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IS YOUR PORTFOLIO ACTUALLY WINNING IN A WINNING MARKET?



Fifty years of index investing have underscored that compounding is the most powerful force in investing. If markets rise, returns stack up more quickly with each passing year. But the key is to diversify across stocks. In this world of double-digit returns, picking single-stock winners should be

simple. But investing in individual equities is a risk, no matter how fast the bulls are running. Daniel Prince, Head of iShares U.S. Wealth Advisory Product Consulting at BlackRock, talks about the power of diversification through indexing.

Markets have been on a tear. When stocks are doing so well, why even worry about diversification?

It's always the right time to be a good steward of your portfolio, and it's never the right time to ignore the tenets of portfolio construction. The markets are doing well, but the perception that a rising tide lifts all boats is a fallacy. There are still individual winners and losers. But those invested in the whole market may be rewarded for being diversified.

"The markets are doing well, but the perception that a rising tide lifts all boats is a fallacy."



Doesn't avoiding single stocks cap your upside?

It comes down to intention. If you're trying to hit a home run, you can buy individual stocks. If you're trying to grow your portfolio at a rate greater than inflation, and if you subscribe to the idea that, over the long term, equities generally provide a higher return than bonds, you will likely need to diversify to get to that level.

As an investor, you want to be compensated for the risk you're exposed to. That means you want to be aware of any stock-specific risk when building an asset allocation.

Tech stocks have really driven the recent returns in equities markets. Doesn't owning the whole market mean owning too much tech?

With market-cap weighting, it's a reflection of what's happening in the world. So while tech might make up a larger portion of the market, it doesn't necessarily mean it's too much exposure. We need to dispel that myth. It's representing all investors' active decisions, not driving behavior. Really, these are just big companies producing big revenues and playing an important role in our society.

iShares Core ETFs offer access to global investments. Should investors be looking beyond the U.S. this year?

Investors in general have been chronically underweight international for the past five years, but they've been rewarded because the U.S. has outpaced those markets. However, if you believe in a global recovery post-pandemic, then it may make sense to increase allocation to international markets. We're not talking about going back and overweighting, mind you. We're talking about letting the market drive so you can pursue your long-term investing goals. That's the key to diversification.

When the stock market is doing so well, does that inevitably lead to a large tax bill?

It doesn't have to. Because of their passive nature, ETFs generally distribute fewer capital gains. That typically creates less turnover, leading to less taxable events within the fund. That helps make iShares U.S. Core equity ETFs tax efficient, and it's what lets investors keep more of what they've earned.

Carefully consider the Funds' Investment objectives, risk factors, and charges and expenses before investing. This and other information can be found in the Funds' prospectuses or, if available, the summary prospectuses which may be obtained by visiting www.iShares.com or www.blackrock.com. Read the prospectus carefully before investing.

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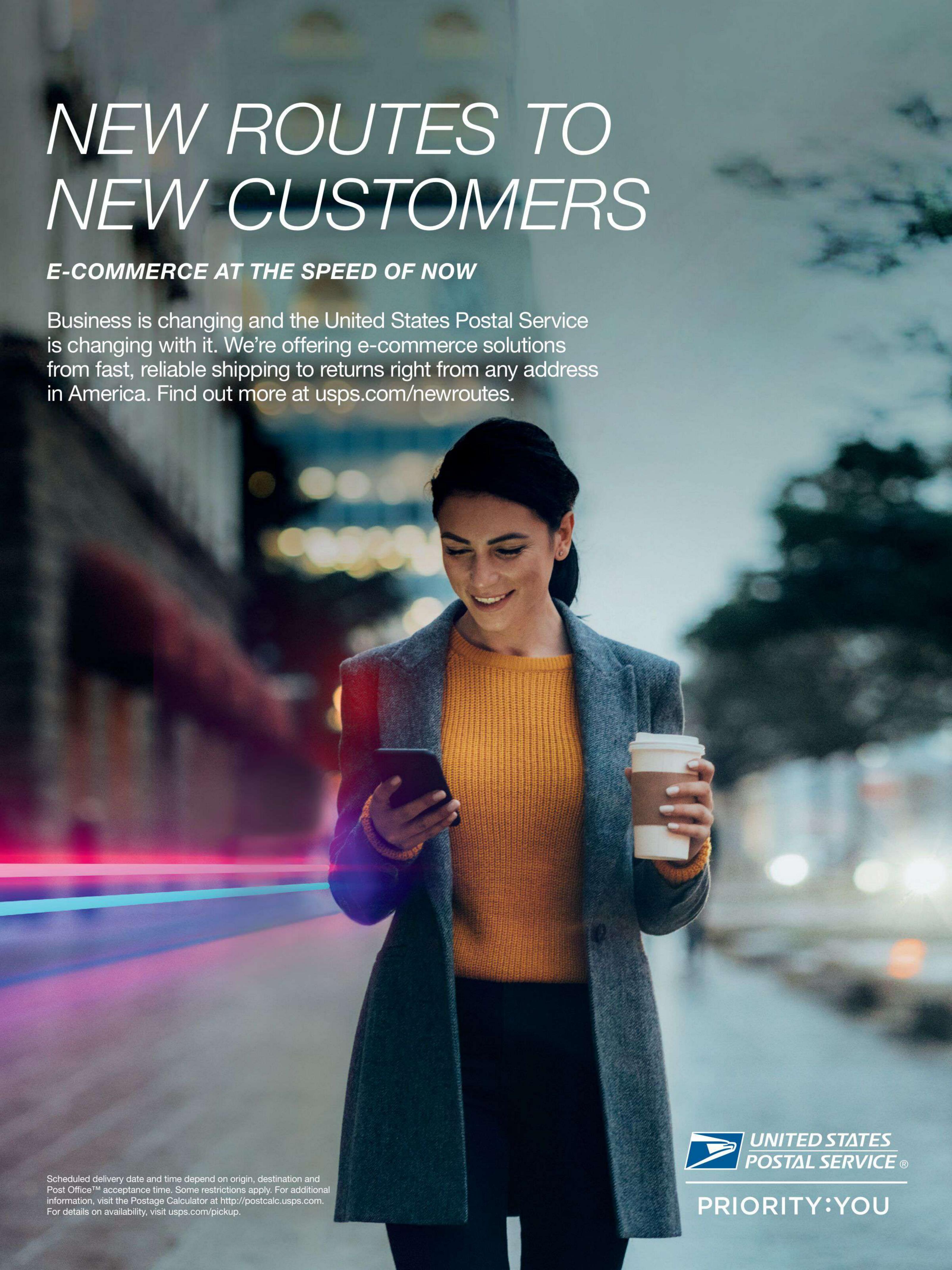


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Bloomberg Businessweek



Clayton Phipps helped popularize fossil-hunting, though some paleontologists have mixed feelings

about that

FEATURES

An Exclusive Excerpt From *The Contrarian*How venture capitalist Peter Thiel gamed tech, Trump, and taxes

Hunting the Next \$32 Million T. Rex
With fossils a hot new asset class, the Dinosaur Cowboy keeps digging

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EDITORIAL 212 617-8120 ● AD SALES 212 617-2900, 731 Lexington Ave. New York, NY 10022 ● EMAIL bwreader@bloomberg.net ● FAX 212 617-9065 ● SUBSCRIPTION CUSTOMER SERVICE URL businessweekmag.com/service ● REPRINTS/PERMISSIONS 800 290-5460 x100 or email businessweekreprints@theygsgroup.com ● Letters to the Editor can be sent by email, fax, or regular mail. They should include the sender's address, phone number(s), and email address if available. Connections with the subject of the letter should be disclosed. We reserve the right to edit for sense, style, and space ● Follow us on social media ▶ FACEBOOK facebook.com/bloombergbusinessweek/ ▶TWITTER @BW ▶ INSTAGRAM @businessweek

COVER TRAIL

How the cover gets made



"So this week's cover is an excerpt from a new book about Peter Thiel."

