimes are not useful for eliciting comparable information and are used for image manipulation," he says.

Despite ING's emissions-measuring efforts, the bank is the Netherlands' biggest lender to shale-gas and plastic companies, according to the Dutch Fair Finance Guide, a group that includes local chapters of Amnesty International and Friends of the Earth. ING spokesman Daan Wentholt says the bank no longer cooperates with research by the Fair Finance Guide because of concerns about its methodology.

Crouch says she's sharing the lessons she's learned about measuring emissions with counterparts at other banks. And despite the mammoth task of measuring her bank's carbon footprint, she remains upbeat. That ING's board has provided resources to the project, she says, "shows how this is going beyond a group of tree-huggers." —*Saijel Kishan*

THE BOTTOM LINE Climate change is a major economic risk, but it's not yet clear how to account for it. Banks are just starting to find ways to identify the vulnerabilities in their own businesses.

How to Make Money From Money-Losing Bonds

● Currency hedging squeezes some extra return out of negative-yielding Japanese and European debt

Money managers at BNY Mellon and Pacific Investment Management Co. have snapped up Japanese bonds. Both companies have made the country the second-largest geographic allocation in some of their biggest international fixed-income funds. Ordinarily that wouldn't seem remarkable, but right now many of Japan's government bonds have a negative yield—it actually costs money to hold them to maturity.

BNY Mellon and Pimco aren't alone. Investors from outside Japan more than doubled purchases of the nation's debt in July. What's the logic? It turns out that buying Japanese bonds can pay better than holding U.S. Treasuries, as long as you happen to be a dollar-based investor and hedge your exposure to currency swings.

The currency effect turns the -0.25% yield on 10-year Japanese government bonds into the equivalent of 2.22% in dollars, which is more than similarly dated Treasuries currently pay. "The returns are actually pretty good and competitive," says Brendan Murphy, of BNY Mellon. About 17% of the $3.2 billion BNY Mellon Global Fixed Income Fund he co-manages is allocated to Japan's bond market.

This bond market alchemy is a product of foreign exchange rates. When a U.S. fund buys a yen-denominated bond, it may choose to hedge the currency risk by entering into a forward contract that allows it to sell yen at a fixed price a few months later. The key to profitability for the U.S. fund is that now the yen will buy back more dollars on the back end of the transaction. The difference in exchange rates—between the value of yen now and the agreed price a few months from now—works out to an annualized return of about 2.5%, more than making up for the negative yield on the bond.

This might sound like a free lunch, but it makes economic sense. If one country offers a higher interest rate than another, and money is constantly moving around the world to find the best returns, forward currency markets end up adjusting to more or less equalize the difference. With U.S. Treasuries standing out as safe assets that still pay a positive yield, dollars are in demand around the world, and U.S. investors are in effect getting paid a bonus for parting with them to buy other assets.

Thanks to a steady stream of Federal Reserve rate hikes since 2015, U.S. short-term interest rates are far higher than in almost every other developed market, even after the U.S. central bank cut rates in July to a range of 2% to 2.25%. By contrast, the Bank of Japan's key rate stands at -0.1%.

The extra yield that U.S. investors pick up from currency hedging would erode if the two nations' interest rates converged. But while traders are pricing in about 1 percentage point of Fed easing over the next 12 months, Murphy doesn't think the central bank will cut that aggressively.

Pimco money manager Sachin Gupta is of a similar mind. Gupta, based in Newport Beach, Calif., expects the Fed to lower rates again this year, but he thinks policymakers may be reluctant to preemptively cut again if the economy stays reasonably strong. So he's comfortable keeping almost 15% of the $12.2 billion U.S. dollar-hedged Pimco International Bond Fund in Japanese bonds. The allocation is in line with the fund's benchmark. "You're taking on the risk of the government of Japan," says Gupta, who added longer-dated Japanese bonds earlier this year. "We think for a Group of Seven country with one of the largest economies in the world, that kind of risk in your own currency is *de minimis*."

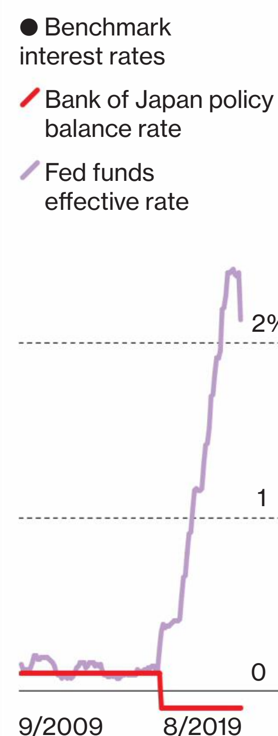
The hedging arbitrage isn't limited to Japan. Gupta also owns low-yielding government debt from nations such as Spain, where hedging from euros into dollars produces a 2.72% annualized return. Murphy, of BNY Mellon, holds Spanish and Belgian debt.

Even bond managers who aren't especially bullish on Japanese bonds see the appeal of the currency play. The $6.6 billion T. Rowe Price International Bond Fund allocated less to Japan than its benchmark index does, but it's been parking money in the nation's short-maturity government bills. "The very short end is an alternative

● Benchmark interest rates

Bank of Japan policy balance rate

Fed funds effective rate



● Kokusai-sensei, a mascot created by Japan's Ministry of Finance to promote government bond sales

DATA: COMPILED BY BLOOMBERG

to holding U.S. cash," says fund manager Kenneth Orchard. "You do pick up yield holding Japanese T-bills instead of holding U.S. government T-bills, and that's purely from the FX swap component." After protecting against currency swings, a three-month Japanese bill yields 2.29%. That compares with -0.12% unhedged, and 1.95% for a similarly dated U.S. bill.

In Murphy's view, removing the currency risk allows him to diversify out of the U.S. bond market and pick up yield without wading into riskier assets. That will be important, he says, as shifting Fed policy and ever-escalating trade tensions between the U.S. and China point to a turbulent stretch ahead in Treasuries. —*Katherine Greifeld*

THE BOTTOM LINE Managers of dollar-based funds are gaining an edge from currency deals, but that won't last if U.S. interest rates converge with those in the rest of the world.

A Hedge Fund Guru Strikes Up the Band

● You probably can't invest in Pete Muller's funds. But you might be able to catch his act

▲ Muller at a gig in New Jersey

Joe's Pub in New York's East Village might not register as a usual hangout for the Wall Street crowd, but on one night in May, you'd have thought it advertised "Quants drink free" on the CNBC crawler an hour before the close. They came to hear singer-songwriter Pete Muller, who was playing at Joe's to support *Dissolve*, his fourth studio album. Muller also happens to be a founding father of the modern quantitative hedge fund.

The audience isn't always this warmed up. Muller, who sings and plays piano, had just returned from a cross-country tour opening for singer-songwriter Stephen Kellogg in places including Charleston, W.Va., and Spokane, Wash. "My wife said, 'If you want real feedback, you've got to get out and play for strangers,'" Muller says.

This isn't a man who needs to spend time gigging in a Spokane bar to pay the rent. Ask around the hedge fund industry, and people speak in awed tones about Muller's returns over his 26-year career as head of PDT Partners, a hedge fund spun out of Morgan Stanley in 2013. Successful quants have a mystique on Wall Street: They use computers to comb through data for signals of future market moves, and their investment processes are closely guarded secrets.

Muller's rock- and soul-tinged music isn't so cryptic. Near the end of his New York set, he covered the 1984 pop hit *Missing You* by John Waite. His voice and conversational singing style call to mind '70s folk singer Steve Goodman. He sings about vulnerability in relationships and saying goodbye to his dying mother for the last time. The video for Muller's song *Let You In* has 108,000 views on YouTube. It's not Billy Joel numbers, but can the Piano Man design a statistical arbitrage algorithm?

Muller quit classical piano at age 15 only to take up jazz a few months later. After earning a math degree from Princeton, he ended up in Marin County, Calif., composing music for a rhythmic gymnastics team for a while. His current musical incarnation is rooted in a sabbatical he took from Morgan Stanley in the early 2000s. "In 2005 I made a record and distributed 100 copies to friends," he says. "I'm still trying to track down all the copies and burn them." To improve, he hosted a weekly songwriting workshop with fellow musicians in his downtown New York loft.

Muller is tight-lipped about anything related to PDT but says his different interests fit together. When building a model, "you always want to express an idea as elegantly as possible," he says. "And it's the same with music." —*Richard Dewey (A freelance contributor, Dewey is a portfolio manager at Royal Bridge Capital, a New York-based hedge fund.)*

THE BOTTOM LINE In Muller's day job, he's kind of a big deal. But the quantitative money manager has taken his music on the road and learned how to play for strangers.

MULLER: CHRIS MORGAN

The Recession

● Trump capitalized on weakness in manufacturing to win the presidency. Now it could cost him a second term

The moment usually comes during Greg Petras's commute through the rolling hills and cornfields of southern Wisconsin. Somewhere between his home near Madison and the factory he runs on the edge of the small town of Brodhead, the news will turn to the trade war, and President Trump will again claim that China is bearing the cost of his tariffs. That's when Petras loses it.

"It's just an outright lie, and he knows it," says Petras, president of Kuhn North America Inc., which employs some 600 people at its farm-equipment factory in Wisconsin. For Kuhn, Trump's trade war has produced a toxic mix of rising costs and falling revenue. "You're slamming your fist on the steering wheel and saying, 'Why would you tell people this?' "

About 250 Kuhn employees spent Labor Day caught in a two-week furlough, and they're facing another one in early October. A shrinking order book means the company is cutting costs and slashing production as Petras and his managers peer out at a U.S. economy that looks far bleaker from the swing-state heartland than it does from the White House or Wall Street.

Kuhn's circus-themed summer picnic survived, but weekend shifts are gone. A plant that just four years ago was humming along to a record $400 million in sales together with a sister plant in Kansas is running at 50% capacity. The five-year-old, $11 million paint shop that coats manure spreaders and livestock feeders in a distinctive "Kuhn Red" is at 39% capacity. Plans for a $4 million research and development building are on hold. "We'll do it someday," Petras says. "We just need things to be going in a better direction."

And there's the rub. After two boom years the picture has changed for America's factories. Battered by slowing export markets, higher input costs because of tariffs, a stronger dollar, and the damper that rising uncertainty has put on capital expenditures, U.S. manufacturers are making less than they did a year ago. A widely watched index of manufacturing activity compiled by the Institute for Supply Management showed a contraction in August—the first since 2016. The Sept. 3 release

Edited by
Cristina Lindblad

DATA: U.S. FEDERAL RESERVE. QUARTERLY PERCENTAGE CHANGES ARE AT ANNUAL RATES

sent U.S. stock prices and bond yields tumbling as it confirmed a worrying trend that became visible over the summer, when Federal Reserve data showed factory output falling for a second consecutive quarter—the technical definition of a recession.

The surge in industrial jobs seen in the first two years of the Trump presidency has gone into reverse in some parts of the country. The U.S. has gained 44,000 manufacturing jobs this year. But that's way down from the 170,000 added in the same period in 2018. In 22 states—including electorally important ones such as Wisconsin and Pennsylvania—the number of people working in factories actually fell in the first seven months of 2019, according to data compiled by the Economic Innovation Group.

This isn't what Trump promised. From his trade policy to tax cuts and deregulation, his grand economic vow was to bring factories home. By unraveling trade deals such as the North American Free Trade Agreement, taking on China, and deploying tariffs as if they were economic cruise missiles, Trump's "America First" agenda was supposed to boost growth in an iconic sector of the economy.

The attack on trade and globalization that Trump launched in 2016 always had a political calculus, and this helped him win a narrow victory in industrial swing states. But as Trump bids for a second term, there are signs he may have shot his own manufacturing recovery in the foot and undermined his own best argument for reelection—a strong economy.

Trump bristles at the idea, portraying his trade war against China as a necessary fight against a rising economic rival. "To me, this is much more important than the economy," he told reporters on Sept. 4. His advisers argue that the blame for any slowdown rests with a Federal Reserve that last year hiked interest rates too quickly and with a strong dollar that makes U.S. exports less competitive. Trump and his allies also point to gains in manufacturing employment. By the end of August of this year the U.S. had added 485,000 factory jobs since he took office, according to Bureau of Labor Statistics data.

The inescapable irony is that Trump's trade wars have played a role in creating a scenario similar to one that helped get him elected. The last time the U.S. logged two consecutive contractions in quarterly industrial production before this year was the first half of 2016. The country lost almost 30,000 manufacturing jobs that year as a collapse in oil prices hit the energy sector and filtered through manufacturing. Industrial areas such as western Pennsylvania saw a slowdown in shale oil projects and in sectors supplying them, such as steel. Yet none of the quarterly declines in 2016 were as large as the 3.1% fall in output recorded in the second quarter of this year.

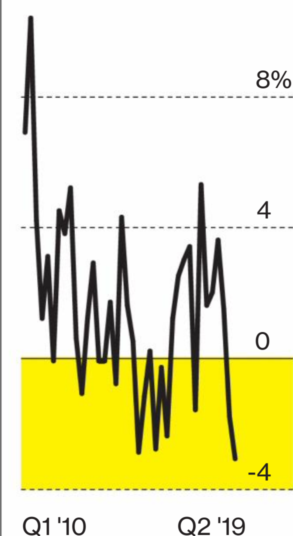
Trump is more exposed politically to a manufacturing downturn than any Democratic rival. Nationally, manufacturing accounted for almost 12% of jobs in counties that voted for Trump in 2016 vs. less than 7% in those that supported Hillary Clinton, says Mark Muro, a senior fellow at the Brookings Institution. In battleground states the divergence is starker, with factory jobs accounting for more than 21% of employment in Trump counties. "This is the one thing he was going to deliver. And Democrats are not vulnerable at all because if things go south they are not responsible at all," Muro says.

The trade war has helped flip at least one vote. Petras, a 56-year-old lifelong Republican, says he had reservations but voted for Trump in 2016. "I defaulted to the Republican ticket thinking pro-business," he says. But he won't in 2020. Trump has turned him into an independent, he says, and he's now expecting to vote for a Democrat.

Kuhn purchasing manager Jim Paum says he has fielded a growing number of cold calls from fabricators offering their services in recent months, ▶

◀ Kuhn's factory in Wisconsin

● Change in U.S. manufacturing output, seasonally adjusted



● Petras

◀ a sign that many factories have spare capacity and are chasing work. It's his own leading indicator. "You can tell the health of the economy from these phone calls," he says.

Steel prices, which surged last year after Trump imposed a 25% tariff on all imports, have come down as demand has fallen and the administration has exempted imports from Canada and Mexico. But Kuhn is still digesting the impact. In the 12 months through July, it paid $2.5 million more for steel than the year before, or 1% of the $250 million in sales it expects this year. The company will also pay more than $1 million in tariffs in 2019 on about 100 different parts that it buys from outside suppliers. The bill on one type of ball bearing from China alone was $138,000, Petras says.

As costs rise, Kuhn is also being squeezed by falling demand from an agricultural sector battered by the loss of China as an export market. The hit to commodity prices from the sudden collapse of Chinese buying came as markets were already absorbing a glut in supply of everything from corn to soybeans. The Trump administration has offered aid to farmers. But a summer of escalation in the China trade war has only made things worse, Petras says: "There's more uncertainty, not less uncertainty."

Kuhn isn't alone in feeling the effects of an agricultural downturn. Moline, Ill.-based John Deere, its far bigger competitor, said in May that it would trim production in response to sagging sales. But the impact of the trade war on industrial America goes far beyond companies catering to farmers.

At Cummins Inc., the Columbus, Ind.-based diesel engine maker, executives are responding to downturns in the U.S. and Chinese truck markets, the world's two largest. "We know that 12 months from now our sales will be significantly lower than they are now in a couple of our really important key markets," says Tom Linebarger, Cummins's chairman and chief executive officer.

That hasn't yet translated into layoffs. But Cummins is already cutting back production and looking at other ways to trim spending, in part to offset higher costs resulting from Trump's tariffs. The company expects to spend more than $150 million on tariffs this year, or more than twice the $70 million it expects to save as a result of a cut in the corporate tax rate passed by a Republican-controlled Congress in 2017.

Tariffs aimed at China have become a "gigantic tax over the U.S. economy," says Linebarger. While Cummins is looking at sourcing parts from other countries to reduce the bill, he dismisses the idea pushed by Trump that U.S. companies could simply pull out of China, where Cummins both makes and sells 40% of its engines.

If China is often viewed as the boogeyman that stole America's factories, the current reality is that many U.S.-based manufacturers' fortunes are more linked to China, whether as a market or as a supplier, than Trump or his hawks are prepared to admit.

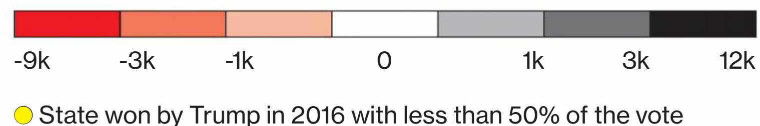
Allan Klinge spent his summer driving back and forth from his York, Pa., factory to Washington to lobby against new tariffs on Chinese-made shipping containers, which his family-owned company customizes to create explosion-proof, temperature-controlled, and other specialized transports that sell for up to $150,000. He scored a victory in August when the Trump administration struck shipping containers off a list of products subject to new tariffs, but that doesn't mean Klinge's challenges have gone away.

Klinge Corp. is paying tariffs on other imported parts and has seen the price of aluminum go up over the past year as a result of Trump's duties. Klinge, who came to York from Denmark as a 6-year-old when his father and grandfather bought the business in the 1980s, is also concerned about the faltering global economy, given that exports account for 80% of his revenue.