"What company did he start again? Hooli?"

"Remind me how long you've worked at a business magazine? He co-founded PayPal."

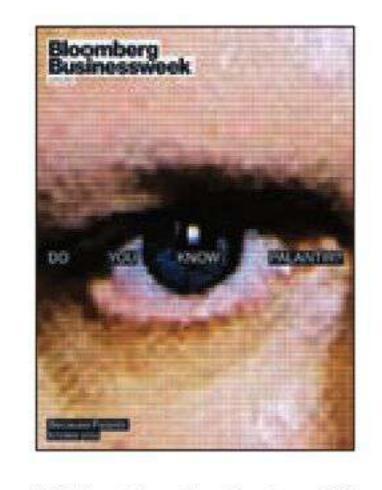
"Oh, yeah! And then he got into some scary surveillance tech stuff?"

"Palantir, yeah. And don't forget, he went full Trump—and also gamed the IRS to fatten his retirement account."

"Wow. About time someone wrote this book about him! So let's do something with a photo of him?"

"Do you think he's recognizable enough?"

"I mean, we put him on the cover before..."

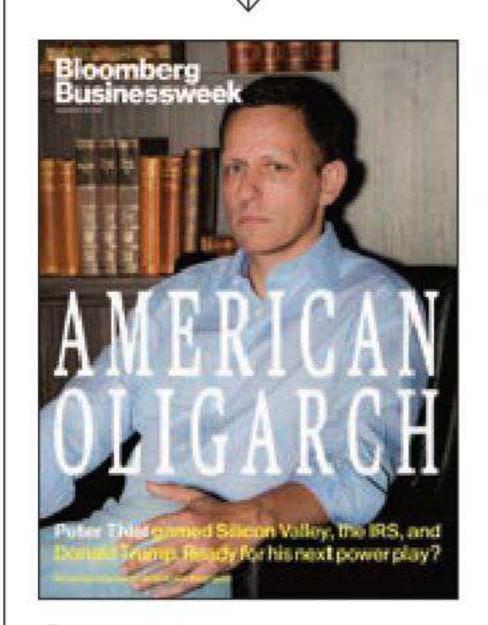


"Oh, that's Peter??
I thought it was just a creepy eye."

"We can zoom out a little more this time."

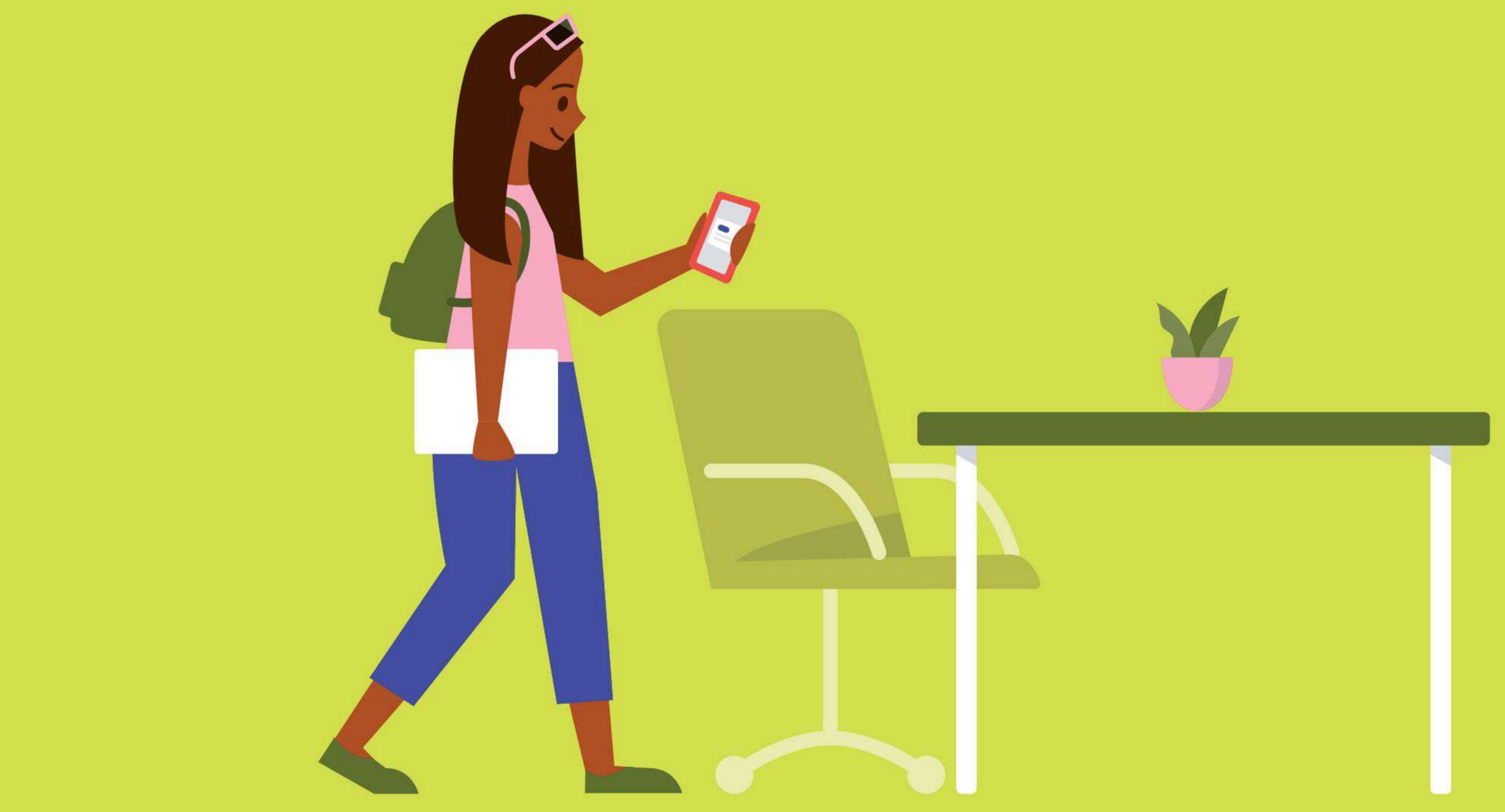
"Good thinking."

"And I can't wait to read this book!"



Cover: Damien Maloney/Redux Pictures

Re-do desks



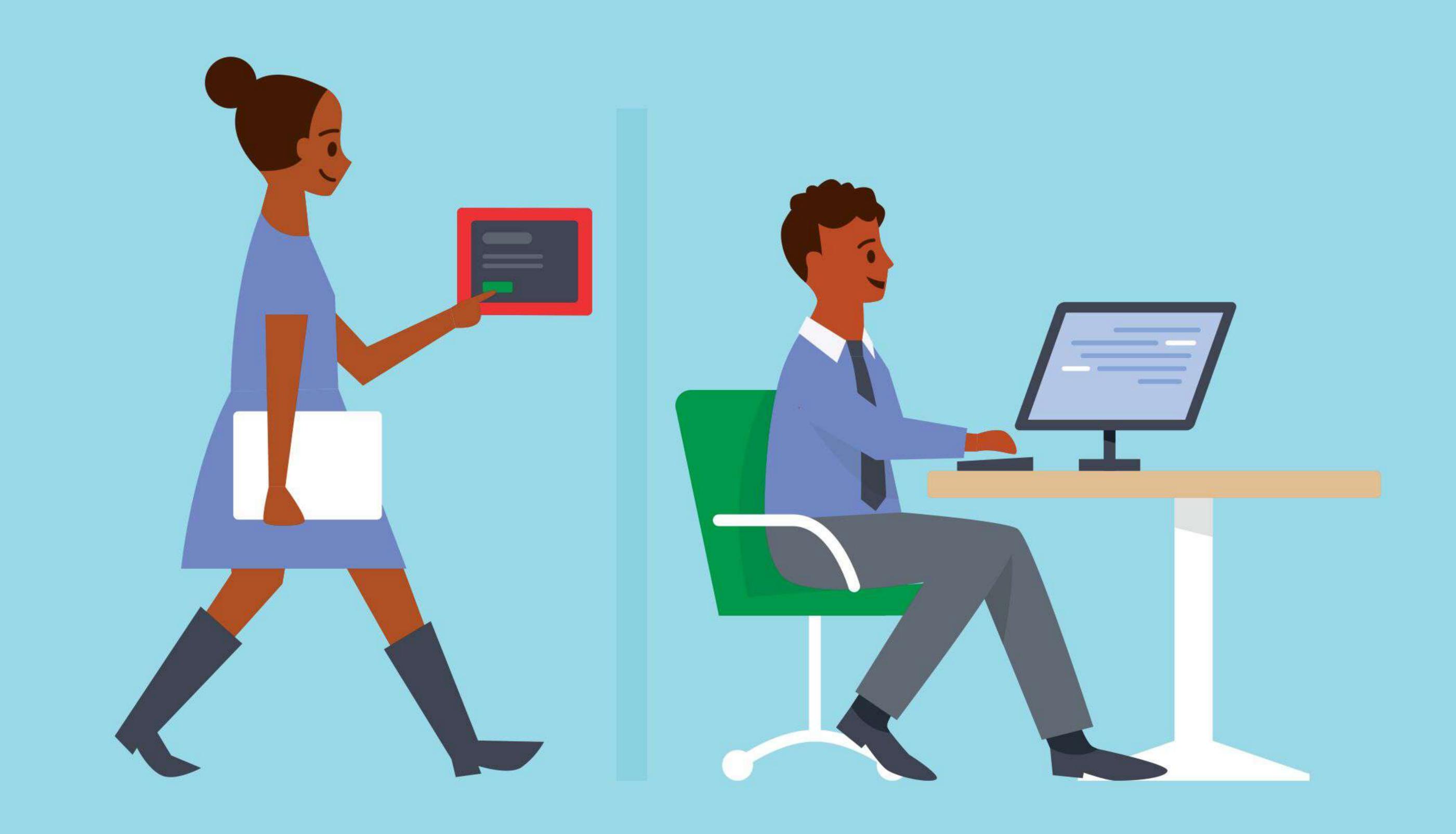
E Envoy

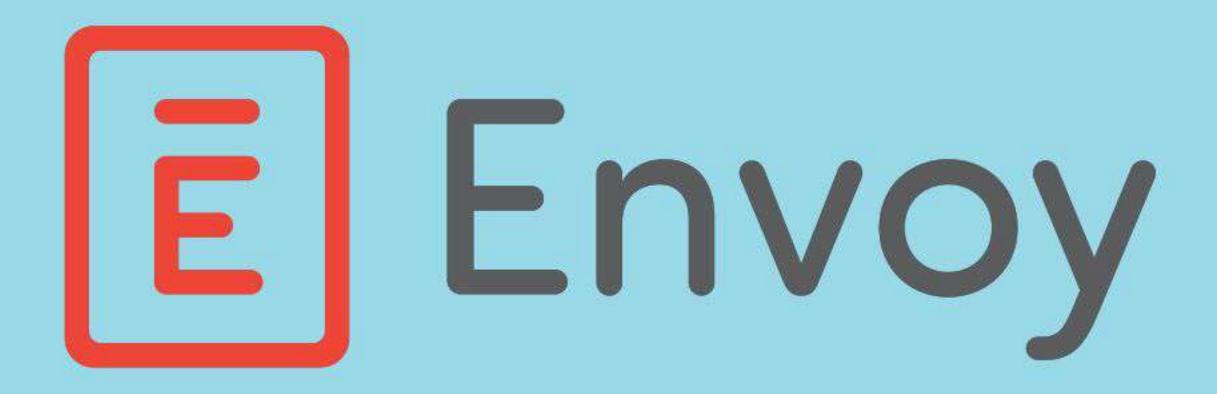
Make hybrid work

In an Envoy workplace, you can sit where you like and like where you sit.