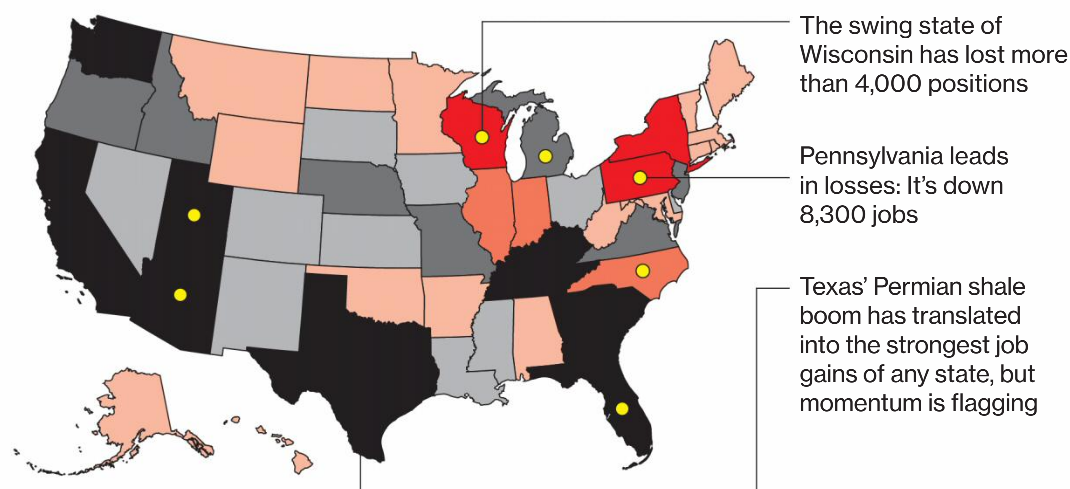
"It's really hard to think in anything beyond 90-day increments," Klinge complained recently as he walked a visitor through his factory and aired his frustration at all the expansion plans he had on hold. "The biggest thing for us is the uncertainty." *—Shawn Donnan*

Manufacturing Jobs

Change in manufacturing jobs, January 2019 to July 2019



● State won by Trump in 2016 with less than 50% of the vote



THE BOTTOM LINE The U.S. added only 44,000 manufacturing jobs in 2019 through July, while the number of factory workers fell in the swing states of Wisconsin and Pennsylvania during that period.

PHOTOGRAPHS BY LYNDON FRENCH FOR BLOOMBERG BUSINESSWEEK. DATA: BUREAU OF LABOR STATISTICS, FEDERAL ELECTION COMMISSION (LEFT), SOCIETY OF INDIAN AUTOMOBILE MANUFACTURERS (RIGHT)

India's Auto Boom Goes Bust

● Troubles in the world's No. 4 car manufacturer are rippling through the economy

It's hard to escape the influence of the auto industry in Chennai, a city in southern India known as the nation's Detroit. Schoolyards have billboards proclaiming they're "supported by" big carmakers such as Daimler, Renault, and Nissan Motor. Even the public toilets in a nearby slum are sponsored by the country's largest tiremaker.

With a rising middle class and rapid urbanization, this should be boom times for India's automotive industry, the fourth largest in the world. Car density—measured by the number of passenger cars per 1,000 people—was only 27 last year, vs. 145 in China and 570 in Germany, according to Fitch Ratings. That leaves huge potential for growth. McKinsey & Co. projected in 2018 that India could overtake Japan as the No. 3 car market by 2021.

Yet the mood in Chennai is one of gloom as an unprecedented slump grips the industry. Passenger car sales have contracted for nine straight months, plunging to 115,957 units in August, a 41% drop from the previous year—the biggest decline on record. Automakers are cutting investment and production; hundreds of dealerships have shut down. Nationwide, job losses in the sector, which employs more than 32 million people directly and indirectly, have climbed to more than 580,000 in the past 18 months, according to estimates from labor unions and auto dealers.

R.C. Bhargava, veteran chairman of Suzuki Motor Corp.'s Indian unit, Maruti Suzuki—the country's largest carmaker—describes the situation as "quite bad" and predicts more job losses for the industry. Maruti's sales have contracted for seven straight months, and the company said this month it will halt production of passenger cars for two days at two of its plants.

At least 60% of contract workers at auto plants in Chennai have lost their jobs in the past few months, according to two labor brokers who declined to be identified because they still do business with the carmakers. The pain is spreading to other parts of the economy. Suresh, 46, who goes by one name, runs a sidewalk tea stall in front of a Daimler truck plant on the city's outskirts. His 20-year-old son's contract job as a machinery maintenance worker at an auto plant wasn't renewed after 18 months, and the monthly loss of $160 to the family's income stings. "I am left with nothing to pay installments for my vehicle and to pay for my daughter's wedding," he says.

The slump in auto sales can be traced to the distress in rural areas, which are home to 70% of the population. Stagnant incomes there are depressing demand for cars, as well as small-ticket items such as shampoo and biscuits. In cities, the rise of ride-sharing apps like Uber has cut into vehicle sales, while some buyers are deferring purchases until stricter car emission standards are introduced next year.

Then there's the credit crunch. It began in the banking system five years ago and has now engulfed shadow lenders, the lightly regulated outfits that accounted for almost 4 of every 10 consumer loans in the three years through 2018. One of the largest players, Infrastructure Leasing & Financial Services Ltd., started to default on debt of almost 1 trillion rupees ($14 billion) last year, further aggravating the liquidity squeeze.

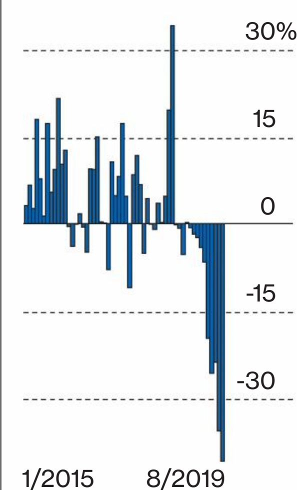
Consumption is the backbone of India's economy, making up about 60% of gross domestic product. So as sales of everything from Maruti Suzuki compacts to gold jewelry have tailed off, so has GDP growth: It dropped to a six-year low of 5% in the three months through June. The unemployment rate is already at a 45-year high of 6.1%, and if the auto industry is any guide, it's headed higher.

Having secured a second term in a landslide victory in May, Prime Minister Narendra Modi is facing the biggest economic challenge of his six-year tenure. The finance ministry has announced some support measures, such as tax exemptions for buyers of electric cars and lifting a ban on government purchases of vehicles. But those haven't satisfied the industry, which is calling for a big cut to the 28% goods-and-services tax rate on cars.

Modi's earlier goal of raising the sector's contribution to GDP from 7% to 12% by 2026 now looks overly optimistic. "I don't see any recovery unless the government intervenes and gives out something really big," says Amit Mehta, managing director of Mehta Automotive, a supplier to Maruti and Hyundai Motor Co., which has been forced to lay off almost half its workforce at a factory in the northwestern city of Ludhiana. "I don't see the market coming back this financial year." —*Anurag Kotoky and Anirban Nag, with P R Sanjai*

THE BOTTOM LINE India's automakers are pleading for relief in the face of the deepest sales declines on record. Unemployment, which is tracking a 45-year high, is headed higher.

● Car sales in India, year-on-year change



Return of the Native

A book looks at Draghi's tenure at the ECB—and what the future holds for him back home after he leaves Frankfurt

PHOTO ILLUSTRATION BY 731; PHOTO: TIM WEGNER/LAIF/REDUX. DATA: WORLD BANK, EUROSTAT

The months leading up to the end of Mario Draghi's eight-year leadership of the European Central Bank eerily resembled its start: Italy on the brink of economic chaos, investors questioning its capacity to support a huge debt mountain, and the risk of crashing out of the single currency becoming something more than just a remote possibility. Even the relative stability of a new government that in September replaced a caustic coalition can't overcome the impression of an unstable Italy. For the ECB president, his home country has been a constant headache. The fact that—with the exception of Greece—no other country has done as badly in the single currency as Italy is just part of the reason.

Gross domestic product per person has fallen more than 10% since 2011, unemployment is

Edited by
Howard Chua-Eoan and
Jillian Goodman

stuck near 10%. The country's cherished position as Europe's second-largest manufacturing powerhouse is threatened by France. Meanwhile, the banking system, which took pride in weathering the global financial crisis without needing a bailout, emerged severely weakened from years of low or nonexistent growth, is still reeling from years of recession, and hasn't been able to reform.

Throughout all this, Italy's political and social cohesion has visibly deteriorated. To gauge the degree of instability, one simply needs to look at the list of prime ministers—Silvio Berlusconi, Mario Monti, Enrico Letta, Matteo Renzi, Paolo Gentiloni, Giuseppe Conte—and finance ministers—Giulio Tremonti, Monti, Vittorio Grilli, Fabrizio Saccomanni, Pier Carlo Padoan, Giovanni Tria, and Roberto Gualtieri—who have represented the country in Brussels and on the international stage while Draghi held his post in Frankfurt. He's been in office continuously longer than any of those Italian officials, a double-edged distinction for a public figure in the country. Who knows what might be asked of him when he returns?

More frustrating still for the ECB president is the fact that the euro has become a target of the desperation and anger that many Italians feel after the succession of crises, austerity measures, promised reforms, and declining living standards that have marked the past decade—and so far have no end in sight. Almost half of all Italians saw the euro as a "bad thing" for their country in 2014 and again in 2016, outnumbering those who viewed the single currency positively. Only recently has support for the euro picked up above 50%.

Under the populist government that lasted until August 2019, the prospect of Italexit—if still very remote—has become a constant part of the political discourse. Parts of the League, the country's dominant party, seem ever bent on making it happen, sooner or later. While relatively few Italians really want a return to the lira, the country's debt burden—and the inability of government after government to bring it down—means the possibility of a catastrophic and sudden departure is always around the corner.

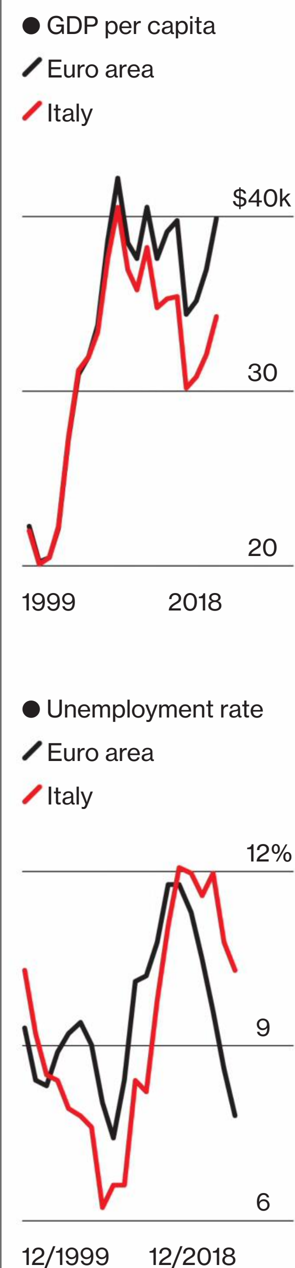
Draghi has watched these gyrations with keen interest while remaining substantially detached. Throughout his term, he's constantly had to deal with the German-held stereotype of the happy-spending southerner who would create runaway inflation and bend the central bank's policies to help profligate countries such as Italy. Faced with questions about his passport, with the insinuation that it made him unsuitable for the job, the ECB president sometimes responded with humor, but more often with thinly disguised impatience. The "clichés of the past," he's said, must be left behind to build a European future. "This doesn't affect me," Draghi said in 2013, when *Der Spiegel* confronted him with allegations he's out to help irresponsible "Club Med" nations.

No one in the Governing Council of the European Central Bank, he continued, "thinks in nationalist categories; that applies more to those who voice such unjustified criticisms." When *Die Zeit* asked him about a year later whether he was "offended by the charge of being an agent of the southern countries," Draghi's answer was a curt "Yes." He said, "I don't accept any labels, but I present facts." He conceded, quoting the Nobel Prize-winning economist and *New York Times* columnist Paul Krugman: "When faith meets evidence, evidence doesn't stand a chance."

If being Italian has made Draghi's job in Frankfurt more complicated, it certainly didn't make his position back home any simpler. One of the nicknames he's earned in Italy in his early days as ECB chief is L'Americano, the American, because of his many years of work and study in the U.S. Theresa May's infamous description of global civil servants as citizens "of nowhere" could well apply to Draghi, too, no matter how strong his roots are with his native country—family in Milan, frequent visits to his hometown, Rome, a country house in Umbria, a small seaside retreat in Lavinio. His policies, his personality, and his career have often been perceived as having little in common with his native land. To be sure, he has little patience with the many shortcomings of Italy and its citizens, nor has he ever sought to justify or conceal those opinions. Indeed, Draghi has been accused of being an "anomalous Italian" or even anti-Italian—what with his cosmopolitanism, elite connections, the mystery of big finance, and Italy's penchant for conspiracy theories.

Much is made in Italy of Draghi's backroom network, his role as a secret *regisseur*—some would say puppet master—of Italian politics and his capacity and willingness to wield the ECB's financial prowess to covertly steer the country's destiny. Certainly, he met its prime ministers regularly at gatherings of the European Council and its finance ministers in similarly pan-EU conventions, as well as Italian business leaders and bank CEOs. But there's no evidence of any direct intervention in the country's politics.

That doesn't mean Draghi turns a blind eye to what's happening back home. His views on the latest twists and turns of Italy's byzantine politics are sought on the sidelines of European and international meetings, and he's offered thorough analyses to colleagues, ministers, and academics over ▶



◀ the past years. But it's only rarely—and in any case obliquely—that he ventures into suggesting a specific course of action. The outsize impression many Italians have of Draghi's influence is partly the consequence of his broader success and partly the effect of the detached pragmatism he's cultivated. Faced with bureaucratic complexity and economic insecurity, the Italian public is simply more and more convinced that a select handful of men pull strings from behind the scenes.

Central banks—with their hallowed independence, difficult-to-understand but far-reaching powers, and penchant for hard-to-decipher acronyms—are a perfect target for conspiracy theories. Draghi himself has repeatedly said that monetary policy cannot be the only game in town and has called on governments and politicians to do their part and not to expect central banks to save the day.

After changing the direction of Europe's debt crisis in 2012 with three simple words, "whatever it takes," his almost mythical status among the world's financial elite has increased expectations about his future role in Italy. Draghi, however, will be returning to an Italy profoundly different from the one he left in 2011. Elections in March 2018 utterly changed the country's political landscape with an unwieldy coalition of the center-right League and the populist Five Star movement, putting it in the center of the nativist and anti-EU wave washing over Europe. On the table were pledges to reverse some of the financial reforms of previous years and to ignore Europe's spending limits, even if it led to increasing the national debt. And, of course, the country flirted with the idea of leaving the single currency. Financial markets started asking for a much higher premium to buy the country's bonds, bringing yields close to crisis levels for a few months.

From his office in Frankfurt, Draghi did little but warn of the potential effect on investor sentiment and European partners of the proclamations of some of the coalition's members. "Complicated questions have easy, wrong answers" is the quip by German economist Rudi Dornbusch, one of Draghi's professors during his time at MIT in the 1970s—and it's a good way to sum up the ECB president's attitude.

With the populists in the ascendance, Draghi found himself more detached from Italy's rulers than he'd been for decades. Ironically, the situation simply increased the calls for his return to the national stage when his ECB term runs out.

It's not the first time. In 2015, when the ECB embarked on quantitative easing, Draghi's name was frequently cited as a candidate for the country's presidency by Italian media, so much so that the central banker had to go on the record to deny his interest in the post. "I don't want to be a politician," he told Germany's *Handelsblatt* newspaper. He's repeated it in private to ministers and top European officials. The presidency would go to Sergio Mattarella, who still holds office and who was Draghi's only regular contact in the government.

Draghi will return from his tenure in Frankfurt to—no surprise—a new government in Rome, following the collapse of the Five Star and League coalition in August. Despite the change in the balance of power, there are few signs that the general mood at home has changed significantly. The League under Matteo Salvini has doubled down on its strident anti-EU rhetoric and is still leading in the polls. The current administration in Italy promises to be just as conflict-ridden and short-lived as the one that preceded it. And a new recession for the country may be just around the corner.

He's personally faced populist anger and frustration in his native Italy before. When Draghi visits family in Milan or Rome, his days are less structured and the security cordoning him off from the world is more relaxed. He likes going shopping, and the people he meets often offer him an earful of their views. It's not always easy listening. In 2013 a young man approached Draghi in the streets of Rome. He explained that he was working odd jobs at night to make ends meet and had one simple question: "Why can't you print money so that we all have enough to live on?" Draghi's answer required a long argument touching upon the risk of inflation, European treaties, and the cautionary tales of economic history—difficult points to make when the face of his interlocutor bore the evidence of suffering.

Draghi is careful not to make any judgment, even in private, when confronted with the "easy, wrong answers" of politicians to difficult questions. After all, he and his policies too have been deemed partially culpable for the rise of populism. This doesn't mean, of course, that Draghi has any sympathy for the populists' conclusions. His argument can be summed up thus: If what's fueling populism is a feeling of impotence in the face of migration, globalization, technological change, and, more generally, the growing complexity of society, retrenching behind national borders is not an effective way to "take back control," to use one of the most effective catchphrases of the Brexit campaign.

In the populist and nationalist way of thinking, Draghi argued in early 2019 as he accepted an honorary degree from the University of Bologna, "if citizens want to be able to exert more control over their destinies, they have to loosen the EU's political structures. But this belief is wrong. It is

"Independence does not guarantee sovereignty"

wrong because it conflates independence with sovereignty." In his perspective, the power-sharing required by European institutions is the best way to make sure that people's sovereignty is more than a hollow slogan. He said in his Bologna speech, "True sovereignty is reflected not in the power of making laws—as a legal definition would have it—but in the ability to control outcomes and respond to the fundamental needs of the people: what John Locke defines as their 'peace, safety, and public good.' The ability to make independent decisions does not guarantee countries such control. In other words, independence does not guarantee sovereignty."

So what will happen after Oct. 31, when Draghi steps down from his commanding role as the most powerful Italian in the world and returns to his native land? No one appears to believe that Draghi's public life is over. Even Berlusconi, who often clashed with Draghi, seems to expect him to be a player in Italian affairs. In an interview before the May 2019 European Parliament elections, he said Draghi "would be the right man for a high-profile role" in the country. If so, he will no longer be able to avoid the hard questions—and the difficult answers.

—*An excerpt adapted from* Mario Draghi, L'artefice *by Jana Randow and Alessandro Speciale, to be published in Italian on Oct. 8 by Rizzoli.*

The Trump Administration's **Internal Peace** Plan

● In firing John Bolton as national security adviser, the president handed Secretary of State Mike Pompeo a victory

In the past week, Donald Trump has used Twitter to simultaneously reveal and cancel a secret peace summit at Camp David with the leaders of Afghanistan and the Taliban, then fire the person who persuaded him to call things off, national security adviser John Bolton.

The moves were characteristic of the U.S. president. But they also represent a low point in the administration's already dismal foreign policy record. Trump took office vowing to bring his dealmaking savvy to U.S. diplomacy, yet his grand gestures and personal negotiation have fallen short in North Korea, China, and the Mideast. Indeed, less than a week before the administration shake-up, the president's Middle East envoy, Jason Greenblatt, announced his intent to quit before an Israeli-Palestinian peace plan could be unveiled, and North Korea envoy Stephen Biegun said negotiations with Pyongyang have been stalled for months.

"So far, his foreign policy bluster has produced little," says James Dorsey, senior fellow at Singapore's S. Rajaratnam School of International Studies, of Trump's record. "North Korea is not backing off nuclear weapons, Iran is proving resilient and defiant, and the 'deal of the century' "—that is, the vaunted peace plan—"looks more like a stillborn baby." The White House rejects the assessment, saying major foreign policy achievements take more than just months to pull together.

In expelling Bolton, Trump succeeded at least in resolving a conflict within his administration. Secretary of State Mike Pompeo, whose disagreements with Bolton had begun spilling out into the open, is now Trump's closest foreign policy adviser. For the time being, Bolton's replacement is Charlie Kupperman, a longtime Bolton confidant. But three Bolton aides have already resigned. Some in Washington see Biegun, a Pompeo ally, as a potential successor, alongside a handful of retired military figures and others in the intelligence community.

Bolton's allies regarded him as a brake on the president's worst instincts; one pointed out to reporters that Trump hadn't made any "bad deals" with U.S. foes on his watch. Others considered Bolton a dangerous influence. Hours after the firing, Senator Rand Paul, the Kentucky Republican, said the chances of war have gone down "exponentially" with him out of the White House. "The world will be a much better place with a new adviser," he added.

Bolton came to the administration best known for his support of the 2003 U.S. invasion of Iraq under George W. Bush. Weeks before joining the current White House, he wrote a *Wall Street Journal* op-ed arguing for a preemptive strike against North Korea, only for Trump to pursue diplomacy with Kim Jong Un, a tactic Pompeo promoted. In an interview soon after on Fox News, Bolton said his personal views were "now behind me" and "the important thing is what the president says and what advice I give him."

Trump followed Bolton's advice in other areas, including ratcheting up sanctions against Iran and supporting the ouster of Venezuelan President Nicolás Maduro, a so far unsuccessful endeavor.

After the abortive Taliban summit, Pompeo ▶

● Staffers whose departures were announced unceremoniously by Trump on Twitter

❶ Chief of staff Reince Priebus July 28, 2017

❷ Secretary of State Rex Tillerson March 13, 2018

❸ National security adviser H.R. McMaster March 22, 2018

❹ White House counsel Don McGahn Aug. 29, 2018

❺ Secretary of Homeland Security Kirstjen Nielsen April 8, 2019

❻ Acting Secretary of Defense Patrick Shanahan June 18, 2019

❼ National security adviser John Bolton

Sept. 10, 2019

TOM BRENNER/BLOOMBERG

◀ defended the president's diplomatic setbacks as signs of strength. "It's going to take more than words," Pompeo said. "He walked away in Hanoi from North Korea; they wouldn't make a deal that made sense for America. He'll do that with the Iranians. When the Chinese moved away from a trade agreement they promised they would make, he broke off those conversations too."

The day before his dismissal, Bolton argued forcefully against a plan to ease sanctions on Iran to help secure a meeting with President Hassan Rouhani. While Trump had been deferential in previous Twitter firings—using effusive exclamation points to oust former Secretary of State Rex Tillerson and couching former Homeland Security Secretary Kirstjen Nielsen's dismissal in euphemisms—he was notably cold in dispatching Bolton. "I informed John Bolton last night that his services are no longer needed at the White House," Trump wrote. "I thank John very much for his service." *—Nick Wadhams, with Glen Carey, Jennifer Jacobs, and Jennifer Epstein*

THE BOTTOM LINE Bolton was responsible for many of the Trump administration's most hawkish foreign policy positions, which have largely failed to generate results.

Between a Rock and a Trade War

● The U.S. is pressuring Israel to rethink investment from China

Gray concrete walls rise out of the Mediterranean off the coast of Haifa in northern Israel, part of what, by 2021, is supposed to be among the world's most advanced class of seaports. The future shipping terminal, along with another being built farther down the seaboard in Ashdod, constitutes an effort to attract larger vessels and more trade to Israel, whose blue-and-white flag waves over the construction site. It's also been a major source of tension with the U.S., Israel's closest international ally, because of what's flying nearby: the red and yellow colors of the People's Republic of China.

U.S. President Trump has sought to portray China as the world's adversary on trade, ratcheting up tariffs against its goods and encouraging others to put pressure on the rising superpower. This has proved difficult, in no small part because of China's "Belt and Road" initiative, a global infrastructure development program that's grown to involve almost $600 billion of construction, with more than 130 countries either signing deals or expressing interest, including Israel. In 2015 the Israeli government extended a 25-year offer for the operation of the Haifa terminal to state-controlled Shanghai International Port Group.

With national elections approaching on Sept. 17, Prime Minister Benjamin Netanyahu can ill afford to alienate the Trump administration on its signature international issue. Trump has endeared himself to Netanyahu by transferring the U.S. Embassy from Tel Aviv to Jerusalem and recognizing Israeli sovereignty in the disputed Golan Heights. Netanyahu reciprocated by naming a new Golan settlement after Trump and praising the American leader for, among other things, quitting the Iranian nuclear accord. "Over the years, Israel has been blessed to have many friends who sat in the Oval Office, but Israel has never had a better friend than you," Netanyahu told the president during a March trip to the White House. An October Pew study found that 69% of Israelis had confidence in Trump's performance as president, and many of Netanyahu's campaign ads prominently feature the U.S. leader.

China today is Israel's second-largest trading partner after the U.S., responsible for $11.5 billion in annual transactions, according to data compiled by Bloomberg. U.S. officials have pressed their longtime ally to create a process that would mimic the Committee on Foreign Investment in the U.S., or Cfius, which reviews certain transactions for national security risks and has the power to impose conditions on or block deals. While Israel is unlikely to issue a formal decision before its elections, Daniel Shapiro, a U.S. ambassador to Israel under President Barack Obama, says, "Israel and Israeli companies are quickly coming to the realization that it's going to be difficult to sustain business as usual in work with China while keeping the United States as the primary partner." For the U.S., Israel may be the ultimate test of its global influence on trade. If the country doesn't follow America's China strategy, who will?

Economic ties between Israel and China date to 1979, before China had formally recognized the Israeli state. Israeli billionaire Shaul Eisenberg

China's Rapid Rise in Israel

Value of Israel's trade with its current top partners

DATA: INTERNATIONAL MONETARY FUND, BLOOMBERG

brokered a secret meeting between representatives that led to Israeli arms sales to China. Diplomatic relations were formalized in 1992. In the early 2000s, the U.S. successfully pressured Israel to cancel a sale to China of its Phalcon radar system, as well as parts for the armed Harpy drones it had already sold them. But the Sino-Israeli relationship recovered. In the past few years, Chinese investment in the country's tech sector has increased sharply, reaching about a quarter of all funds raised by Israeli tech companies in the third quarter of last year, data from the Israeli high-tech tracker IVC Research Center show.

As recently as October, Netanyahu hailed the "natural partnership" between Israel and China as he hosted Vice President Wang Qishan at a meeting of the Israel-China Joint Committee on Innovation Cooperation in Jerusalem. Since then, a string of U.S. officials have taken issue with the relationship, including recently ousted national security adviser John Bolton and Secretary of State Mike Pompeo, who threatened to limit intelligence sharing with Israel unless the country falls in line.

The Haifa seaport in particular has been a cause for concern because of its proximity to a harbor used occasionally by the U.S. Navy's Sixth Fleet. Although the two facilities are separated by a breakwater and an older commercial port, the U.S. Senate passed a defense spending bill that includes a provision expressing "serious security concerns" about the development. Zhan Yongxin, China's ambassador to Israel, pushed back with an op-ed in Israeli daily *Haaretz* in August, arguing that "the win-win cooperation between China and Israel" ought to be "respected."

"Using Chinese contractors to build some of our infrastructure is very important for Israel because there are very few infrastructure builders in the world," says Avi Simhon, Netanyahu's top economic adviser. "If we have additional competition for these projects, that could save us many billions of dollars." The Shanghai group was the only operator to submit a complete bid for the Haifa port, and multiple Chinese companies are bidding against one another to build a new mass-transit system in Tel Aviv.

Developing some kind of Cfius-like process is now under discussion at the highest levels of the Israeli government, according to two people familiar with the matter who asked for confidentiality to discuss the private deliberations. On one side is the defense establishment, which has argued for tighter controls, while on the other are financial officials, who are wary of anything that could impede foreign capital flowing into the country. It's possible that whatever comes out of the conversations would focus solely on strategic, regulated sectors such as defense and energy, thereby falling short of addressing U.S. concerns.

▲ Haifa's port

Despite the hand-wringing on both sides, it's tough to imagine Israel won't choose the U.S. over China. In July, Israel began soliciting bids for 5G mobile telecommunications frequencies. The man in charge, Minister of Communications David Amsalem, says the issue of foreign investment is complicated. "It's not like buying some shoes," he says. So will Huawei Technologies Co., the Chinese giant and frequent Trump target, be allowed to participate? Amsalem's reply: "Go to the next question." —*Ivan Levingston*

THE BOTTOM LINE Whether or not Netanyahu prevails in his bid for reelection, Israel's economy will remain dependent on China's continued investment, potentially alienating the U.S.

JACK GUEZ/AFP/GETTY IMAGES

90%

of the

pharmaceuticals sold in the U.S. are generics

How carcinogens and other i
supply. By Anna Edney, Susan

80%

of the active ingredients are produced overseas, where FDA inspections are declining

Huahai factory in Linhai, China

mpurities end up in the drug
n Berfield, and Evelyn Yu

The chemical N-Nitrosodimethylamine, or NDMA, is a yellow liquid that dissolves in water. It doesn't have an odor or much of a taste. It's known to cause cancer in animals and is classified as a probable carcinogen in humans—it's most toxic to the liver. A single dose of less than a milligram can mutate mice cells and stimulate tumors, and 2 grams can kill a person in days. An Oklahoma man poisoned the family of an ex-girlfriend in 1978 by pouring a small vial of NDMA into a pitcher of lemonade. In 2018 a graduate student in Canada sickened a colleague by injecting the chemical into his apple pie.

NDMA no longer has industrial uses—it was once added to rocket fuel—but it can form during industrial processes at tanneries and foundries as well as at pesticide, dye, and tire makers. It can be found in drinking water disinfected with chloramine. It's in tobacco smoke, which is one reason secondhand smoke is dangerous, and it's what makes eating a lot of cured and grilled meat potentially risky. The U.S. Food and Drug Administration says it's reasonably safe to consume as much as one microgram—one millionth of a gram—of NDMA a day.

In July 2018 the FDA announced that NDMA had been found in the widely used blood-pressure medicine valsartan and started overseeing a recall of drugs from three companies. They'd all bought the active ingredient for their valsartan from Zhejiang Huahai Pharmaceutical Co., one of China's biggest generic companies. The recall has since been expanded 51 times, to include two related drugs, irbesartan and losartan, made by at least 10 companies—some since 2014. Drugs sold to millions of people in 30 countries could be tainted.

Some of the contaminated valsartan contains as much as 17 micrograms of NDMA in a single pill. That's equivalent to eating 48 pounds of bacon. The FDA estimates that for every 8,000 people who took the highest dose of contaminated valsartan for four years, there would be one additional occurrence of cancer. "We had to be honest about that, but it's not a great message for the consumer," says Janet Woodcock, director of the agency's Center for Drug Evaluation and Research. "Throw a couple of lamb chops on the barbecue and you'd find nitrosamine after a good grilling. You have to put this in perspective."

You'd find nitrosamine—a category of carcinogen that includes NDMA—but you wouldn't find 17 micrograms of it. European health regulators put the cancer risk from contaminated blood pressure medicines higher: They estimate that one out of every 3,390 people could become sick.

The FDA has a rigorous approval process for new drugs. Companies conduct clinical trials in humans over several years to prove a drug is safe and effective. But 90% of all medications prescribed to Americans are generics. They're cheaper, they're supposed to work the same way, and they receive less scrutiny right from the start. Companies manufacturing generic drugs have to show only that patients will absorb them at the same rate as the name-brand medications they mimic. At least 80% of the active pharmaceutical ingredients, or APIs, for all drugs are made in Chinese and Indian factories that U.S. pharmaceutical companies never have to identify to patients, using raw materials whose sources the pharmaceutical companies don't know much about. The FDA checks less than 1% of drugs for impurities or potency before letting them into the country. Surveillance inspections of overseas factories have declined since 2016, even as the agency is under pressure to get more generics to market more quickly. In 2008 the FDA opened three posts in China and announced plans to dramatically increase the number of inspectors there. By 2014, it had closed its offices in Shanghai and Guangzhou, leaving only the Beijing office with inspectors who could visit Chinese factories on short notice.

Huahai, the first manufacturer found to have NDMA in its valsartan, is also the one whose product had the highest concentration. When an FDA inspector visited in May 2017, he was alarmed by what he saw: aging, rusty machinery; customer complaints dismissed without reason; testing anomalies that were never looked into. He reported that the company was ignoring signs its products were contaminated. Senior FDA officials didn't reprimand Huahai; they expected the company to resolve the problem on its own. Huahai didn't. The agency didn't try to identify any impurities at that point, and Huahai didn't either. It wasn't until a year later that another company—a customer of Huahai's—found an impurity in Huahai's valsartan and identified it as NDMA. That was when the FDA demanded drugmakers begin looking for NDMA in their valsartan. They found it again and again.

"Valsartan is just the one we caught. Who knows how many more are out there?"

Quality-control problems in the generic drug industry go beyond the visible lapses. The valsartan recall has revealed the once-invisible failures in the chemistry itself, sometimes undetected for months, maybe years. "Valsartan is just the one we caught," says David Gortler, a former FDA medical officer and now a consultant focusing on drug safety. "Who knows how many more are out there?"

Where the FDA's drug approval process is founded on testing and more testing, the regulatory system for generics is built on trust, specifically trust in manufacturers. Woodcock takes exception to that characterization—"In God we trust, everyone else has to bring us data," she says—but it's an accurate description of the complex global system that's developed in the past decade. It's designed to, above all, make and distribute drugs

Brackman

She didn't have a history of cancer. She didn't have any risk factors for cancer. She'd had a mild stroke but was otherwise in pretty good health.

A possible clue to Brackman's disease arrived in a one-page letter from Walgreens in July 2018. Valsartan, which she'd been taking daily for at least two years, was being voluntarily recalled by its manufacturer, which had detected "a trace amount of an unexpected impurity," Walgreens said. "This impurity has been classified as a probable human carcinogen."

The letter provided the name of the company behind the recall—Solco Healthcare U.S. Brackman had never heard of Solco. She did remember that a few years earlier, the shape of her blood pressure pills changed. Walgreens said her insurer required the pharmacy to change suppliers. She didn't think any more about it at the time, but now it's one of the things that makes her mad: She didn't have a say.

Brackman found out that Solco is based in Cranbury, N.J., and owned by Huahai. The yellow oval pill she took every night was made in a factory in Linhai, in Zhejiang province, about three hours south of Shanghai by high-speed train.

Linhai, which sits between Kuocang Mountain and the East China Sea, is a prosperous city known for having its own Great Wall and the country's best mandarin oranges. It's been an important center of trade since Japanese ships arrived during the Southern Song Dynasty a thousand years ago. More recently, Linhai's economy has relied on the manufacturing of automobiles, eyeglasses, Christmas lights, chemicals, and pharmaceuticals.

Chen Baohua, educated at Zhejiang University of Technology and a member of China's National People's Congress, founded Huahai in 1989, when he was 26. He started with $5,000 and 12 employees who mixed chemicals in a one-room warehouse. China was becoming an important source of raw materials to the drug industry, offering prices at least 10% lower than its main rival, India. One of Huahai's specialties was ingredients for hypertension drugs.

Chen listed Huahai on the Shanghai stock exchange in 2003, expanded operations to the U.S. in 2004, and in 2006 briefly joined *Forbes*'s list of the 400 richest Chinese, at No. 363, with an estimated net worth of $101 million. The company's sales then were $73 million, and its value on the stock market ▶

in a cost-efficient manner. It usually functions beyond view. Until there's trouble.

Karen Brackman's favorite color is purple. On her good days, she wears an amethyst ring, a purple fitness tracker, and purple-tinted sunglasses. Her toy poodle, which she brought home four years ago, is named Savannah. Her husband, whom she married 30 years ago, is named Tom. Her kids are grown. Her career as an executive assistant at a Nashville company ended happily 11 years ago, when she was 64. Her townhouse sits on Lot 26 of the Rockbridge Cove subdivision in the city of Murfreesboro, Tenn. Her painting studio is on the ground floor; Tom's music studio is on the second.

Brackman's tumor is 5.5 centimeters in diameter. It looks like a black tennis ball and has taken over the left lobe of her liver. The doctor who found it in the spring of 2018 told her it's very aggressive and rare. Then he said he was flabbergasted.

PREVIOUS SPREAD: PILL BOTTLE: HELEN SESSIONS/ALAMY. FACTORY: QILAI SHEN/BLOOMBERG. THIS SPREAD: PILL: SCIENCE SOURCE. BRACKMAN: PHOTOGRAPH BY WILL WARASILA FOR BLOOMBERG BUSINESSWEEK

◀ $390 million. In 2007, Huahai became the first Chinese company to win FDA approval to export finished pills to the U.S. The drug was a generic treatment for HIV. A banner commemorating the accomplishment hangs outside Huahai's headquarters.

Hypertension affects billions of people, which is why the Swiss pharmaceutical company Novartis AG spent more than $1 billion to develop Diovan, whose active ingredient is valsartan. Diovan went on the market in 1996 and became the best-selling blood-pressure medication in the world. In 2007, it accounted for 20% of Novartis's $24 billion in pharmaceutical sales. It would continue to be a multibillion-dollar drug until Novartis's European patent expired in 2011 and its U.S. patent expired in 2012. Companies were eager to compete with generic versions.

Huahai was among those preparing to supply valsartan to generic drug companies. It would be an important product for Huahai at a crucial time. The company was growing, but not as quickly as some shareholders wanted. It looked like valsartan could help change its fortunes.

The valsartan molecule is simple. A drug prescribed in relatively large doses and taken frequently needs a fairly uncomplicated synthesis to make it cost-effective—in this case, a chain of six chemical reactions starting from basic materials.