Desks Rooms Visitors Deliveries Mobile Protect

Reserve rooms



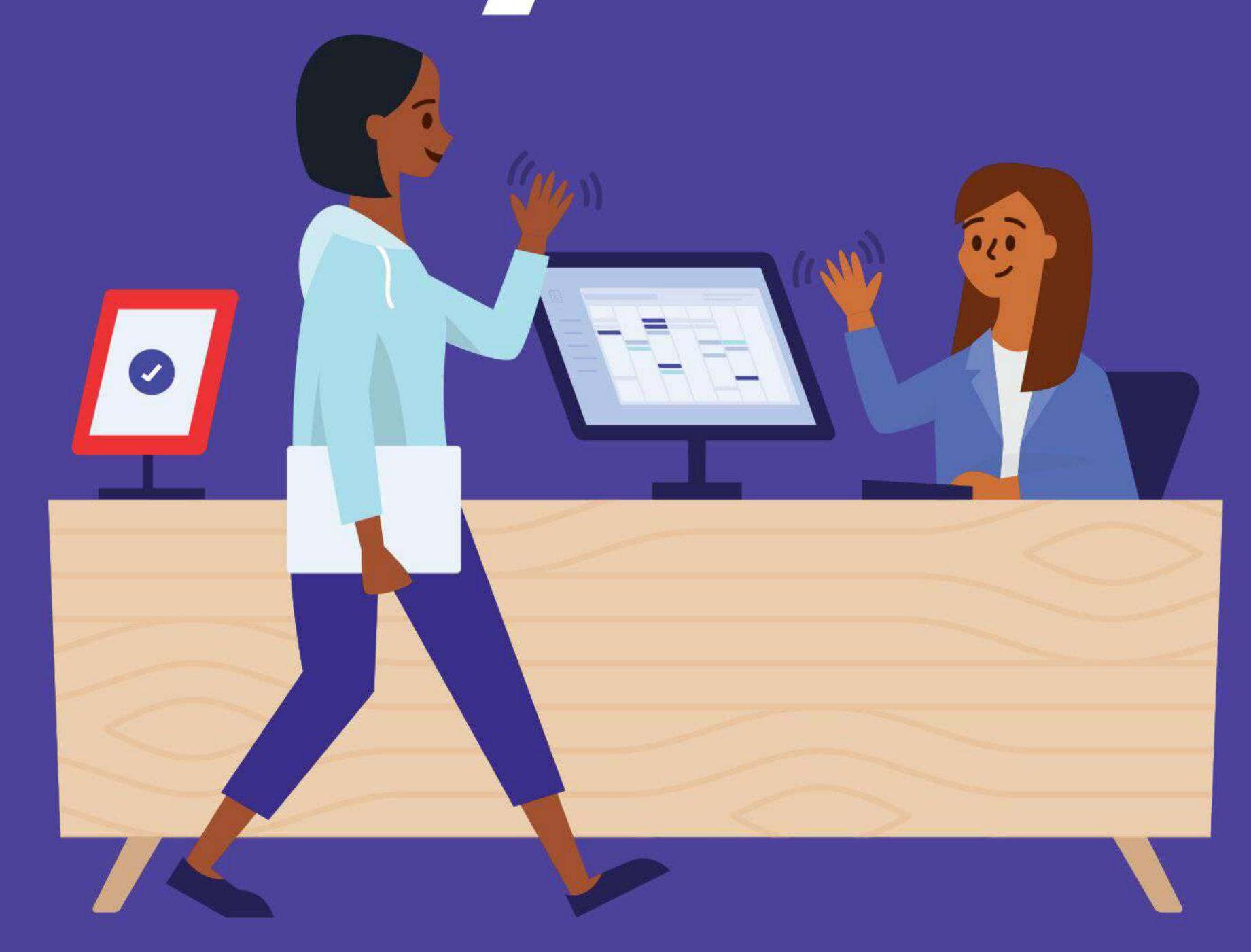


Make hybrid work

In an Envoy workplace, there's no such thing as wasted space. Make yours do more.

Desks Rooms Visitors Deliveries Mobile Protect

Reassess safety



Envoy

Make hybrid work

In an Envoy workplace, employee happiness and safety go hand in hand.

Desks Rooms Visitors Deliveries Mobile Protect

Rework

Envoy

Make hybrid work

Don't just come back, come back to better. Envoy's people-centric platform helps you create a workplace people love — all from a single dashboard.

Desks | Rooms | Visitors | Deliveries | Mobile | Protect

INBRIEF

 Worldwide, coronavirus cases have exceeded 226 million, almost

people have died, and more than 5.8 billion vaccine doses have been given. The U.K., which dropped most social distancing rules after a huge vaccination drive, will offer shots to all children 12 and older to minimize school disruptions.

Democrats in the House proposed lifting the top U.S. corporate tax rate from 21% to 26.5%.

The proposal is slightly below what President Joe Biden recommended, but it would still raise revenue by \$2.1 trillion over 10 years.

 Macau's top gaming stocks lost a record \$18.4 billion in combined market value on Sept. 15 after China said it would tighten supervision and review shareholdings of the casinos in the enclave, the world's biggest gambling hub.

In what could signal one of China's biggest debt restructurings, the government in Beijing has stepped in to examine the deepening financial crisis at property developer Evergrande, which has liabilities of about



 Representative Alexandria Ocasio-Cortez of New York made a bold Brother Vellies bearing her signature message: "Tax the rich."

A fire at a converter station in Kent shut down a major cable that brings electricity to **England from** France.

The Sept. 15 incident will likely cause disruptions for at least a month, further straining power supplies in the U.K., where prices are already at record highs.

 In its largest deal to date, Intuit, the maker of TurboTax and QuickBooks software, agreed to buy Mailchimp, a privately held email marketing company, for

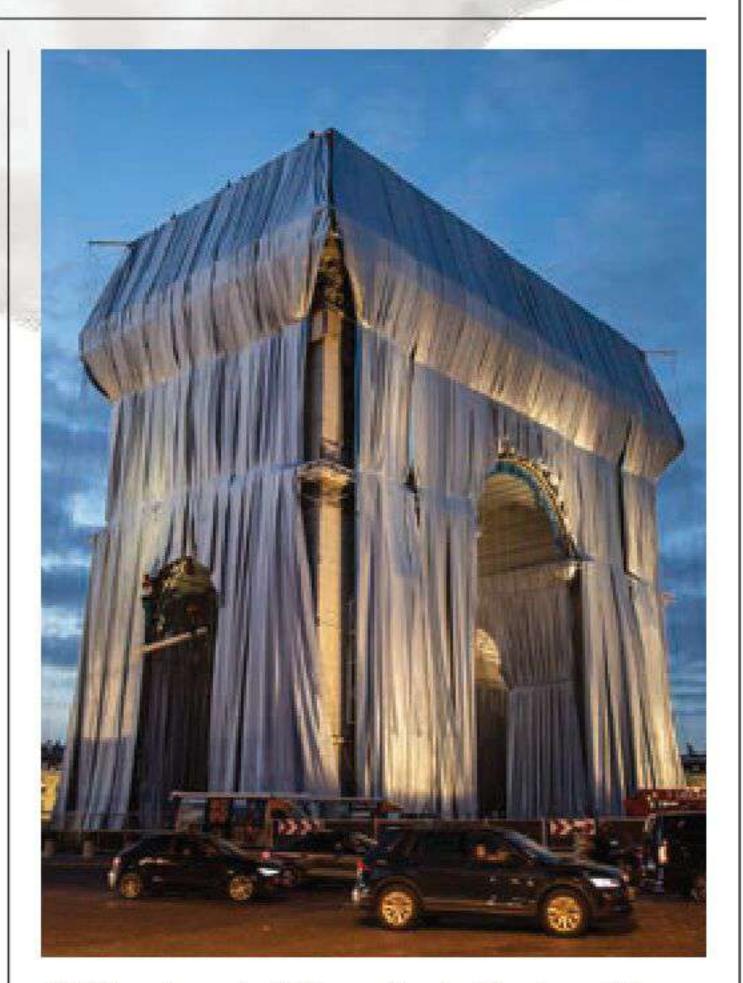


statement at the opulent Met Gala on Sept. 13, wearing a gown designed by

The price of aluminum hit

• "We inherited a deadine. We did not inherit a plan.

\$3,000 a ton in London on Sept. 13, its highest level since 2008. The metal has gained almost 50% this year as the global economic recovery spurs demand.



 The Arc de Triomphe in Paris will be wrapped in silvery fabric and red rope until Oct. 3. Husband and wife artists Christo and Jeanne-Claude conceived the installation decades ago, though neither lived to see its fulfillment.

U.S. Secretary of State Antony Blinken faced an intense grilling during more than five hours of testimony before the House Foreign Affairs Committee on Sept. 13 over the Biden administration's withdrawal from Afghanistan. ≥ 41

It's Time, Fed: Start Winding Down the Covid Bond-Buying

At the Federal Reserve's next policy meeting, Sept. 21-22, officials will resume their debate about when and how to taper their Covid-related bond-buying program. Signs of a slowing economy because of the resurgent pandemic have complicated matters—especially when it comes to explaining the policy to investors—but the basic calculation hasn't changed. Neither the recent setbacks nor more-moderate-than-expected inflation figures released on Sept. 14 should deflect the Fed from beginning to taper promptly and from planning to end the program by the spring.

The Fed has said it wants to see "substantial" progress on jobs and inflation before dialing back its \$120 billion a month of bond purchases. Its medium-term goal for inflation is to slightly exceed (by an unspecified amount and for an unspecified period) the central bank's long-term 2% target. The benchmark for jobs is "maximum employment." At its last policy meeting, Fed Chair Jerome Powell said inflation, now running at 3.6% according to the central bank's preferred measure, had ticked that box. Jobs, however, still had a ways to go. Then came the employment figures for August—an increase of only 235,000, against an expected 733,000, making an early announcement on tapering harder to justify.

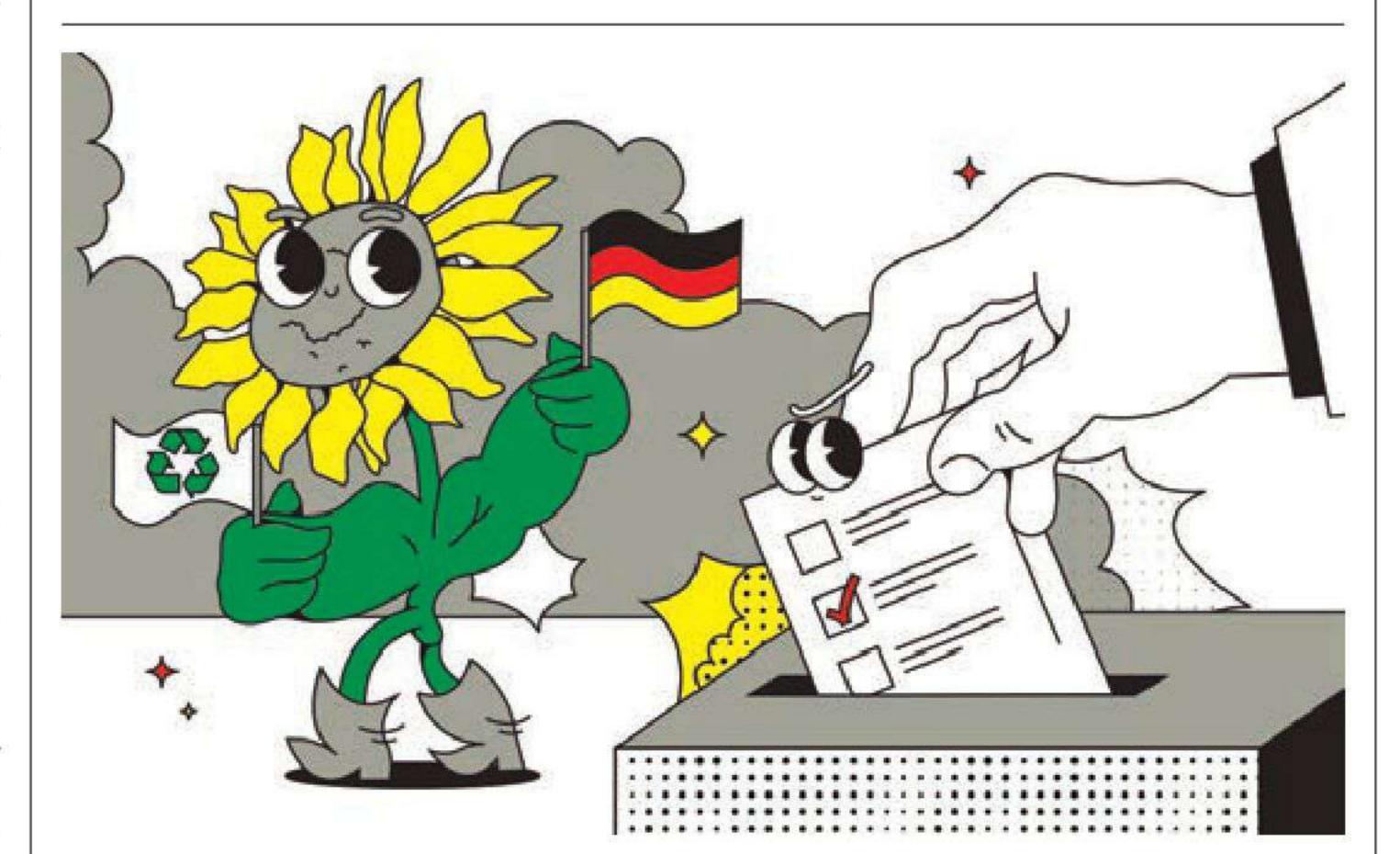
Powell and his colleagues need to keep several points in mind. It's right to be guided by data, but a strategy for adjusting bond purchases gradually over a period of many months should be driven by trends and not by a single month's figures. On that basis, regardless of August's jobs report, the labor market has seen very substantial progress toward full employment. Granted, the unemployment rate is still a bit higher than before the pandemic, and labor force participation lower (perhaps because early retirement has taken some workers out of the labor force for good). But other measures, such as job openings, suggest a labor market that's already unusually tight.

The pandemic setback might well mean slower-thanexpected growth this quarter and next, but supply-side bottlenecks are likely to be a bigger factor than shrinking demand. If so, the Fed's maximally accommodative monetary policy isn't the right remedy. It gambles with pushing inflation higher in the short term, and it will add to financial-market fragility by keeping asset prices dangerously elevated and spurring the appetite for risk.