The FDA's relationship with manufacturers like Huahai, on the other hand, isn't simple at all. If Huahai wants to make its own version of a generic drug and export it to the U.S., it needs FDA approval. But if Huahai supplies the main ingredient to a company that finishes the drug and sells it in the U.S., it's required only to keep the FDA informed of any changes to the manufacturing process.

In November 2011, Huahai did make a change, a critical one: It switched to a different solvent than the one Novartis had used. There's no making drugs without a solvent; it dissolves the chemicals the drugmaker is combining and then, ideally, is washed out. Huahai's solvent of choice was dimethylformamide, or DMF. In its Chinese patent application, the company said DMF would make manufacturing more efficient, make it easy to control impurities, and assure good quality.

One of those reasons was more important than the others. "The purpose of the change was to save money," Jun Du, vice chairman of Huahai, told an FDA inspector after the recall began last year. "Mr. Du further stated the cost reduction was so significant it is what made it possible for the firm to dominate the world market share," Cheryl Clausen, the inspector, wrote in a 58-page report reviewed by Bloomberg.

The patent application was public, which meant any generic company outside China could copy the steps in Huahai's valsartan synthesis. It appears a handful did, and that this is one reason so much of the world's valsartan supply is contaminated.

The FDA didn't know it at the time, but Huahai didn't follow protocol for the switch. The company first called it a critical change, then just a minor one. It proved to be the former. When DMF dissolved the chemicals at the end of the synthesis, it created a side reaction, which produced a residue that couldn't be cleared out of the drug. The chemists at Huahai either didn't realize that or didn't consider it a potential hazard. A Chinese company hired by Huahai to conduct a pilot test recommended it continue to improve the way it purified solvents before it began commercial manufacturing, Clausen reported. Huahai didn't.

The main responsibility falls on Huahai and every other company to conduct their own safety reviews and to detect and control any impurities. "We have to rely on manufacturers to follow the rules," Woodcock says. "We can't beat quality in. We can't test quality in. People have to be dedicated to making a quality product."

Huahai said in a December statement that it is "taking every step to ensure [its] products remain safe, therapeutically effective, and meet the highest standards." In January the company told investors impurities in its valsartan didn't pose severe health risks. Du says, "My company, which voluntarily initiated the recall, has cooperated fully with the FDA and has provided the agency with considerable information of value in its investigation." The company didn't respond to specific questions about its manufacturing processes. ▶

A Different Way

During an FDA lab inspection just before the online pharmacy Valisure LLC opened for business a year ago, co-founder David Light learned the company was the first—and still appears to be the only—analytical pharmacy in the U.S. That is, the only one that tests the drugs it sells. This was just weeks after the first recall of the blood-pressure medication valsartan.

"Valsartan has added a light to this issue, but these issues have been around for a long time and will become more visible because more people are looking," Light says. "Until something more is done about the system, it's only going to get worse."

The creation of Valisure stems from a personal place. Several years ago, Light's college friend, Adam Clark-Joseph, an assistant finance professor at the University of Illinois at Urbana-Champaign, found that his antiseizure medication sometimes didn't work. His doctor told him the active-ingredient levels in drugs and the rate at which they dissolve in the body vary sometimes, and there was nothing that could be done. Clark-Joseph wasn't satisfied. He called Light, who was working as the director of product management at Thermo Fisher Scientific Inc.'s DNA sequencing division. They cooked up the Valisure model, and three years later launched the company together. It now sells 2,000 pharmaceuticals, which it tests using laser-based technology. If a batch doesn't pass, as about 10% haven't so far, Valisure sends it back.

Carcinogens in drugs are rare; problems with active ingredients aren't. Light says one rejection that particularly sticks out was for levothyroxine, which is used to treat an underactive thyroid and certain types of thyroid cancers. Valisure found doses were too high, and unpredictably so—they varied from pill to pill. The company went through a number of manufacturers before finding one that consistently delivered levothyroxine with correct doses.

Valisure also sees instances of pills that don't dissolve properly, which affects how the active ingredients are absorbed. The pharmacy found multiple batches of lamotrigine—the antiseizure drug Clark-Joseph takes—in which the pills didn't dissolve for 24 hours, maybe longer. "At some point, you have to stop the test," Light says.

18+

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◀ **Massoud Motamed arrived at Huahai in May** 2017 to conduct an inspection for the FDA. The company knew he was coming, which is common for inspections outside the U.S. Du cleared his calendar for the five-day review and stayed close to Motamed the entire time.

Motamed found black metallic and yellow rust particles in some of the machinery. In his report, he wrote that gaskets were discolored, warped, fraying, and missing pieces. Through a translator, Du told him the equipment was old and needed to be replaced.

Motamed identified worse problems. During regular quality testing, the company had found impurities in its drugs, which appeared as spikes or peaks in graphs that resemble the readout of an echocardiogram. Huahai didn't try to identify them. Instead, it omitted those tests from its official reports, retested the drugs, and recorded passing grades.

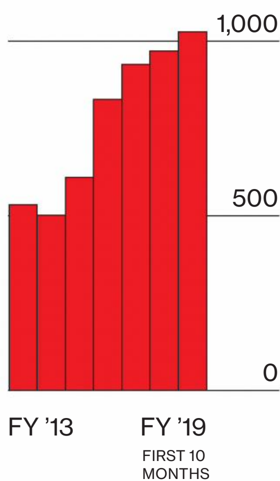
Du called those spikes "ghost peaks" and said they appeared from time to time for undetermined reasons. Motamed was incredulous. "I indicated that I am not familiar with this concept," he wrote. He concluded in his report that Huahai's decision not to investigate or identify the impurities "casts a cloud of uncertainty over the accuracy of test results used in approval and release of the firm's finished API products." He recommended the FDA send a warning letter, the strongest of the agency's rebukes. That likely would have meant the factory couldn't manufacture any new drugs until it passed another inspection.

The FDA didn't send the letter. Instead, it gave Huahai a chance to resolve the issues without any repercussions. In a memo, obtained via a public-records request, FDA managers explained their decision. The company had passed inspections in 2010 and 2014 and said the test results Motamed questioned hadn't affected the final products. As is always the case with inspectors, Motamed had no say in how the agency evaluated Huahai's response. He didn't even see it; inspectors submit their reports and move on.

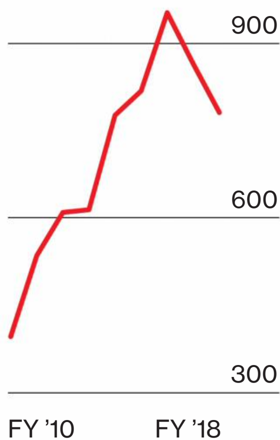
Michael de la Torre runs FDAzilla, a research company with a database of agency inspections going back two decades. He says the FDA was too trusting of Huahai given the actions Motamed documented. "This was willful adulteration of testing data," he says. "They were gaming the system." He calculated how often in the past five years the FDA has issued a warning letter when a company's problems include faked results: 25% of the time.

Motamed joined the agency toward the end of the Obama administration, as overseas inspections were peaking. In 2016, the FDA conducted 163 surveillance inspections in China, a record; his audit of Huahai in 2017 was one of 140 in the country that year. In 2018 the number fell to 125, according to agency documents. Motamed left the agency four months after his visit to Huahai. He says it wasn't because he was frustrated, but he is now. "I honestly don't think the FDA realizes the true nature of how the industry operates," he says. "In most cases, business pressures are superseding quality decisions in manufacturing."

Generic drug approvals by the Food and Drug Administration



FDA surveillance inspections of drugmakers overseas



Other inspections of factories connected to the blood-pressure pill recall have discovered disturbing evidence of dangerous practices. At a Strides Pharma Science Ltd. facility in Puducherry, India, someone had stuffed discarded quality-control records into a 55-gallon drum in the scrap yard. Other records sat near a shredder. Strides is approved to make losartan, which was recalled in May. The company didn't respond to requests for comment for this story.

In June the FDA sent a warning letter to another Indian company, Aurobindo Pharma Ltd., saying the company ignored impurities in an active ingredient it produced. The name of the ingredient was concealed by the FDA when it released the letter publicly. Aurobindo recalled contaminated valsartan in January and again in March. The company didn't respond to requests for comment.

An FDA inspector reported that technicians at the flagship facility of Mylan NV in India disregarded about 75% of failing quality checks, for no good scientific reason, over six months in 2016. The inspector suggested that staff were retesting failing drugs until they passed. Because the FDA routinely keeps crucial information in these audits secret, it's unclear which drugs were involved. Mylan recalled its valsartan last November. The company makes its own active ingredient for the drug in India and also sold it to such companies as Teva Pharmaceutical Industries Ltd. Teva recalled its valsartan. Mylan says the warning letter was unrelated to the recall. The facility has since been reinspected and the FDA didn't find any major issues. Teva declined to comment for this story.

Karen and Tom Brackman watched with agitation as the recalls kept coming. Tom retired from his job as a facilities manager for Dell so he could take care of Karen. By the end of the summer, they began looking for a lawyer. "I knew I wasn't the only one," Karen says. "I want knowledge." The more they've learned, the more frustrated they've become. "The whole system is broken," Tom says. "The FDA hasn't been trying to make sure what's coming from these different countries is of high quality. It's scary." What they've come to realize—what some doctors have come to realize, too—is that the government has a limited ability to regulate the generics industry overseas. It's really supposed to regulate itself. And it's not.

In early 2018, Novartis placed an order with Huahai for 45 metric tons of valsartan to use in its own generic version of Diovan. It wasn't unusual: Novartis had been buying ▶

FDA FISCAL YEAR ENDED SEPT. 30. DATA: FDA

An FDA inspector recommended issuing a warning letter to Huahai's Linhai factory

◀ valsartan from Huahai since 2012. Clausen, the FDA inspector who visited Huahai last summer, detailed in her report what happened next. After the shipments arrived in Stein, Switzerland, Novartis's scientists conducted tests for residual solvents. What they found worried them: a spike in the data that signaled an impurity. Novartis told executives at Huahai about the spike in June. Clausen wrote in her report that Huahai knew about the data peak and considered it "noise."

Novartis sent samples to another company for more extensive testing. It then informed Huahai that the impurity the company had ignored, and that no other customer seemed to have noticed, was NDMA. Novartis says it notified health regulators of the contamination and recalled its generic valsartan in Europe and Canada.

A probable carcinogen in a medication taken by millions of people manufactured in a factory the FDA knew had problems was a crisis for the agency. Staff scrambled to verify their own test to detect NDMA. The agency says industrial chemists and regulators around the world were surprised to find the toxin in valsartan. They knew there was a risk NDMA could form but didn't think it could survive.

Huahai finally developed a test to detect the toxin—something it should have done when it made the manufacturing change. "They certainly should have caught it, and they should have modified the procedure to correct it," says Kevin Schug, an analytical chemistry professor at the University of Texas at Arlington who's done extensive research on the testing of pharmaceuticals. The company left no records of trying to do either. "Any well-trained analytical chemist would know to check," says Gortler, the former FDA medical officer. "If it's not intentional, it's incompetence. At some point, those are the same."

Gortler says if regulators can't trust manufacturers to catch such impurities, the FDA should inspect the drugs before they enter the U.S. That the agency tests so few is another problem. "It is totally unacceptable," he says. "It is titanically unacceptable."

It seems that none of Huahai's customers anywhere looked for impurities in valsartan until Novartis did—or if they did, they didn't identify what they found. "We in the industry are responsible for testing," says Rick Sachleben, an organic chemist and pharmaceutical consultant. "If we're buying stuff, we have to make sure they're making it right."

To gauge what testing might turn up, consider Valisure LLC, an online pharmacy in New Haven, Conn., that opened in 2018 and tests every drug it orders. It's rejected more than 10% of the medication batches it's purchased, according to CEO David Light. Grounds for rejection could be a drug not having the proper amount of active ingredient, or not dissolving as it's supposed to, or containing impurities. Valisure does sell two versions of valsartan, from Alembic Pharmaceuticals Ltd. in India and Jubilant Cadista in Maryland.

Light says he's spoken with people in the industry about his findings. "The overwhelming response is, 'We know there's a problem, but it's not our problem,'" he says.

QILAI SHEN/BLOOMBERG

"There's no liability at any one point. The whole system is so complicated you could point at anybody. The only element who cares in this whole global supply chain is patients."

In September 2018, the FDA placed the Linhai facility on what it calls "import alert," which prohibits Huahai from selling anything made there to any company that markets Huahai products in the U.S. Canada did the same. European regulators banned Huahai from sending any more valsartan to companies there.

The FDA finally sent a warning letter to Huahai in November. It criticized the company for not trying to identify the impurity earlier and for not anticipating that using DMF as a solvent could cause the problem in the first place. "You did not consider the potential for mutagenic or other toxic impurities to form," the letter read. "You are responsible for developing and using suitable methods to detect impurities.... You are responsible for the quality of the drugs you produce."

Clausen raised one other concern about Huahai: In September 2016, a customer had complained about a drug contaminated with a probable human carcinogen. Huahai had reprocessed the rejected batches and sold them to other customers outside the U.S. The FDA didn't identify the drug in the version of the warning letter it made public. Solco issued a press release saying that the drug wasn't valsartan. It was levetiracetam, an epilepsy treatment, and, the company said, the batches that were cleaned up and resold met manufacturing specifications.

"The only element who cares in this whole global supply chain is patients"

The problems at Linhai were so serious and the response so inadequate that the FDA said it had grave concerns about the possibility of cancer-causing toxins in everything manufactured at the facility.

Valsartan was Huahai's second-biggest product before the recall and accounted for 15% of its revenue. In April, Huahai said sales of valsartan had fallen 17%. The company spent 413 million yuan ($58 million) in 2018 to handle the recall and set aside an additional 302 million yuan to compensate its customers. And it reported it was no longer planning on listing another U.S. subsidiary, Prinston Pharmaceutical Inc., on a U.S. stock exchange.

The Chinese government seems to be standing by Huahai, though. From August to October of 2018, the Linhai city government gave 300 million yuan to Huahai in "industrial development assistance funds," the company said. In December, Huahai won six bids as part of a government program to provide lower-cost generic drugs in 11 cities. Huahai said in January that it wants to raise as much as 1.8 billion yuan through a private placement to replenish its working capital and fund a research and development center, as well as a "smart manufacturing" project. By April, Huahai's recall in China was complete.

Karen Brackman doesn't make plans in the weeks after chemotherapy. "When I'm really in pain, it's like I'm on a trolley car and everybody else is on a jet," she says. She had to cancel her painting classes in the Hobby Lobby store nearby. She missed her son's wedding in Australia. She brushes her teeth constantly. "Chemo smells," she says. "It's like a decaying chemical emanating from your cells."

Brackman sued Huahai in April. Her case is part of a bigger, multidistrict suit that will be heard in U.S. District Court in New Jersey. About 140 lawsuits have been filed against Huahai and other drugmakers involved in the recall, as well as pharmacies that filled the prescriptions. There's no trial date yet. Brackman's lawyer, Daniel Nigh of Levin Papantonio in Pensacola, Fla., is also evaluating the claims of more than 500 other people with cancer—liver, stomach, small intestinal, colon, esophageal, kidney—who took valsartan from 2015 to 2018. Huahai says it can't reliably estimate the impact of litigation.

The recalls keep coming. On June 26, No. 52 was issued, and the FDA can't promise that's the last. The agency isn't, however, asking companies or pharmacies to notify patients about possible contamination of batches that expired—or were ingested—before the recall. Woodcock says it's not necessary to worry: "It's not like if you took valsartan you have to be checked for cancer."

The American Medical Association will assess over the next year whether the country's drug supply should be better protected. Independent testing is one possibility. Maybe one day. Improving the quality of imported drugs should be a higher priority, says Peter Pitts, a former associate commissioner at the FDA. "Because if we wait, shame on us."

Congress, for so long focused on the cost of medicine, is starting to look at how to make it safer. It's asked the U.S. Government Accountability Office to conduct a review of the FDA's supervision of factories overseas. The agency is focusing on whether the common practice of recycling solvents may spread any contamination.

"I'm concerned it's like peeling an onion," Robert Kugler, the senior U.S. district judge hearing the multidistrict lawsuit, said in a June conference with the lawyers. "The more regulatory agencies look into more generic brands, the more we're going to find. There's no good way around it. It's a mess."

Until recently, regulators were confident they were properly assessing the potential risk in generics production. Now they're realizing that a system so dependent on trust and self-regulation has vulnerabilities. They know the process sometimes ends with potentially dangerous pills in bottles. Now they have to uncover how it begins. Ⓑ —*With Dong Lyu*

PIZZA FOR THE PEOPLE

Average hourly wage is $14

Ovens are small, cheap, electric, and self-venting

A shop requires only 300 square feet

The company gives paid time off for activism

Pizzas cost $10 to $11

Text messaging is &Pizza's primary internal communication tool

The company has so far raised more than $50 million in capital from private investors

Store employees are called "tribe members"

Customizable with 48 ingredients, including arugula

Fast-casual chain &Pizza wants to become the most progressive fast-food employer in the U.S.

By Elizabeth Dunn Photographs by Cole Wilson

Michael Lastoria, chief executive officer of &Pizza, a Washington, D.C.-based chain with 36 locations up and down the East Coast, is tall, slim, and serene, with a full beard and brown hair that falls past his shoulders. When I meet him, on a warm spring day inside an &Pizza location in Manhattan's NoMad district, he's wearing a black silk shirt, a black cape, cropped black pants with long black socks, and a pair of black Wu Wear Wallabee boots: what Jesus might look like if he walked in a Yohji Yamamoto show.

Lastoria, 39, committed to an all-black wardrobe around the time the first &Pizza store opened, seven years ago (the name is pronounced "and pizza"—the ampersand chosen, Lastoria says, to convey values of unity and inclusivity). The uniforms at &Pizza stores are black, and black is the dress code for corporate staffers, too, meaning anyone can jump behind the counter. "It's about making sure we're not losing that connection to employees in pizza shops," he says. Around us, the restaurant is mobbed by a Generation Z crowd, hunched over pies topped with spicy chickpeas or arugula while songs by Grimes and Drake boom over the sound system. From time to time, a customer holds a phone aloft, capturing the moment when they lift the lid of an eye-catching black-and-white rectangular pizza box to reveal their just-baked, personalized creation.