The crucial point is that the Fed now has to contend with two dangers, not one. The first is that the economy might stall and need renewed demand-side support; the other is that elevated inflation will persist and prove difficult to reverse. Although consumer prices in August rose a relatively modest 0.3% from the previous month, this second danger shouldn't be underestimated. The idea that the Fed can afford to wait until excessive inflation is an established fact and then move to reduce it—gradually and painlessly—is wrong. At that point, cutting inflation might be much harder than optimists suppose.

The Fed needs to give itself the option of moving to curb inflation promptly should the need arise. That, in turn, means bringing its bond-buying program to a close sooner rather than later, so that the way is clear to start raising interest rates if need be. Even without quantitative easing, the Fed's zero-interest-rate policy will still be extremely accommodative. The program served a vital purpose, but the Fed now needs to acknowledge that the balance of costs and benefits has changed. **B** For more commentary, go to bloomberg.com/opinion

AGENDA



Into a Greener Future?

German elections on Sept. 26 will ring in a new political era after 16 years under Chancellor Angela Merkel. The Green Party has a fair chance of joining the government, while the race for the top job remains open.

- ► The United Nations General Assembly opens on Sept. 21. Delegates will discuss issues from the Afghanistan crisis to climate change to the pandemic relief effort.
- ► Canada heads to the polls on Sept. 20. Opinion surveys show Erin O'Toole, leader of the Conservative Party, could weaken or even defeat Prime Minister Justin Trudeau.
- ► The U.K. Labour Party holds its party conference in Brighton Sept. 25-29. Keir Starmer, its leader, has struggled to dent the popularity of Prime Minister Boris Johnson.

- ► Germany's benchmark DAX Index of blue-chip companies expands from 30 to 40 members on Sept. 20. The shake-up will tilt the weighting of the index more toward technology stocks.
- ► The 63rd annual meeting of the U.S. National Association for Business Economics takes place Sept. 26-28. Guest speakers include Treasury Secretary Janet Yellen.
- ➤ With Broadway back in action, New York's banking fans can finally see *The Lehman Trilogy*, which already had a successful London run. It begins previews at the Nederlander on Sept. 25.



"Business was a whole new world to me. I served in the military prior to becoming an entrepreneur. In 2017 we had seven employees and about \$5M in annual revenue. I was passionate about what we were doing, but I was a fish out of water. I knew I had to surround myself with people who had 'been there and done that' — who were further along in their business journey. That's why I joined Vistage. The relationships and connections inform, energize and inspire me. One guest speaker session gave me a whole new framework that changed the way we run our business.

Today we have over 100 employees, and we hit \$50.4M in annual revenue in 2020. I am fully supported. I am a more efficient and confident leader.

I'm Ryan. I live a life of climb."

Ryan Hogan

Co-founder & CEO, Hunt A Killer Seattle, WA Vistage member since 2017

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- A tight job market is boosting pay above the target Biden and unions set their sights on
- By Michael Sasso

The push for a \$15 federal minimum wage may have stalled in Congress, but Covid-19 is helping steer the U.S. ever closer toward a key objective of labor unions and their allies in the White House and on Capitol Hill.

An analysis of jobs posted from spring 2019 to spring 2021 from a sampling of cities shows many service-sector industries crossed above a \$15 starting wage during the period, often by significant margins, according to Emsi Burning Glass, an analytics firm that tracks job postings to glean labor market insights. The trend seems to have gathered steam in the recovery from the Covid recession, with several large employers, including Walmart, Target, Best Buy, and Chipotle Mexican Grill, bumping up starting or average hourly pay to \$15 or more. Amazon.com Inc. recently announced it was boosting average starting wages for open logistics jobs to \$18 an hour.

Ten states, plus D.C., have passed laws that will incrementally raise their minimum wage to \$15 over several years. Campaigning for the presidency, Joe Biden proposed raising the federal minimum wage, currently set at \$7.25 per hour, to \$15, but his administration would be hard-pressed to marshal enough votes in Congress—even among Democrats—to make that a reality.

That some companies are targeting \$15 specifically suggests they're signaling that they're treating employees more fairly, which still represents something of a victory for the union-backed "Fight for \$15" campaign, says Ben Zipperer, an economist at the left-leaning Economic Policy Institute (EPI). In Los Altos, Calif., Smith.ai, a 330-person business that handles customer support for companies, recently raised its starting wage to \$15 an hour, purposely choosing that rate in part because of all the attention on the issue. "I think people are looking at \$15 as the new normal, kind of the new standard," says co-founder Aaron Lee. "As we bump up to \$15, we see a lot more applicants."

The tight labor market has empowered workers to demand higher pay and improved conditions. The number of job vacancies exceeded new hires by 4.3 million in July, the most in data going back to 2000. Meanwhile, workers' average hourly earnings climbed 0.6% in August, twice as much as forecast.

The tightness has sped up the rate at which Americans are hitting the \$15 threshold, either because of supply-and-demand factors or state and local minimum-wage laws. The share of workers earning less than \$15 an hour is dropping by about 1.5% a month so far this year, not adjusted for inflation, almost double the rate of the first seven months of 2019, according to Zipperer's research. Today just under 20% of U.S. workers still make below that level.

To be sure, a 5% rise in the consumer price index has chipped away at workers' wage gains. Average hourly earnings adjusted for inflation are down 0.9% from August of last year.

Fifty miles northeast of Atlanta, John Culpepper keeps boosting the average wage at his Braselton, Ga., staffing agency, which caters to the area's big crop of distribution centers and manufacturers. It was \$13.39 in the summer of 2020 and has since climbed 25%, to \$16.80. Chalk it up in part to aggressive recruiting tactics by employers in the area. For instance, deep-discount retailer Ollie's Bargain Outlet has taken to emailing its customers and offering \$1,000 bonuses and jobs paying up to \$20 an hour for warehouse work in nearby Commerce.

Employers that balk at the new pay rates are losing out, according to Culpepper, who owns four Express Employment Professionals offices in north Georgia. "A lot of them can't do it, and so therefore they're having labor shortages, which is affecting them getting product out the door," he says.

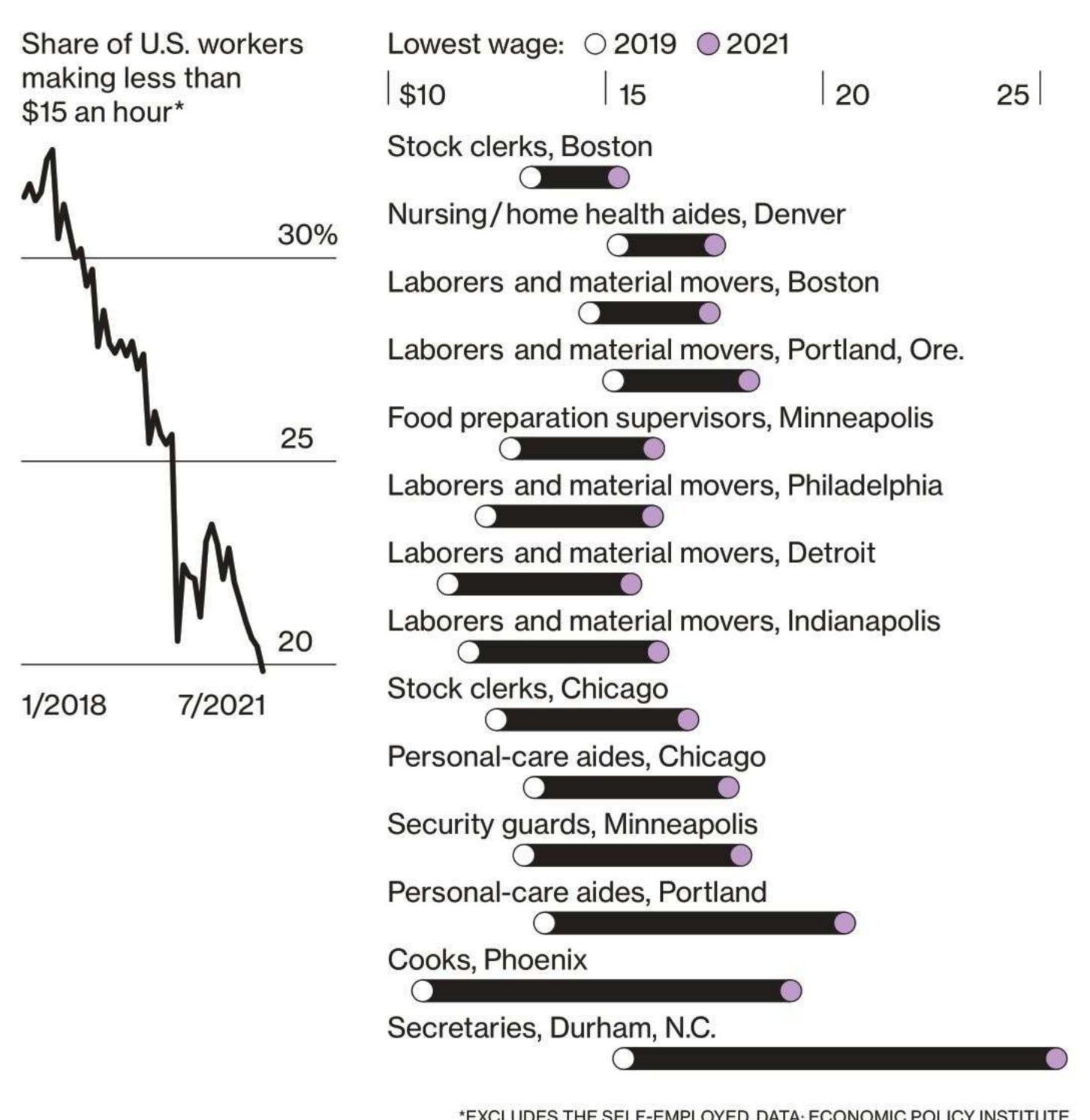
Data from Emsi Burning Glass show a substantial portion of low-paying jobs in metropolitan areas went to \$15 and above in the past two years. In Phoenix half of the employers seeking cooks at less than \$15 an hour in spring 2019 had moved above that level by spring 2021. Two years ago the lowest wage advertised in job postings for cooks in Phoenix averaged \$10.71 an hour, but that jumped 80%, to \$19.24, two years later. In Philadelphia 88% of employers that offered less than \$15 two years ago for laborers and material handlers had moved above that figure by 2021.

Then there's Chicago, where an ordinance took effect in July requiring employers with 21 or more employees to pay at least \$15 an hour. The wage gains in some low-paying industries in the city have outstripped the new minimum, says Emsi Burning Glass chief economist Bledi Taska. For example, half of Chicago employers that offered less than \$15 for personal-care aides two years ago were above that figure by spring 2021, with the average low wage in job postings climbing from \$13.28 an hour to \$17.78.

It's important to note that Emsi Burning Glass's data come with some caveats. For starters, just 35% of job postings specify a wage or wage range. Also, the firm focuses only on large U.S. metro areas, so its findings may not be representative of labor market dynamics in smaller locales. Still, Taska says a clear trend is visible from the millions of job announcements his firm analyzes: "Even without a state mandate, the market is driving employers to go above that threshold."

If it persists, the upward pressure on wages may wind

Labor Market Realignment



USING U.S. CENSUS BUREAU DATA; EMSI BURNING GLASS

up feeding into consumer price inflation, which is already trending higher because of a combination of supply bottlenecks and rising prices for a host of commodities. About half of small businesses reported raising prices since June, according to an August survey by the National Federation of Independent Business.

Greg Vojnovic, who owns Bojangles fast-food restaurants in northwest Georgia and Hot Dog Shoppes in Ohio, drives by billboards advertising \$17-an-hour warehouse jobs and sees the effects on his ability to find workers. He's already having "an extraordinarily hard time" hiring, and if the federal government adopts a \$15 minimum wage, he says he'd be forced to automate some functions. "You obviously couldn't live on \$15 an hour in New York," Vojnovic says. But "the \$15 minimum wage across the country just doesn't make sense. The cost of living is just very different across the country."

Progressive think tanks and labor activists reject the idea that labor market dynamics may make the push for a higher federal minimum unnecessary, and they're pressing for even bigger gains. Zipperer's think tank, EPI, estimated in January that 32 million U.S. workers would benefit from a \$15 minimum wage by 2025—two-thirds of them because they'll still be earning less than that and the remaining third because their pay may get a boost as employers rejigger their wage scales.

About 40% of the U.S. workforce lives in states where the minimum wage is mandated to rise to \$15 an hour, EPI estimates. "I don't think it ends the conversation," says Chris Figueredo, who oversees the Ballot Initiative Strategy Center, a nonprofit that pushes for progressive state ballot measures. "The fight for \$15 is the floor. It's not the ceiling." **©**

OMAS: CHRISTOPHER DILTS/BLOOMBERG. CONTAINERS: DAVID PAUL MORRIS/BLOOMBERG



 Logistics managers are battling the pandemic, a labor shortage, and sky-high demand