The menu at &Pizza has eight options. There's a classic margherita pie, but the big draws are the offbeat flavor combinations such as the Pineapple Jack, with pineapple, salami, pickled red onion, and barbecue sauce (against all odds, it's tasty). Most customers create their own, choosing from a stable of 48 ingredients, including mushroom truffle sauce, shrimp, ranch dressing, and scrambled egg. The dough is stretched to form a skateboard shape and run through a TurboChef conveyor oven that cooks it in less than two minutes. The final product tends to be light but filling, with a thin, crispy crust almost like a flatbread: daintier than a dollar slice, but sturdier than a Neapolitan pie. Pizzas cost $10 to $11 and feed one person generously. The restaurant also sells its own line of branded iced teas and craft sodas, as well as cookies by Milk Bar, the New York-based bakery known for nostalgia-sweetened treats such as Cereal Milk™ soft-serve and confetti birthday cake.

Although &Pizza sits squarely in fast-casual territory—quality food, made for you, with prices a level above fast food—the brand has eschewed the category's dominant aesthetic of reclaimed wood, warm lighting, and earth tones, favoring a younger, urban vibe. Shops are decorated in a bold, graphic black-and-white motif, and the walls often feature work by street artists admired by Lastoria. The shops tend to be open late—in some cases, until 4 a.m.—and are known to churn out pies right up to closing time.

&Pizza uses premium ingredients, but unlike many of its peers, it doesn't fixate on the details. If pressed, Lastoria will share that the dough is made from five ingredients (flour, water, yeast, salt, and sugar) and with no preservatives at a production facility in D.C. The mozzarella comes from a century-old cheesemaker in Wisconsin, the tomato sauce from a family-owned operation in California. But Lastoria doesn't want to get precious with sourcing narratives. Milk Bar founder Christina Tosi says this is one of the qualities that drew her into a partnership with the brand. "They don't TMI you about the history of your pizza."

What Lastoria does want to talk about to anyone who will listen is his ambition to turn &Pizza into the most progressive fast-food employer in the nation. That starts with pay: Store employees, whom the company calls "tribe members," are among the best-paid fast-food workers in the nation. At &Pizza the average hourly wage is $14, compared with $9.84 for the industry, according to the market research firm TDn2K. The company uses input from tribe members to inform everything from store music choices to uniform fabrics to the decision to pay extra for late-night shifts.

So far, Lastoria says, the approach is working. A recent store opening in Washington drew 1,000 job applications, and in a sector where job tenure is measured in months, &Pizza estimates that around 100 of its 750 employees have gotten the company's ampersand logo as a tattoo.

Over the past two decades, the rise of the fast-casual market, now worth about $40 billion annually, has proven that American consumers are willing to pay more for food they can feel virtuous about eating. But despite the progressive rhetoric on such topics as animal welfare and personal health, fast-casual leaders have been slow to speak up on the subject of labor. Twenty years after Chipotle Mexican Grill Inc. began advertising humanely raised pork and local produce, workers employed by quick-service restaurants are still among the lowest-paid in the country. Industry groups such as the National Restaurant Association and the American Pizza Community actively lobby against increasing the federal minimum wage, which has been stalled at $7.25 for a decade. If Lastoria has his way, &Pizza will do for the American fast-food worker what Chipotle has done for its ingredients: persuade ▶

◀ customers to pay a little more for food that supports their values.

◀ The &Pizza process is designed to take little time and even less space

A few weeks later, in Washington, Lastoria is eager to show off &Pizza's newest digs: a rectangular kiosk, fashioned in black-and- white acrylic, in the middle of Union Station's subterranean food court. The space inside is configured as tightly as a ship's galley, with prep areas, two production lines, and four ovens. Employees dredge patties of pizza dough through semolina flour, preparing for the lunch rush. Lastoria points out the ovens, which call to mind amped-up versions of the toasters found in college cafeterias.

The prestige fast-casual pizza oven is either a gas-powered Wood Stone—gleaming, mammoths with flames licking the back, used by industry heavyweights Mod Super Fast Pizza LLC and Blaze Pizza LLC—or a wood-fired brick Marra Forni, the domed apparatus resembling an oversize football helmet seen at Whole Foods Markets across the country. These help market the artisan pizza image but require a restaurant space equipped with costly venting to expel the smoke and odors created by cooking at high temperature. TurboChef's models don't run as hot, but they're small, cheap, electric, and most critically, self-venting, meaning they filter their own air emissions, so &Pizza can set up shop where most others can't.

Even these tie back to &Pizza's central mission. As a company that aimed to do better by its employees, franchising was off the table as a means of growth; while it's the fastest route to expansion, it would require ceding control of such things as pay and hiring practices. Lastoria knew he'd need to stretch whatever capital he raised to fund as many locations as possible. Building a business model around investing in labor also meant the company would need to minimize the cost of rent.

Lastoria says all he needs is electricity, water, and 300 square feet to open a shop. He's adamant that the impact on the finished product of a Wood Stone or Marra Forni vs. his conveyor ovens is minimal. "My chef friends love these things," he says. (Among the pizzaiolos I spoke to, the consensus view was that a fancy oven can improve a pizza's texture, but not the flavor. &Pizza's ovens cook at 600F, producing crust that's a little denser and tighter than one firing at upwards of 800F.)

&Pizza has always favored real estate that's small and cheap, but lately the company has economized even further with modular, free-standing "cubes," like the one in Union Station. A cube costs half as much to build as a conventional store and can be broken down and reassembled in a matter of days, so the company can respond nimbly to changes in foot traffic patterns or co-tenants. The first cube opened in February in an alcove formerly occupied by vending machines inside the Rayburn House Office Building—where members of Congress keep their offices—as a result of overwhelming demand from congressional staffers. Each &Pizza store has its own name, and this one was dubbed the Influence. It was the first location where the starting salary for all employees was $15 per hour.

Lastoria grew up in Fillmore, N.Y., a small town in the state's western reaches where economic opportunity has receded along with manufacturing. At 22 he moved to New York City and started a digital media company called Innovation Ads Inc.; four years later he sold it to a private equity firm. By the age of 26 he had more money than he imagined he'd earn in a lifetime. Soon after, he started an advertising agency, Jwalk, but he couldn't shake a sense of emptiness. He thought about the depressed incomes in places such as Fillmore and decided that his next business would do something to improve the plight of low-wage workers.

The hospitality industry, which employs 10% of the U.S. workforce and provides some of its lowest-paying jobs, was a natural target. Why pizza? "It's universal, it's global, it's a staple," Lastoria says. "As someone who isn't a chef, it was approachable." Pizza was also overdue for a fast-casual reboot. In 2012, when &Pizza's first location opened in Washington, Chipotle and Qdoba had put a premium spin on Mexican fast food, and Five Guys and Shake Shack had enlivened the burger category. Panera and Firehouse Subs sold sandwiches a cut above what Subway had offered for decades.

But pizza, now a $45 billion category with steady growth, remained sclerotic, stubbornly dominated for decades by Domino's, Pizza Hut, Little Caesars, and Papa John's. Domino's made waves by harnessing technology to fuel sales growth and lifting its share price from under $5 at the end of 2008 to more than $200 today. But the pizza itself has remained essentially the same: sweet sauce, chewy crust, tired toppings. It didn't take a culinary genius to see ways of improving on the status quo. Premium pizza could command premium prices—and pay premium wages.

Ever since co-founding &Pizza, Lastoria has devoted himself to advocating for legislation to raise the minimum wage, speaking at rallies, and lending his name to such efforts as Fight for $15, a group begun by fast-food workers, and Business for a Fair Minimum Wage, a network of business owners and executives. He's twice appeared on the Senate floor in support of raising the wage and helped lead a successful campaign for

a $15 minimum in the District of Columbia, which passed in 2016. D.C.'s mayor signed the bill into law in front of an &Pizza.

But Lastoria sees wages as just the tip of the iceberg. One of his concerns is the cultural split in most food service companies between hourly store workers—"the people who are actually doing the work"—and the corporate echo chamber, where policies are made. Lastoria has tried to collapse that divide. Everyone from the chief executive officer down to a part-time cashier receives the same health-care coverage. Lastoria provides every employee with his cellphone number and has replaced email with text as &Pizza's primary internal communication tool. Feedback from the tribe via text has led to major changes in corporate policy. The company now pays extra for shifts late at night and on holidays, gives paid time off for activism, and is actively campaigning for extended Washington Metro hours to make it easier to get to and from work.

Lastoria's good intentions will matter a great deal more if &Pizza can transcend its status as a small but gutsy fast-casual player and hit the mainstream. To that end, the company has so far raised more than $50 million in capital from private investors including Avalt and RSE Ventures (the latter of which was co-founded by Stephen Ross, the billionaire real estate developer and fundraiser for President Trump—a curious alliance for a company espousing such progressive values). Lastoria says he plans to use the money to double &Pizza's store count by the end of 2020. Matt Higgins, who helped found RSE and appears on ABC's *Shark Tank*, says the company stood out for its labor-centered mission, but the strong economics persuaded him to invest. "&Pizza's build-out cost is attractive, and out of our entire portfolio, Michael's four-wall economics are at the top," Higgins says, referring to the brand's shop-level profitability.

In recent years, &Pizza has been dwarfed by two West Coast fast-casual artisan chains: Southern California-based Blaze and Mod, which began in Seattle. Both employ a franchising model and each has grown to more than 300 locations. Lastoria insists that he doesn't view them as threats—if anything, he says, their success validates the demand for better pizza options. "We see ourselves as a very different kind of brand, because we grew up on the East Coast, we're company-owned and operated, and we were birthed for a very different reason," he says. (Mod, too, has a social impact mission, which revolves around hiring candidates facing barriers to employment, such as special needs or a criminal record.)

To help speed up its expansion, &Pizza has formed a partnership with ZumePizza Inc., the Mountain View, Calif.-based automated pizza delivery company that raised $375 million in funding from SoftBank Group Corp. last October. "I reached out to Zume co-founder Alex Garden on LinkedIn," Lastoria says. "We had a conversation and realized we were spirit animals." Together, the companies are designing trucks outfitted with all the same gear as the shops, capable of producing the same volume of pizza as a free-standing shop at a fraction of the cost. &Pizza will use them to test out potential shop locations, fulfill catering orders, or move around, like ghost kitchens, to expand the brand's delivery coverage. The first pizza shops on wheels have already arrived in Washington. Still, if the goal is to fundamentally alter how fast food thinks about labor, with just three dozen shops, &Pizza has a long way to go before it might wield that level of influence.

Despite everything Lastoria has done for the tribe, turnover remains only slightly below industry average, and no one is exactly sure why. Andy Hooper, who worked as the company's "chief people officer" before being appointed to the role of president and chief operating officer in June, thinks a more attractive health-care offering is part of the solution. &Pizza recently cut health-care premiums in half and now gives plan participants an annual lump sum of $1,200 to offset the deductible as soon as they join, which they can do as soon as 60 days into employment. It's a costly solution, but Hooper thinks it's worth it. "We'd rather pour money into base wage and health care than get cute with a bunch of other offerings that people don't actually use," he says.

Lastoria wonders if more fundamental forces are at play. His goal is for 100% of &Pizza's shop leaders to be promoted from within, which he sees as a powerful metric for how well the company moves people up in the economy. It's been more difficult than he expected—the opportunities are there, he says, but not everyone seems willing, or able, to take advantage of them. Lastoria says he puts the onus on himself. "We don't subscribe to the old 'pull yourself up by your bootstraps' mentality," he tells me. The average age of an &Pizza tribe member is 22, so the company has hired a psychologist who specializes in adolescent development to better understand what motivates, and stymies, its young workforce.

Lastoria knows none of that will matter in the long run unless the brand can continue to, at the very least, hold its own in today's crowded restaurant market. &Pizza has taken off, but consumer tastes are fickle, and when it comes to quick-service restaurants, expectations have never been higher. Sure, today's consumers dig a social justice mission, but is that enough to keep them coming back? "It's about the 30 things you do well," Lastoria says. "You have to be digitally native, there has to be a creative component, you have to be inspirational, political, willing to take a stand. You have to understand technology, understand the youth and what motivates them to work." All of that, and pizza. Ⓑ

David Swensen built a $29 billion fortune for his university and revolutionized investing. What's wrong with that?

HOW YALE GOT CRAZY RICH

By Drake Bennett, Janet Lorin, and Michael McDonald
Photograph by Jamie Chung

On a Tuesday in early April, David Swensen sat onstage in a gradually filling lecture hall. Sunlight slanted through a Tiffany stained-glass window of angels personifying various pursuits of the mind. Outside, tour groups moved along the paths of Yale's Old Campus, spilling onto topsoil ventilated with small holes to speed the growth of the grass upon which undergrads would picturesquely recline in warmer weather.

Swensen is a legend at Yale, and its highest-paid employee. But he's neither the university president nor the football coach. He's the money manager who for 34 years has been in charge of the endowment—the multibillion-dollar pool of money, seeded and fed by donations, that comprises Yale's fortune. It's largely thanks to Swensen that the university can woo star scholars, that its admissions can be need-blind, its libraries and cafeterias staffed, its sports teams fielded, its grad students stipended, its antique windows tended, and its lawns aerated.

The afternoon's event was a conversation on personal finance with NPR correspondent Chris Arnold. "This is my passion," Swensen told the audience. He warned about how money managers can take advantage of their clients. "All of the ads that you see steer you in the wrong direction, because it's ad money being spent by for-profit organizations." In khakis, a button-down, and a fleece vest with a Y over his chest, Swensen at 65 is square-jawed, with a teenager's gangly frame. Several years ago he began receiving treatment for cancer. Onstage, he moved with evident effort, and his speech was punctuated by pauses for breath.

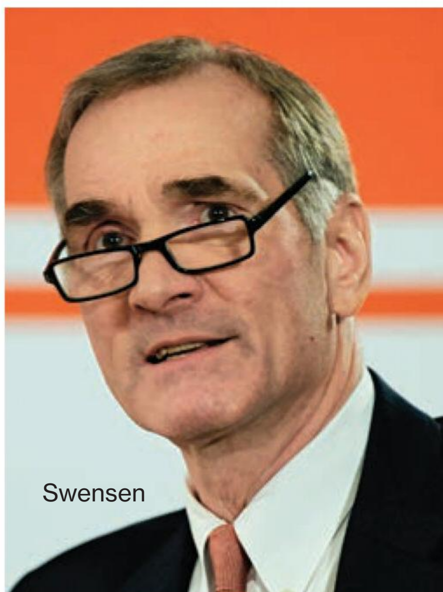
Exactly halfway through the hourlong conversation, a member of the Yale Democratic Socialists named Lorna Chitty stood up in the second row. A few dozen other stone-faced students also rose. "David Swensen," she proclaimed, "while you stand here teaching us how to hoard wealth, there are 20 students occupying the investments office. When will you respond to the years of student activism calling for you to divest from holdings in Puerto Rican debt and the fossil fuel industry?" From the stage, Arnold proposed that the protesters hold off until the Q&A, when everyone could have "a civil exchange of questions."

"Instead," Chitty responded, "we will be leaving and joining our comrades who are sitting at the investments office." As the students filed out they shook their banners and chanted, "Hey, hey! Ho, ho! Fossil fuels have got to go!" The disruption wasn't a surprise—Yale police were on hand—and it lasted a mere two minutes. (A few blocks away, the investment-office occupiers got no farther than the building lobby.) Throughout, Swensen sat silently. With chants still echoing from the hallway, he picked up where he had left off: hammering on the unconscionably high fees of financial firms. To him, that was an injustice worth decrying. "The problem," the great money manager said, "is that when you're motivated by profit, oftentimes you stray."

Swensen is regularly mentioned in the same breath as Warren Buffett and other investing greats. "He's right up there with John Bogle, Peter Lynch, [Benjamin] Graham, and [David] Dodd as a major force in investment management," says Byron Wien, a longtime Wall Street strategist. The endowment was worth $1 billion in 1985 when Swensen started at Yale; today

◀ it's $29.4 billion. Other schools—including Bowdoin, MIT, Princeton, Stanford, and Penn, whose endowment heads all once worked for Swensen—have seen their wealth multiply. Harvard's stash is bigger, at $39 billion, but Swensen's reputation is more than a matter of returns and asset size. He's an intellectual leader whose once-radical ideas have become an orthodoxy. More than anyone, Swensen convinced the smart money that the best opportunities lie not in buying and holding ordinary stocks, but in esoteric hedge fund strategies and private equity—a template for long-term investing now widely known as "the Yale model." Swensen did all this not as the chief of a giant asset management firm, but as the financial steward of a nonprofit institution of higher learning.

Today, though, the massive size of the top universities' purses has become a flashpoint in a broader argument about elitism and inequality. Politicians have begun to question the tax-free status universities have long enjoyed: The 2017 tax law signed by President Trump included a new endowment tax, and Yale's home state of Connecticut a few years ago weighed something similar. Meanwhile, students discovering that they're stakeholders in these fortunes are proving increasingly aggressive in scrutinizing the sources of the returns. And away from campus, the investment world is grappling with the implications of the shift from public equity (i.e., the stock market) to private investment, where access and connections are the coin of the realm and the best opportunities tend to go to a relative handful of plugged-in investors, including top endowments. All this, too, is part of the world the Yale model helped create.


Swensen

Swensen regularly teaches investing courses at Yale, and in the late 1990s some former students bought him a first edition of John Maynard Keynes's masterwork, *The General Theory of Employment, Interest, and Money*. As Swensen would recount in a talk at the 2018 Yale reunion, the graduate presenting him the book had told him, "David, you always read from Keynes as if you were reading from the Bible."

Swensen likes to remind people that Keynes wasn't just a theorist, he was also an extraordinarily successful investor. For more than 20 years the great economist managed the endowment of King's College, Cambridge, expanding it steadily during the turbulent decades between the two world wars. He would discharge his fiduciary duties first thing in the morning, poring over company reports and phoning brokers while still in bed.

Endowment management is a less genteelly domestic affair today—Swensen leads a team of almost 30. But the career of Yale's chief investment officer is marked by a similar combination of theory and practice. He first came to Yale as a grad student in economics in 1975, after graduating from the University of Wisconsin in his hometown of River Falls. His father was a chemistry professor and dean at UWRF; his mother, after raising six children, would become a Lutheran minister. One of Swensen's dissertation advisers at Yale was James Tobin, who'd been a top economic adviser to the Kennedy administration and would soon win a Nobel Prize. According to Charles Ellis, founder of Greenwich Associates and former chair of Yale's investment committee, "When it snowed, David went to Jim's house to shovel the sidewalk."

Among the work that earned Tobin his Nobel was his contribution to Modern Portfolio Theory, formulated in the 1950s by his friend Harry Markowitz. The basic concept is simple enough: Asked by a reporter once to explain it, Tobin said, "You know, don't put your eggs in one basket." But by translating risk and return into mathematical concepts, the theory birthed a set of practical tools that are relied on every day by legions of 401(k) investors, who diversify their savings into thousands of underlying securities, most of which would be far too risky as a single investment. To Swensen it felt a little like getting away with something. "Diversification, as Harry Markowitz says, is a free lunch," Swensen said in his 2018 reunion talk. "For a given level of return, if you diversify you can get that return at lower risk. For a given level of risk, if you diversify you can get a higher return. That's pretty cool! Free lunch!"

As a grad student, Swensen looked and acted the part. He grew a beard and organized beer tastings at the residential college where he was a fellow. His academic interest, though, was against type: the valuation of corporate bonds. He got to know an investment banker at Salomon Brothers named Gene Dattel, a Yale alum who suggested that Swensen work there for a few years to get a firsthand feel for the topic. Dattel, deeply impressed by Swensen, had a feeling he'd thrive at the firm. But he did counsel the young academic, he recalls, to "look investment banker-ish" for his interview. "It was a way of saying to shave your beard," he says, "and wear a suit."

The early 1980s were famously fast times at Salomon, and a cleanshaven Swensen fit right in as the firm upended the once-staid bond business. In 1981 he helped structure the world's first swap agreement, allowing IBM Corp. to hedge its exposure to Swiss francs and German marks in a deal with the World Bank. After three years, Swensen left to head the swaps desk at Lehman Brothers. His foray was beginning to look like a career.

Then he got a call from Yale's provost, William Brainard, who'd been his other dissertation adviser. Brainard was looking for someone to run the endowment, and Tobin had suggested their former student. At first, Swensen begged off: All he knew about portfolio management was the Markowitz and Tobin he'd studied in grad school. But he agreed to go to New Haven and chat with Brainard. "He was the only candidate among many who thought and could talk intelligently about what was special about managing the large endowment of a tax-exempt university," Brainard recalls. And that was that. Swensen took the job, and with it an 80% pay cut. He started on April 1, 1985.

If the hiring of a 31-year-old was a vote of confidence in

SWENSEN: PETER FOLEY/BLOOMBERG. PREVIOUS PAGE: PROP STYLIST: AMY HENRY; DOG STYLIST: AJA COON

Swensen, it also reflected the stature of the job. Ivy League endowments, like Ivy League football teams, tended to be unexceptional performers helmed by unfamous people. The conventional wisdom was that a portfolio was prudently diversified if it was divided between blue-chip stocks and bonds, with a few exotic investments as a garnish. But the 1970s had been a disaster for most universities' finances. The global recession that followed the 1973 oil embargo hammered stocks as inflation ate up bond returns. Stagflation revealed that the eggs had been in one basket, after all.

Steadily losing out to inflation is particularly bad for a college. Individuals investing for themselves can ballpark the minimum they need to earn by multiplying annual spending by the number of years they expect to live. Three-hundred-year-old universities, on the other hand, assume immortality and invest accordingly—they can't let their money be whittled down.

In 1986, a Yale College and School of Management graduate named Dean Takahashi joined the investment-office, quickly becoming Swensen's sounding board and trusted deputy. They sought out investment categories that would at once allow for true diversification and beat the market. Such assets weren't easy to find—plenty of investors and economists argued they didn't exist. But Yale had certain advantages. Its nonprofit status sheltered it from taxes on income. It could access top outside fund managers. It had alumni in high places in business and finance who, like Swensen, bled Yale blue. Even in its relatively straitened circumstances, Yale came to the table with a bankroll of a billion dollars. What's more, as Swensen realized, its presumption of perpetuity didn't have to be a burden; it could be an edge. Allowed a longer time horizon, he could make bets that locked up money for years at a time.

Swensen had discovered working in finance that sophisticated investors had new options. There were the venture capital firms along Palo Alto's Sand Hill Road that were seeding semiconductor manufacturers and the newer tech companies. There were the nascent private equity firms leveraging up to take faltering companies private, then remake and resell them (or their parts) at a profit. And there were hedge funds, profiting by exploiting discrete, temporary opportunities—an artificially propped-up currency, say, or a stock whose price didn't fully reflect the odds of an impending merger.

And so, after Swensen took over, the garnish became the meal. He invested in San Francisco's Farallon Capital Management LLC, founded by Tom Steyer, Yale class of '79. Farallon started out in merger arbitrage, then moved into distressed debt, buying up, among other things, the largest bank in Indonesia. By the time Steyer left Farallon in 2012 to devote himself to liberal activism—he's now running for president—it was one of the largest hedge funds in the world.

Yale's biggest rival was doing something similar. In the early 1990s, under new head Jack Meyer, Harvard Management Co. began hiring private equity specialists and hedge-fund-style investors to run its money internally. Yale and Harvard also began investing heavily in natural resources such as oil, natural gas, and timberland. If you wanted to unload your forest quickly, good luck. But to Swensen and other endowment officers, that was a virtue. "The illiquid nature of real assets and the information-intensive aspects of the transaction processes favor skilled and experienced investors," a 2003 Yale endowment annual report read. In other words, the assets were going cheap because so few people could handle them.

Swensen's legend was made with the popping of the dot-com bubble. During Yale's fiscal year ended in June 2000, when the Nasdaq hit the era's peak, the endowment's portfolio returned 41%. Even more impressively, over the next 12 months as stocks collapsed, Yale's assiduously diversified portfolio returned a healthy 9.2%. Yale became an emblem of a new investing style. A few years later, at a party celebrating Swensen's 20th anniversary at Yale, then-President Richard Levin unveiled a chart showing the biggest donors in the school's history. An economist, Levin had calculated how much Swensen had outperformed the average university endowment over the course of his career—how much Swensen had thereby "contributed" to Yale. That figure was $7.8 billion. Today, Levin says Swensen's contribution is greater than the sum of all the money donated in the two decades Levin was in charge. "We've just done better," Levin says, because of Swensen's "uncanny ability" to pick the best outside money managers.

"He's right up there with John Bogle, Peter Lynch, Graham, and Dodd as a major force"

Supplementing Swensen's native abilities, however, is a money manager network built up over decades and bolstered by loyal Yalies. William Helman, a general partner at Greylock Partners, says that when the top VC firm decided to open to a few new clients in the 1990s it sought out Yale in part because of an alumni connection at the firm. Yale's $2.7 million bet on Greylock-backed LinkedIn Corp. generated an $84.4 million gain when the company went public in 2011. Swensen seeded Yale alum and former investment office staffer Lei Zhang with $20 million to start Hillhouse Capital Management in 2005, which has backed tech startups such as JD.com in China. Hillhouse earned $2 billion for the university.

There are clues in Yale tax documents about other winning bets, including Boston hedge fund Bracebridge Capital, which Swensen seeded decades ago, and a $274 million stake in New York-based health-care investor Baker Brothers Advisors that quadrupled over a decade. All in all, about 60% of Yale's portfolio is allocated to alternative investments such as private equity, hedge funds, and venture capital. And Swensen has been more willing than most CIOs ▶

◀ to take the risk of riding his best bets even as they swell to a large share of the endowment.

Early on, few firms dealt in the sort of assets Swensen was interested in, so he had to help create them—becoming, in essence, a venture capitalist of venture capitalists. "Dave absolutely put us in business," says Joel Cutler, one of the founders of VC firm General Catalyst. Getting in early has other benefits: Swensen can exercise more influence over younger, unproven firms and negotiate down the management fees that he abhors.

Following Yale's example, universities and other endowments have piled into alternative investments. "He legitimized private equity as an asset class," says Wien, the strategist. According to *More Money Than God*, Sebastian Mallaby's 2010 history of hedge funds, "By 2009, roughly half the capital in hedge funds came not from individuals but from institutions." The deep pool of large institutions seeking opportunities has reshaped the corporate landscape, as companies looking to raise money rely less on public stock markets. Companies such as Uber Technologies Inc. can grow to valuations in the tens of billions before going public. If new bubbles are forming in tech—or in debt-fueled private equity deals—small investors aren't pumping them up. The smart money is.

Stringent as an investor, Swensen is unabashedly emotional about Yale. Ann Miura-Ko was a decade out of college in 2008 when he invested in Floodgate Fund LP, the VC firm she co-founded. She later served on the university's investment committee and is now a trustee. "I thought I loved Yale until I met David," she says. Swensen, she says, can rattle off the roster of the football team and is quick to blame the refs for its not-infrequent losses. When Miura-Ko returned to Yale for her reunion, he insisted on giving her family a personal campus tour, proudly wearing a blue-and-white reunion blazer with barbershop-quartet stripes. He's also passionate about the investment office's softball team. Andrew Golden, who worked for Swensen in the late 1980s and early 1990s and now runs Princeton's endowment, remembers watching his then-boss tear his ACL trying to stretch a base hit.

Even at immortal institutions, though, 34 years is a long career. And while Swensen doesn't like to talk about his legacy—he declined to be interviewed for this story—his treatment for cancer has led to questions about when he'll step down and what will happen when he does. The speculation intensified in August with the news that Takahashi, his longtime No. 2, is leaving his role at the investment office, though staying at Yale to work on solutions to climate change.

Swensen's instincts seem to be at least partly replicable. Three of the five best-performing endowments over the past decade are those of Bowdoin, MIT, and Princeton, all run by members of his investment office's diaspora. Yale itself just missed the top 10. Golden describes Swensen as a natural teacher: "He grew up in the academic family." Seth Alexander, who runs MIT's endowment, started working for Swensen right out of college (Yale, as it happens). "Instead of leaving junior people at their desks to do spreadsheet work, he invited them to join him at meetings, to travel to see potential investments, and to join in the discussions when decisions were made," Alexander wrote in an email. Hillhouse's Zhang says he uses daily what he learned from Swensen about judging character.

At the same time, it can be difficult to disentangle how much of Swensen's students' success comes from learning at the feet of the master and how much from the privileged access afforded members of a particularly exclusive alumni network. Regulatory filings show that Yale, Princeton, and MIT all hold shares in real estate investment trust JBG Smith Properties, and that Yale and MIT were both early backers of a fund launched in 2013 called Foxhaven Asset Management. Princeton, like Yale, amassed stakes in blue-chip managers the Baupost Group and Water Street Capital. Money managers outside this charmed circle often trade tips about Swensen and his acolytes' investments: The head of a wealth management office in the Bay Area says he once traveled to Singapore to meet with a fund on the strength of a rumor that Yale had backed it.

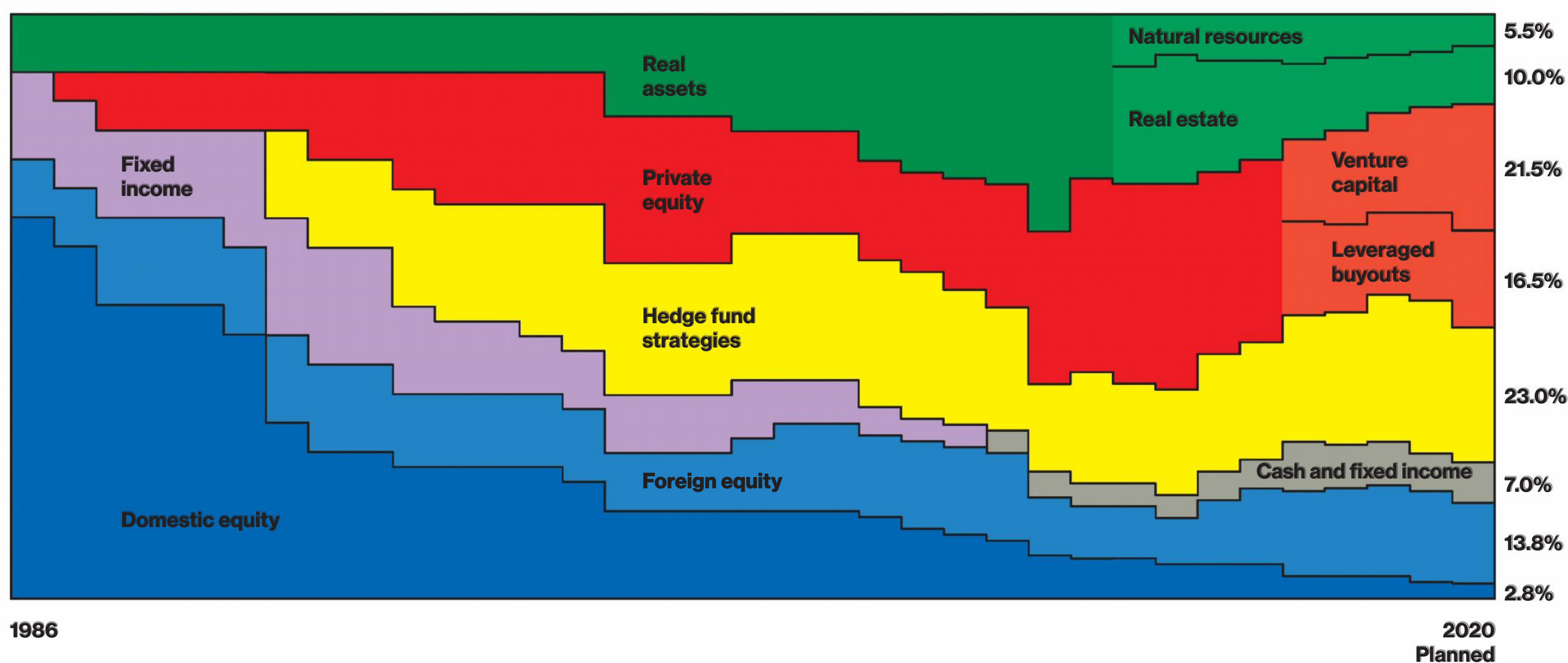
Swensen is adamant that most people and many institutions shouldn't try to do what he does. "Certainly, the game of active management entices players to enter, offering the often false hope of excess returns," he wrote in his book *Pioneering Portfolio Management*. The great mass of investors are better off in low-cost index funds. "It's like copying a champion figure skater," Swensen's friend Ellis says. "Who can reproduce 35 years of building the world's best scuttlebutt network?"

"Who can reproduce 35 years of building the world's best scuttlebutt network?"

And even champion figure skaters don't land every jump. Yale's endowment, and the many others that copied it, were knocked sideways by the 2008 financial crisis. When real estate values crashed, stocks cratered, and markets all over the world froze, the highly illiquid assets on endowment balance sheets went from being ballast to millstones. Yale did better than most and was able to borrow money to get by. In general, though, its returns have dropped off in recent years: Over the past 20 years they've averaged 11.8%, over the past decade 7.4%.

Still, no one at Yale is complaining about Swensen's returns. What some have begun to criticize is how they're earned. Yale has prospered by forging partnerships between the educational and financial elite. It's not hard to see why that might invite the attention of activists. In 2004, after Farallon launched an ill-fated venture to sell water from a Colorado aquifer, campus protesters kicked off an "UnFarallon" campaign, demanding greater transparency about what endowment money was funding. More recent efforts have focused on getting Yale to divest from fossil fuels and from hedge funds that have

YALE'S EVER-CHANGING PILE OF MONEY



bought up bonds issued by Puerto Rico. Protesters argue that the money the territory, still recovering from Hurricane Maria, will have to pay to bondholders can't go to social services and rebuilding. (Yale said in a statement on its website that Puerto Rico is in the process of restructuring its debt, and that if it does so successfully the cost will be sustainable.)

Members of Yale's graduate student union have for the past few years been digging through regulatory filings to follow the endowment's money. The union, Unite Here Local 33, has publicized what it characterized as unsustainable forestry practices in Yale-owned timberland. It also discovered that a mortgage-servicing company owned by one of Yale's money managers had threatened to foreclose on homes owned by university employees—homes, in some cases, the school helped them buy. "We have found that David Swensen's investment choices have repeatedly contradicted Yale's stated values," says Local 33's vice president for research, a Ph.D. candidate named Charles Decker. In 2016 the investment office announced that, after much consideration, it had directed its managers to divest $10 million, or 0.04% of the endowment, from fossil fuel companies. It's updated its ethical investment policy to raise the possibility of exiting investments it deems socially irresponsible.

Last year, Swensen published an op-ed in the *Yale Daily News* criticizing the student paper's coverage of the endowment. "In the more than three decades that I have managed Yale's endowment," he wrote, "the honesty of the activists and the reporting of the *News* have deteriorated." After it was published, he sent a series of emails to the paper's editors over what he argued was improper editing. In the exchange, which the *News* published, he called the editor-in-chief "a coward," and her decisions "disgusting." "Don't you understand simple English?" he asked.

The Yale model depends on putting money in funds for extended periods—the endowment doesn't pick and choose individual investments by the funds. Still, Yale isn't just any investor, and Swensen has a history of imposing his will on his money managers and taking stands on principle. It's just that his principles and those of student activists are different. MIT's Alexander remembers "a particularly uncomfortable investor meeting in Brazil" from his Yale days where Swensen confronted a private equity firm over a restructuring that he felt would disadvantage its investors. "David could not help himself but stand up," he recalls.

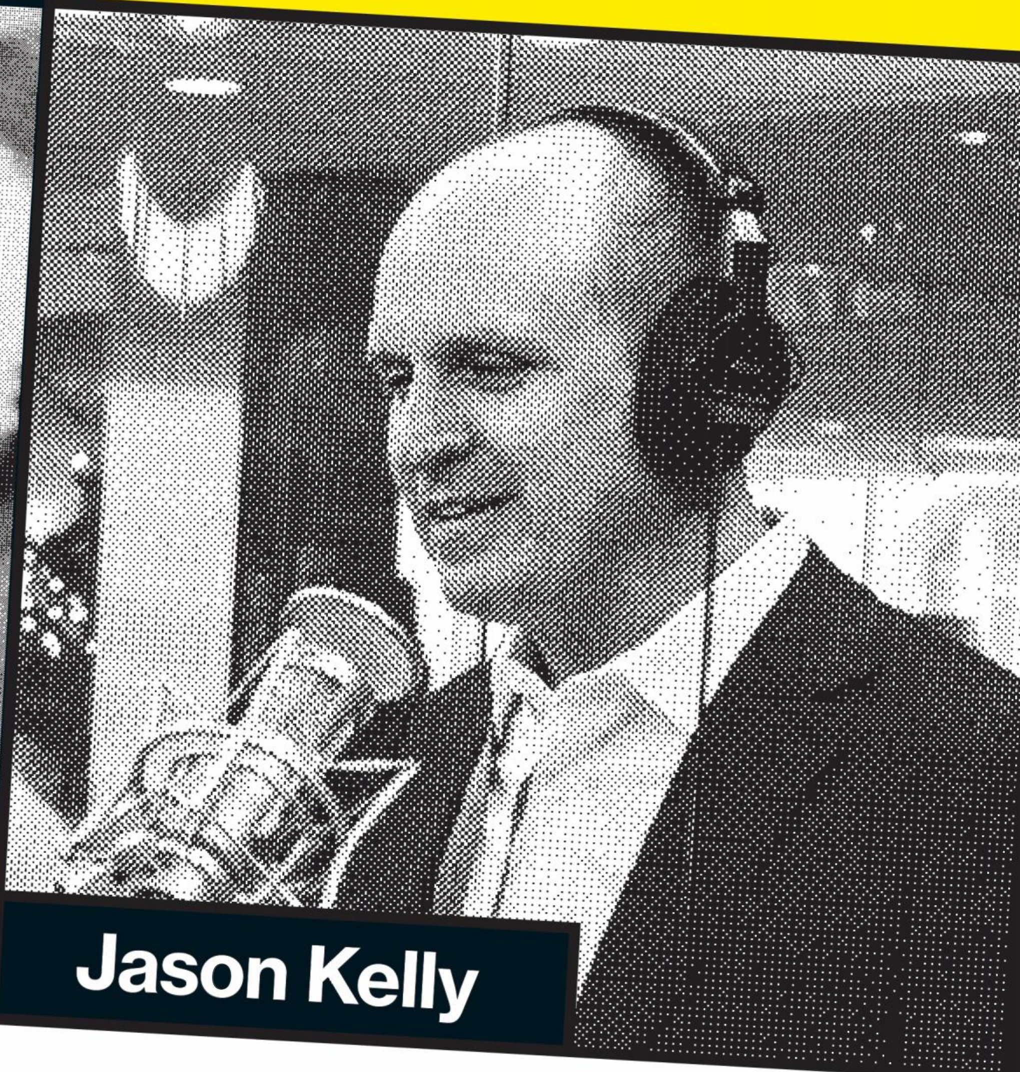
Swensen likes to talk about how he looks for money managers who have "a screw loose." In terms of self-interest, the rational thing to do if you run a hedge fund or private equity firm is concentrate on raising as much money as possible and grow rich off the fees. The managers Swensen wants are driven by a different ambition. They want to beat their competitors' returns, whether or not that translates into maximum personal enrichment. The ideal Swensen manager looks a lot like Swensen, who passed up Wall Street lucre to ensure that the university he loves is rich beyond the dreams of avarice.

What Yale's $29 billion fortune means for a democracy—at a time when many Americans struggle to pay off student debt or come up with tuition for an underfunded public college—is another question. Certainly Yale's money can open doors to opportunity: The university provides generous funding to low- and middle-income students who win admission and supports a college-aid program for top students in New Haven public schools. Leon Botstein, the president of Bard College, thinks rich universities can do more. Rather than focusing on expanding their endowments to ever more mind-boggling sizes, he argues, they should be dipping into them to attack social problems. "The money is paralyzing," he says. "The fear of being poor makes them risk-averse."

As promised, there was a Q&A at Swensen's personal finance talk. It was late afternoon by this point, and the lecture hall had grown dim. He began to discuss the sort of portfolio people should have as they approach retirement. He's been exploring the idea of having Yale offer an annuity for employees that would begin to cover costs after age 80 or 85. "Then the retirement problem becomes a lot easier," he says. It works because annuities don't have to pay forever—for humans, there's always an end in sight. That's one luxury the stewards of Yale's fortune have never had. B

DATA: YALE UNIVERSITY. ASSET ALLOCATION FIGURES ARE TARGETS

Listen too.



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Art Moves

PURSUITS

FALL CULTURE PREVIEW

September 16, 2019

Edited by
Chris Rovzar

Businessweek.com

The Skanes Dansteater will put on the duet *Dare to Wreck*, which integrates a dancer's wheelchair into the choreography, at the Fall for Dance Festival

At museums, concert halls, theaters, and bookstores this season, creative works are racing for the future. By James Tarmy

MUSEUMS

Space for Growth

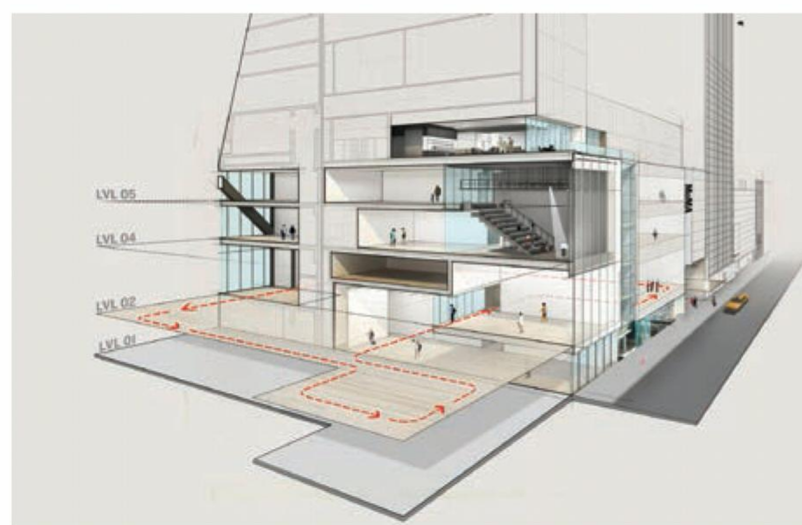
The Museum of Modern Art in New York has some of the greatest masterpieces on the planet. Until recently, though, its building wasn't up to that same standard. Setting aside the 20-minute waits on weekends to buy tickets, no matter how many people were inside, it felt like a crowd. Trying to get in front of Vincent van Gogh's *Starry Night* or Andy Warhol's *Campbell's Soup Cans* was more about sharp elbows than art appreciation.

That's set to change on Oct. 21, when the museum reopens after being shuttered for a four-month, $450 million renovation and expansion designed by Diller Scofidio + Renfro in collaboration with Gensler. "This project allows us to rethink the experience that our visitors have when they come to the museum," says Sarah Suzuki, a MoMA curator of drawings and prints who's spent the last two years coordinating the renovation. "That has both a physical manifestation–in the architecture and the way that people move through spaces–and a different approach to a visitor experience."

The lobby has been redesigned with human flow in mind. The ticket desk has been moved and a lounge area added. There are new elevators and a separate staircase to improve circulation, and 40,000 square feet of gallery space have been built, both inside the new Jean Nouvel skyscraper next door and in the area where the American Folk Art Museum used to be. Overall, the museum's exhibition space increases 30%.

Historically, MoMA's permanent collection on its second, fourth, and fifth floors was grouped by categories–painting and sculpture, drawings and prints, photography, architecture, design, and film with little overlap. Now categories will be integrated. Just as important, art from the museum's storage will regularly come and go, which ultimately allows much more to be seen. "The collection will not be permanent but one that's constantly in motion," Suzuki says. "We've committed to rotating a third of the collection floors every six months."

Before anyone gets up in arms about their favorite paintings disappearing from view, "none of us got into this business to break hearts," she says. "We actually have a relatively small list of things that we know are at the top of the must-sees." Those–*Starry Night* included–will stay up. "But," Suzuki adds, "it will have new neighbors, and it might not be in the same place you saw it last time. We're trying to make the visitor experience as rich as possible."



From top: María Freire's *Untitled*, 1954, from MoMA's collection; a cross-section of MoMA's new gallery space

"MODERN MAHARAJAH: A PATRON OF THE 1930S"
Musée des Arts Décoratifs, Paris, Sept. 26–Jan. 12

The Maharajah of Indore (1908–1961) was famous for being elegant, cosmopolitan, and very rich. After studying at the University of Oxford, he was exposed to modernists in Paris and London before acceding to his father's throne in 1926. Almost immediately, he set about constructing an au courant palace in India called Manik Bagh. Designers and artists including Eileen Gray furnished the interiors, from which some 500 objects will be on view.

"RICHARD GERSTL: INSPIRATION—LEGACY"
Leopold Museum, Vienna, Sept. 27–Jan. 20

Before Richard Gerstl committed suicide

PREVIOUS PAGE: DAVID THIBEL. THIS PAGE: COURTESY MOMA

in 1908 at age 25, he was considered a promising, if not prominent, member of Austria's expressionist movement. He became famous only after his death, and in the past century his art has influenced the likes of Georg Baselitz and Paul McCarthy. This will be the first monographic presentation of his art in Austria in 25 years.

BW PICK

"GAUGUIN PORTRAITS"
The National Gallery, London, Oct. 7–Jan. 26

Paul Gauguin's French Polynesian landscapes have been crowd-pleasers for a century, but his portraits of Europeans in his native France are less well known. Now a collection of about 50 portraits, which span his early career through his later years in the South Pacific, will go on view in the National Gallery's Sainsbury Wing.

"THE IMPRESSIONISTS AND PHOTOGRAPHY"
Thyssen-Bornemisza Museo Nacional, Madrid, Oct. 15–Jan. 26

Edgar Degas and Edouard Manet have occupied space on museum walls for so long it's easy to forget that they were once considered vanguards. As self-appointed members of the late-19th century avant-garde, these painters were eager to celebrate the new and novel, such as photography. The lens introduced ways of seeing and ways to interpret light, framing, space, and movement. The exhibition combines paintings with photographs that might have inspired them.

"BALTHAZAR: A BLACK AFRICAN KING IN MEDIEVAL AND RENAISSANCE ART"
The Getty Center, Los Angeles, Nov. 19–Feb. 16

Amid the current vogue for figurative portraiture of black subjects, the Getty is coming out with an exhibition to remind everyone that the focus has been a cornerstone of Western art for the past 600 years. The original impetus was Biblical—early medieval legend asserted that one of the three kings to pay tribute to the infant Jesus was African—though the reality of depicting black figures at a time when slavery was widespread across Europe was, for obvious reasons, less than straightforward. The Getty doesn't shy from the controversy inherent in the subject matter.

CATALINA KULCZAR

THEATER

Ugly Love

Plays on and off Broadway and in London's West End have always relied on celebrities to bring in crowds, but the fall season seems to have an unusual amount of star power. In London, Claire Foy and Matt Smith, both of Netflix's *The Crown*, will face off at the Old Vic in Duncan Macmillan's **LUNGS** *(Oct. 14–Nov. 9)*, an intimate character study of a couple grappling with a chaotic world and their own fraught relationship. (In other words, just like *The Crown* but with fewer tiaras.) At the Playhouse Theatre a few steps from the Thames, *X-Men* star James McAvoy will play the title role in **CYRANO DE BERGERAC** *(Nov. 27–Feb. 29)*, Martin Crimp's adaptation of Edmond Rostand's romantic comedy. One hitch: The play hinges on de Bergerac's ugliness, and McAvoy ... isn't ugly. Talk about range. Meanwhile in New York at Studio 54, *Weeds* star Mary-Louise Parker will lead **THE SOUND INSIDE** *(Sept. 14–Jan. 12)* as a creative writing professor at Yale who gets drawn into a complicated relationship with a student. She starred in the same role when the play opened at the Williamstown Theater Festival last summer and won raves. Talking Heads lead singer David Byrne stars in **AMERICAN UTOPIA** *(Oct. 4–Jan. 19)*, a "theatrical concert" based on his 2018 album that bears the same name. Alongside recent songs, there will be some greatest hits at the Hudson Theatre. Finally, Academy Award winner Marisa Tomei plays Serafina, a widow rediscovering love, in Tennessee Williams's **THE ROSE TATTOO** *(Sept. 19–Dec. 8)* at the American Airlines Theatre. It might not be Williams's best-known work, which means Tomei can make the role her own.

David Byrne will appear in his own theatrical concert, *American Utopia*

The Mark Morris Dance Group will perform at the Fall for Dance Festival

DANCE

Moving Geography

BLIXEN
Royal Danish Ballet, Copenhagen, Sept. 11–April 16

Company soloist Gregory Dean has choreographed a three-act dance about the author Karen Blixen set to music by Claude Debussy. Blixen, the Danish baroness who wrote *Out of Africa*, was born into a wealthy family, bounced around the world in a series of unhappy relationships, and became a literary superstar before dying from medical treatments that included mercury pills and arsenic tablets prescribed, it's suspected, for imaginary ailments.

BW PICK

FALL FOR DANCE FESTIVAL
New York City Center, New York, Oct. 1–13

There are five programs that include everything from tap dance to ballet in the 16th annual festival's lineup. Particularly anticipated is a new work by choreographer Kyle Abraham, a 2013 MacArthur fellow who has his own New York-based dance company. Abraham has created a solo work for American Ballet Theatre principal Misty Copeland, which will appear along with works from Mark Morris and Skanes Dansteater.

UNSTKAMER
Netherlands Dance Theater, The Hague, Oct. 3–Nov. 16

Since their appointment in 2002 as the company's in-house choreographers, Sol León and Paul Lightfoot have created more than 50 works of fast, gestural dance that channel classical ballet. This celebration of the company's 60th anniversary will travel to Europe's capitals.

RE-MARK
City Contemporary Dance Company, Hong Kong, Nov. 16–24

Sang Jijia, the CCDC's resident choreographer and a onetime dancer in the company, premiered this multimedia piece last year in Florence. Now he's bringing it to Hong Kong, incorporating components of the city's culture and geography.

CONGO
Theatre de la Ville, Paris, Nov. 20–23

In a new work by the influential dancer/choreographer Faustin Linyekula, Eric Vuillard's Prix Goncourt-winning novel *Congo* will be brought to life onstage. It's a synthesis of dance and theater that interrogates colonialism.

BOOKS

Life, Death, and Cooking

There are plenty of good books to curl up with as the seasons change. In the nonfiction category, those seeking creative inspiration should turn to *New Yorker* writer Calvin Tomkins's forthcoming collection, ***THE LIVES OF ARTISTS*** *(Phaidon, Sept. 25)*. It's a massive boxed set of 82 profiles that he wrote from 1962 to 2019. Equally personal, but thankfully much shorter, is ***THE UNDYING*** *(Farrar, Straus & Giroux, Sept. 17)*, a quasi-memoir by the poet and essayist Anne Boyer, which chronicles her battle with breast cancer in often harrowing detail. It's less a story of quiet inspiration and more a chronicle of rage, financial hardship, and physical torment—not for the faint of heart and yet eminently readable. For another compilation by a dazzlingly good writer, crack open the classicist-cum-contemporary commentator Daniel Mendelsohn's collection of essays, ***ECSTASY AND TERROR: FROM THE GREEKS TO GAME OF THRONES*** *(New York Review Books, Oct. 8)*. Mendelsohn has mastered a crisp, easy pace, and his criticism, while always pointed, reads more like a snapshot of the zeitgeist than a list of grievances. Patti Smith continues to mine her rich past with ***YEAR OF THE MONKEY*** *(Knopf, Sept. 24)*, a slightly more fictionalized chronicle than her two previous books. Far more limited and invariably more controversial will be former U.K. Prime Minister David Cameron's ***FOR THE RECORD*** *(Harper, Sept. 24)*, a memoir that's expected to be a justification for wreaking Brexit on the Western world. He delayed the release at least once before, but apparently, like Britain's uncoupling plans, the wait is over. If a break from reality is needed, try ***THE DUTCH HOUSE*** *(Harper, Sept. 24)*, a tale of sibling trauma and companionship by the bestselling author Ann Patchett. Alternately, there's ***THE CHEFFE*** *(Knopf, Oct. 29)*, a triumphant chronicle of a star female chef told from the point of view of her former assistant, by the Booker Prize-nominated writer Marie NDiaye. Think *Kitchen Confidential* with more ambition and drama. And for a bit of dreaminess, try ***LAMPEDUSA*** *(Farrar, Straus & Giroux, Sept. 17)* by Steven Price, a novel that follows the real-life Italian prince Giuseppe Tomasi as he tries to finish his first and last novel, *The Leopard*. Aside from writer's block, the prince, stuck in a sunny, aristocratic Sicily, is facing down his imminent death.

A scene from *Porgy and Bess*, opening the season at the Met Opera in New York

MUSIC

A Monumental Intimacy

LONDON SYMPHONY ORCHESTRA SEASON OPENING
Barbican Hall, London, Sept. 14

The LSO starts things off with a bang with a world premiere by British composer Emily Howard, conducted by the orchestra's music director, Simon Rattle. The rest of the evening also consists of music by English composers—Colin Matthews's *Violin Concerto* and the late William Walton's sweeping four-movement *Symphony No. 1* from 1935.

PORGY AND BESS
Metropolitan Opera, New York, Sept. 23–Feb. 1

George and Ira Gershwin's 1935 opera, which is filled with now-famous songs (*Summertime* might be the English language's most popular operatic tune of all time), will be performed on the Met stage for the first time in almost 30 years. Bass-baritone Eric Owens and soprano Angel Blue lead the cast in a season-opening production co-produced with the Dutch National Opera and the English National Opera.

BEETHOVEN'S *SYMPHONY NO. 1* AND *SYMPHONY NO. 3*
Chicago Symphony Orchestra, Chicago, Sept. 26-28

In honor of Beethoven's 250th birthday, the CSO will perform all nine of the composer's symphonies as part of a season-long celebration. Conductor Riccardo Muti will begin with the first and third symphonies. In the following weeks and months, stars including Anne-Sophie Mutter, Mitsuko Uchida, and András Schiff will play pieces from the canon in a rousing program delivered by an orchestra famed for its smooth, virtuosic execution.

BW PICK

TRIFONOV AND BABAYAN IN RECITAL
Carnegie Hall, New York, Oct. 16

Daniil Trifonov, 28, is one of the hottest pianists on the recital scene; Sergei Babayan—a generation older—is a fixture in the world's most prestigious concert halls and, not coincidentally, Trifonov's former teacher. To call reviews of their 2018 joint recital at Carnegie Hall "ecstatic" would be underselling it. Now they're returning as part of the celebrated "Keyboard Virtuosos" series, a seven-month program that includes some of the world's best pianists. The duo will play works by Prokofiev, Rachmaninoff, and Ravel.

MADONNA: MADAME X TOUR
BAM, Brooklyn, N.Y., Sept. 17–Oct. 12

Traditionally, Madonna concerts have been all about spectacle—lights, pyrotechnics, massive disco balls. Her concert series at BAM celebrating the release of her album *Madame X* will be a more modest affair. The album—a collection of 15 songs influenced by Lisbon, where she mostly resides now—will make its debut in a so-called theater tour. In the announcement video, Madonna explains why: "I want to have an intimate experience with my fans," she says, sharing a margarita with DJ Diplo.

PREVIOUS PAGE: STEPHANIE BERGER. THIS PAGE: TRISTRAM KENTON

ARTISTS

Billionaires Are Begging To Buy This Art. Too Bad

Although she resisted it, Vija Celmins has reached the pinnacle of the art market. By James Tarmy

Jeff Koons, Gerhard Richter, and David Hockney are household names with prices to match. The artist Vija Celmins commands similar prices from a lofty collector base; Henry Kravis, J. Tomilson Hill, and Mitchell and Emily Rales own work by Celmins, as do corporate collections such as those of JPMorgan Chase & Co. and the Cartier Foundation. But in contrast with her peers, you might see her name and ask, "Who?"

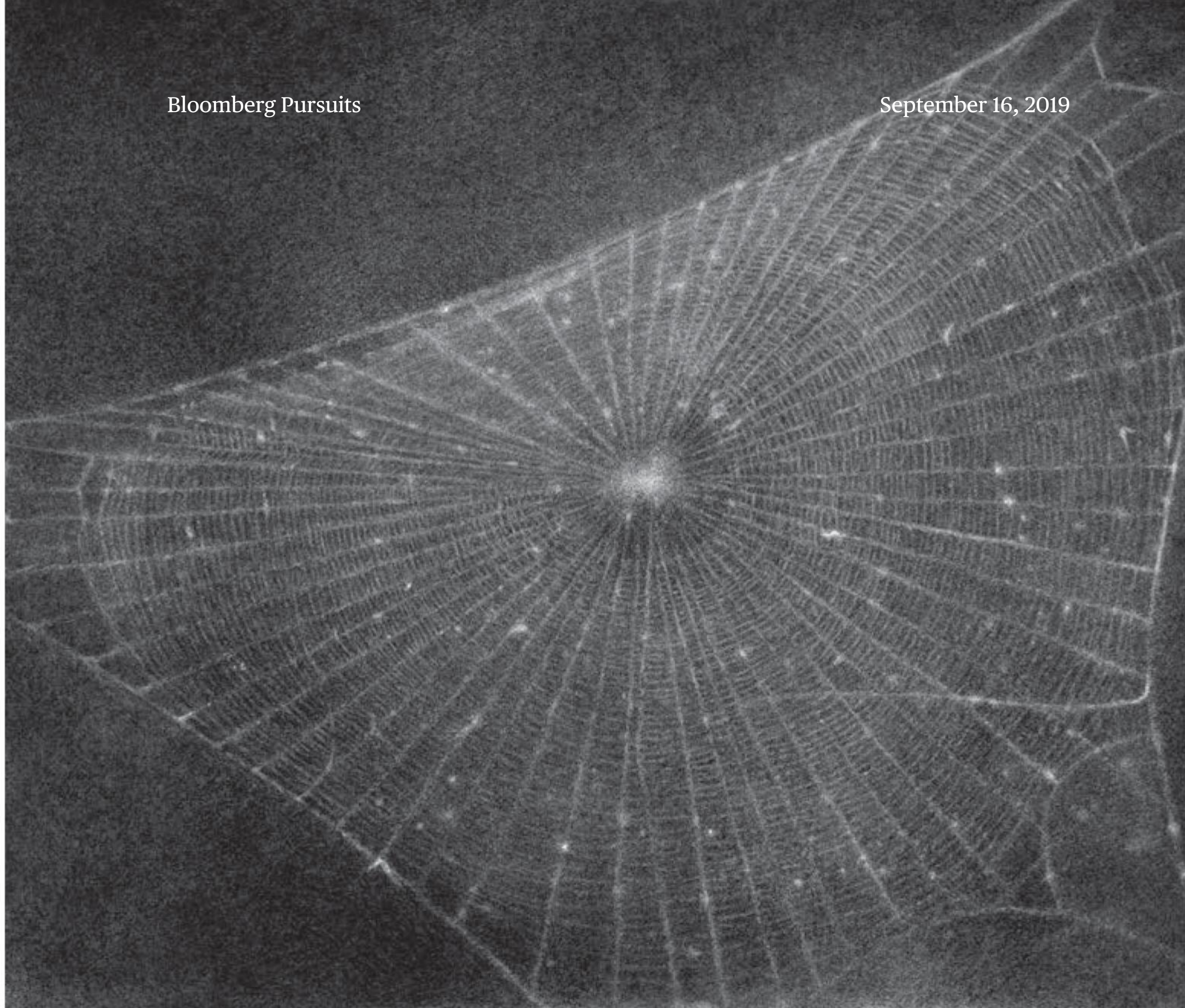
"I'm not speaking in any kind of pejorative way, but I've always thought of Vija as a niche artist," says Laurence Shopmaker, co-founder of Senior & Shopmaker Gallery in New York, which will exhibit a group of Celmins's prints from Sept. 12 to Nov. 2.

That might change after the Met Breuer opens its fall season on Sept. 24 with a 120-object retrospective of her work, the first in more than 25 years. The show, which features many of Celmins's hyperrealistic drawings, was initially on view in San Francisco and Toronto, where it was met with uniformly positive acclaim. ("Why is this genius artist only now getting a show worthy of her art?" gushed the *Washington Post*.) Its reception in New York is expected to be similarly rapturous.

"She's always been recognized as a fantastic artist," says Met curator Ian Alteveer, "someone curators and critics and artists and a certain group of collectors have loved." Her paintings sell for upwards of $5 million and drawings for about $1 million, placing Celmins, who's now 80, at the very top of the contemporary art world and the top of the art market generally. In November one of her drawings, *Untitled (Long Ocean #5)*, from 1972 will come to auction at Christie's, carrying a high estimate of $2 million.

Her success flies in the face of conventional wisdom about the art business, which holds that to create a sustainable market, hypersuccessful artists need the trifecta of institutional, art dealer, and auction house support, all of which play off one another. Instead, Celmins's career offers a rare example of an artist's prices growing even as her process challenges all three branches of the art world.

© VIJA CELMINS, COURTESY THE ARTIST AND MATTHEW MARKS GALLERY. PHOTO: COURTESY MCKEE GALLERY



Graphite on paper by Celmins, from left: *Untitled (Big Sea #1)*, 1969; *Clouds*, 1968; *Untitled (Web #1)*, 1998

Because of Celmins's time-intensive practices, her output is very low. For a gallery and collectors, "the problem is getting the work," says Renee McKee. "She was also not that interested in working on museum shows. They always interrupted her work." Along with her husband, David, McKee spent more than 30 years building Celmins's market through their New York gallery. On the secondary market, where the artist and her dealers have less control over what comes up for sale, Celmins's art is nearly impossible to buy—again, a volume issue. Just two noneditioned works, including a 19-inch graphite-on-paper depiction of the night sky that sold for $2.4 million, have come up for sale in the past 12 months.

The simplest explanation for Celmins's success is the art itself. "It's super detail-oriented, and it's super precise," says the Met's Alteveer. After beginning her career painting realistic, life-size depictions of the objects in her studio, Celmins moved to painting World War II planes. Then, "in 1968 she decides to leave paint altogether and for the next 10 years only used graphite," Alteveer says.

Soon after her switch, she began to make her ocean series, ethereal and spectacularly detailed drawings of photographs of the water's surface. This work became arguably her most famous. "Carefully, sometimes over three months, she would redescribe [on paper] what she sees in the photo," Alteveer says. She never used an eraser with this series; if she erred, she tossed out the piece and began again. Along with the oceans was a series of desert drawings and another of constellations. In the 1980s, Celmins began to paint again—the oceans and deserts were rendered in oil—and she began a series of the night sky; the paintings were often created with as many as 20 layers.

"It's very labor-intensive," McKee says, having seen the artist at work. "She paints, then scrapes it off, then paints it again. It's layer upon layer until she's happy with it."

"She's actually quite quick," she continues. "She just doesn't like what she comes up with, and then she has to start all over again." Thus, Celmins's collectors often have to wait years before they have a chance to acquire an original work. (Her current gallery, Matthew Marks, declined to comment on the existence of a waiting list.)

"Her collector base grew from the initial people who were interested to other people who saw her museum shows and wanted a work in their collection," says McKee—because that's how the trifecta is supposed to work. But even as demand built, Celmins resisted price hikes. "It was always as difficult to get her to release her work as it was to get her to raise her prices. That's Vija."

Eventually, though, prices did rise. "We tried not to sell to speculators or people who really didn't understand who they were buying," McKee says. "They had to be serious clients." Today that clientele, by dint of cost, is almost exclusively very wealthy collectors. The McKees closed their gallery in 2015, and Celmins went to Marks, at which point her prices continued to soar.

Not that it matters much to the artist, McKee says, "but she's not unaware of it." Instead, Celmins has "tried to keep her sense of integrity and belief in the art that she's creating," McKee says. The marketing and selling are the purview of her dealers.

"Of course there was a lot of advocacy" on her behalf, she says. "Everyone who came into the gallery, all of the art fairs we did, we'd talk about her. [A market] doesn't happen by itself." B

AUCTIONS

A New Master At Sotheby's

Will going private mean big changes at the storied auction house?
By Katya Kazakina

Drahi

On Sept. 5 shareholders of publicly traded Sotheby's approved a $3.7 billion acquisition offer from French telecommunications tycoon Patrick Drahi. Come this November during the auctions in New York, clients bidding on treasures like Claude Monet's *Charing Cross Bridge* will likely be raising their paddles inside the halls of a private company.

While the news sent shock waves through the art world, Drahi, not known as a major collector, declined to speak publicly.

Art lore says that the public Sotheby's was long at a disadvantage to the more nimble and risk-tolerant Christie's, which is owned by French billionaire François Pinault. Christie's doesn't have to answer to shareholders and isn't punished by stock declines. There's also the presumption that Pinault's deep pockets allow it to offer far higher guarantees—which effectively ensure that the consignors will be paid a certain amount, giving the house another leg up.

But even as Sotheby's evolves, clients of the 275-year-old auction house—collectors and dealers who buy and sell Picassos and Warhols, Chinese porcelain and $437,500 Nike sneakers—predict business as usual.

"Sotheby's going private, I don't see that it would have that much of an impact on most people," says Morgan Long, senior director at the Fine Art Group Ltd., a regular client. "I don't find on the consignment side or the buy side that there's much difference between Sotheby's and Christie's."

"There was always this perception that being public hampered our ability to do business," says Scott Nussbaum, who left Sotheby's in 2015 after 13 years to join Phillips, a boutique auction house owned by Russia's Mercury Group. "Now that I work for a private company, I am not sure that's true."

Nonetheless, Sotheby's going private is important for the art market, where it and Christie's accounted for 46% of $29 billion in global auction sales in 2018, according to a UBS report. Clients are watching to see if Sotheby's will attract more rainmakers and reduce its red tape.

"It's bullish for the market," says collector and dealer Adam Lindemann. "People from the outside will take the art market forward. It can't be just musical chairs between [gallery owners] Larry Gagosian, Hauser & Wirth, and David Zwirner."

Sellers make choices between houses, in part, based on which team can maximize the value of an object and offer better financial terms, says art adviser Gabriela Palmieri, a former Sotheby's specialist. For buyers, the house they choose hinges on the quality of artworks—and such practicalities as more favorable payment plans and efficient shipping.

Emotions also play a role in whether a client chooses Sotheby's or Christie's or Phillips. Long, of the Fine Art Group, says one of her clients only works with Christie's because his father had a long-term professional relationship with a specialist there. That doesn't change with corporate ownership.

Then there's the optics, which, given that the art world is built on perception, is no small thing. "For many years we thought that Christie's was doing better than Sotheby's, but we didn't really know," says Barbara Bertozzi Castelli, owner of Castelli Gallery in New York. "Maybe they were losing money."

Pinault understands and accepts the risks and rewards of owning Christie's, says Paul Gray, who's bought works on behalf of clients including hedge fund manager Ken Griffin. "That definitely gives them an edge in guaranteeing works at speculatively high levels," he says. "We've seen this strength come back to haunt them, and the house has ended up with some really major buy-ins of guaranteed material with writedown sales afterwards." That is, if a work fails to sell, Christie's (or Pinault) has to purchase it at the guaranteed price.

Sotheby's, until now, was a different story. Losing money on a guaranteed artwork, which would have to be disclosed, often contributed to disappointing quarterly results. Shares would nosedive, which in turn could make management more reluctant to offer lucrative deals to future sellers of the most prized works. This dynamic will now change, but as a result the functions of a huge chunk of the market will be hidden from view.

Drahi, who's worth $10.7 billion, hasn't disclosed his vision for Sotheby's. His 2016 acquisition of Cablevision from the billionaire Dolan family was followed by cost-cutting of jobs and programming, according to a lawsuit filed last year by the Dolans against Drahi's telecommunications giant, Altice Europe NV. The parties settled in August.

Whatever lies in store for Sotheby's, Drahi isn't spending the money "to leave it as it is," says Alberto Mugrabi, whose family is among the most ubiquitous buyers and sellers at auction. Technology is expected to be part of the new management's focus given Drahi's role as president of Altice. "He has new ways of seeing things," Mugrabi says. "The new owners will give me more options how to sell my art."

Come November, whatever the outcome for the Monet, estimated at $20 million to $30 million, employees won't have to worry about satisfying shareholders. "They would need to report to one person, and one person only," Long says.

BRUNO LEVY/REDUX

THE ONE

Steel Magnolia

A show of small-scale sculptures expands the legacy of John Chamberlain
Photograph by Kyoko Hamada

Abstract expressionist John Chamberlain took the gestural force of Jackson Pollock's paintings and rendered it in three dimensions. His most famous sculptures—mammoth car doors and hoods bent and crushed into submission—are almost by definition grandiose and heroic: the artist inflicting his physicality on inanimate objects.

So it may come as a surprise that in the late 1980s Chamberlain made smaller sculptures, some no bigger than a foot tall, as part of a series he called "Baby Tycoons." In pieces such as *Winter Philodendron* from 1992 ($650,000), the gesture of the artist's hand in miniature becomes something more delicate and engrossing.

THE FIELD

- Alexander Calder's tabletop sculptures regularly come to auction with estimates of as low as $300,000.
- Mark di Suvero has a thriving practice of making more manageable objects than his towering I-beam structures often seen in corporate plazas. A 31-inch-high steel sculpture from 1991 sold at Christie's New York for $62,500 in 2017.
- A 30-inch-high 1959 work by David Smith sold at Christie's New York in May for $615,000.

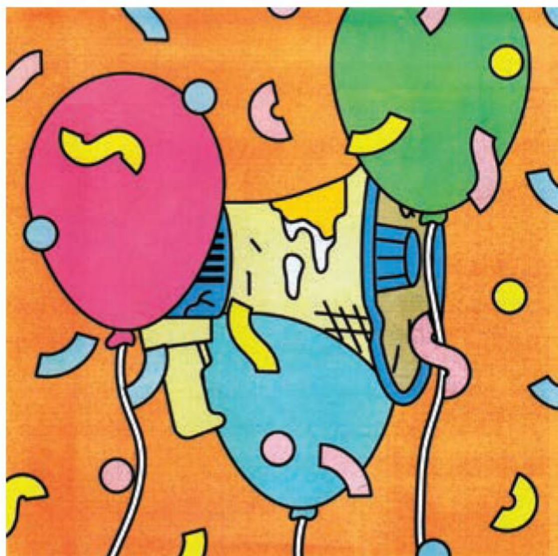
THE CASE

Winter Philodendron is made from painted and chromium-plated steel. The piece has never been exhibited or sold. In May, Hauser & Wirth announced it would represent Chamberlain's estate; this exhibition of "Baby Tycoons," which opened on Sept. 5 at the gallery's East 69th Street space in New York, is a prelude to a bigger show next year. *$650,000; hauserwirth.com*

At just over 10 inches high and 14 inches wide, the sculpture is a little larger than a basketball

The Poet Whose Lawsuit Couldn't Stop the Party

By Joe Nocera



Abiodun Oyewole v. Rita Ora et al.

Case # 1:16-cv-01912

● In case you're curious, here's an excerpt of the lyrics from *How We Do (Party)*: "I wanna party and bullshit…// 'Cause when the sun sets baby / On the avenue / I get that drunk sex feeling / Yeah, when I'm with you / So put your arms around me, baby / We're tearing up the town / 'Cause that's just how we do."

● Christopher Wallace, aka the Notorious B.I.G., was given a songwriting credit on Ora's single. So was Motown Records founder Berry Gordy Jr. Each was among the 14 co-defendants named in Oyewole's suit, alongside the Roc Nation music label and several music publishing companies.

ILLUSTRATION BY GEORGE WYLESOL

❶ THE ORIGIN In 1968, Abiodun Oyewole, one of three members of The Last Poets, wrote a poem called "When the Revolution Comes." Chanted raplike to the beat of a congo drum, it's an angry work predicting that one day "blood will run through the streets of Harlem." It also laments that, before that moment, too many black people will "party and bullshit."

❷ THE SUIT Fast-forward to 2016: Oyewole hears the song *How We Do (Party)*, from singer Rita Ora's 2012 debut studio album, *Ora*. The song opens with the repeated phrase "party and bullshit." Oyewole already knew that Notorious B.I.G. had written a rap song titled *Party and Bullshit* in 1992. Angered by Ora's use of the phrase, he sues Ora, B.I.G.'s estate, and various related entities for copyright infringement.

❸ THE TRIAL There was no trial. There weren't even any oral arguments. In March 2018, U.S. District Court Judge Allison Nathan granted the defendants' motion to dismiss. She did so in an interesting way, ignoring a classic music industry argument–i.e., that Oyewole's poem and the later songs weren't substantially similar–and relying instead on fair use doctrine, often used to defend the use of similar words or plots in journalism or literature.

❹ THE TWIST Oyewole's core complaint had been that Ora and B.I.G. didn't just borrow the phrase "party and bullshit," they used it to suggest fun, in "contravention" of Oyewole's desire to "encourage people NOT to waste time with party and bullshit." That's what doomed him: One of the factors in determining whether the use of someone else's words is "fair" or not is whether the new work is "transformative." Because Ora's and Biggie's use of "party and bullshit" was the opposite of Oyewole's, the judge ruled, what they did was legal. On Sept. 4, the Court of Appeals for the Second Circuit affirmed that Nathan had issued "a thorough and well-reasoned opinion." The likelihood that Oyewole will appeal to the Supreme Court seems, er, slim. Ⓑ —*Nocera is a business columnist for Bloomberg Opinion*

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