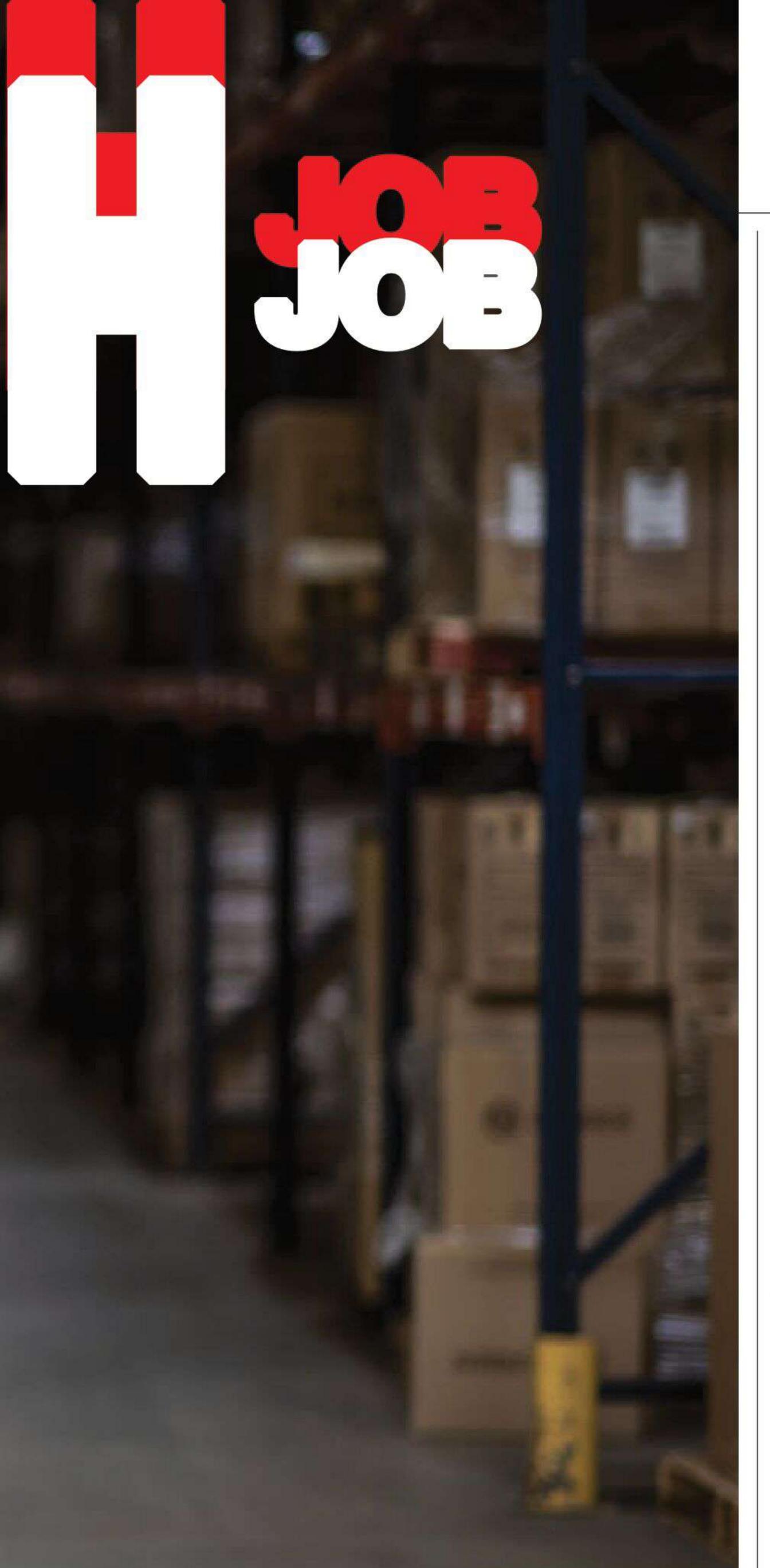
It's mid-August, and logistics manager RoxAnne Thomas's phone won't stop pinging. Her faucets, sinks, and toilets are waylaid near Shanghai, snagged in Vancouver, and buried under a pile of shipping containers in a rail yard outside Chicago. As U.S. transportation manager for Gerber Plumbing Fixtures LLC, a unit of Taiwan's Globe Union Industrial Corp. that's based in Woodridge, Ill., Thomas is trying to overcome the biggest shock wave to unsettle global trade since the dawn of container shipping almost seven decades ago.

The pandemic has thrown the vital but usually humdrum world of logistics into a tailspin, spurring shortages of everything: masks and vaccine vials, semiconductors, plastic polymers, bicycles, and even baseball bobbleheads. For Thomas it's complicated the shipment of about 10,000 20-foot containers of bathroom equipment she brings into the U.S. each year from China and Mexico, but it has also revealed a bigger, structural challenge.

The system underpinning globalization—production on one side of the planet, connected to consumers on the other by trucks, ships, planes, cranes, and forklifts—is too rigid to absorb today's rolling tremors from Covid-19, or to recover quickly from the jolts to consumer demand or the labor force. It's avoided a complete collapse only through a combination of human ingenuity, painfully long hours, and, as Thomas describes a recent success, strategy, mixed with a stroke of luck.

What's also apparent from her vantage point is that supply uncertainties, disruptions, and inflationary forces are here for the foreseeable future, perhaps into 2023. But how things play out this

Edited by Rachel Evans



built into annual contracts between shippers and the carriers, and these deals normally have strict requirements, such as only nonstop service between ports or a minimum of two sailings a week. But little by little over the past 18 months, Thomas has had to let those demands go and instead brawl for ship space in the spot market, where the daily rates quoted by carriers and freight agents have soared.

"Now I'm saying, 'Just get me a box,' " she says. "We're constantly fighting this battle between

Container rates and availability are usually

"Now I'm saying, 'Just get me a box,' " she says.
"We're constantly fighting this battle between
how much is too much to spend and how many
containers can that actually get me, and it literally seems to change week to week." Wholesalers
and commercial plumbers are the main buyers
of Gerber's bathroom fixtures. The company's

- ◆ Thomas at the Gerber warehouse
- ▼ Shipping containers at the Port of Oakland



biggest domestic competitors are American Standard, Kohler, Mansfield Plumbing Products, and Toto USA.

Two years ago, a 40-foot container cost less than \$2,000 to transport goods from Asia to the U.S. Today the service fetches as much as \$25,000 if an importer pays a premium for on-time delivery, which is a luxury. That's translated into big money for container carriers, with the industry on track to post \$100 billion in net profit this year, up from about \$15 billion in 2020, says John McCown, an industry veteran and founder of Blue Alpha Capital.

With the scales so tipped against them, many shippers of cargo are balking, hoping rates go down or praying that they won't run out of things. That's provided openings for Thomas to stretch her budget when possible and snap up the few containers that become available. "There are companies that just don't have the finances to withstand \rightarrow

month, one of two peak seasons each year for goods, will be crucial in determining how long these shortages last and which companies are able to adapt. "Every step of the process, there's still backlog," said Thomas, 41, in one of several interviews from late July through August. "The beginning of the supply chain in China—I don't think that's going to get better for a year." And the outlook more broadly? "A year and a half before things are truly back to normal."

Although the pandemic has shuttered factories and shaken supplies of raw materials, Thomas's chief challenge is freight, and it starts with what used to be cheap, plentiful commodities: shipping containers. About 25 million are in use globally, shuttling goods around the world on some 6,000 ships. Companies such as Denmark's A.P. Moller-Maersk A/S or China's Cosco Shipping Holdings Co. own or operate these vessels, with the 10 top companies controlling 85% of global capacity.

◀ this, and they have contracted space that they're just not using anymore," she says. One of Gerber's freight forwarders, Flexport Inc. in San Francisco, recently offered a chance to get 50 extra boxes out of Qingdao, China. Even at elevated rates, Thomas jumped at the chance.

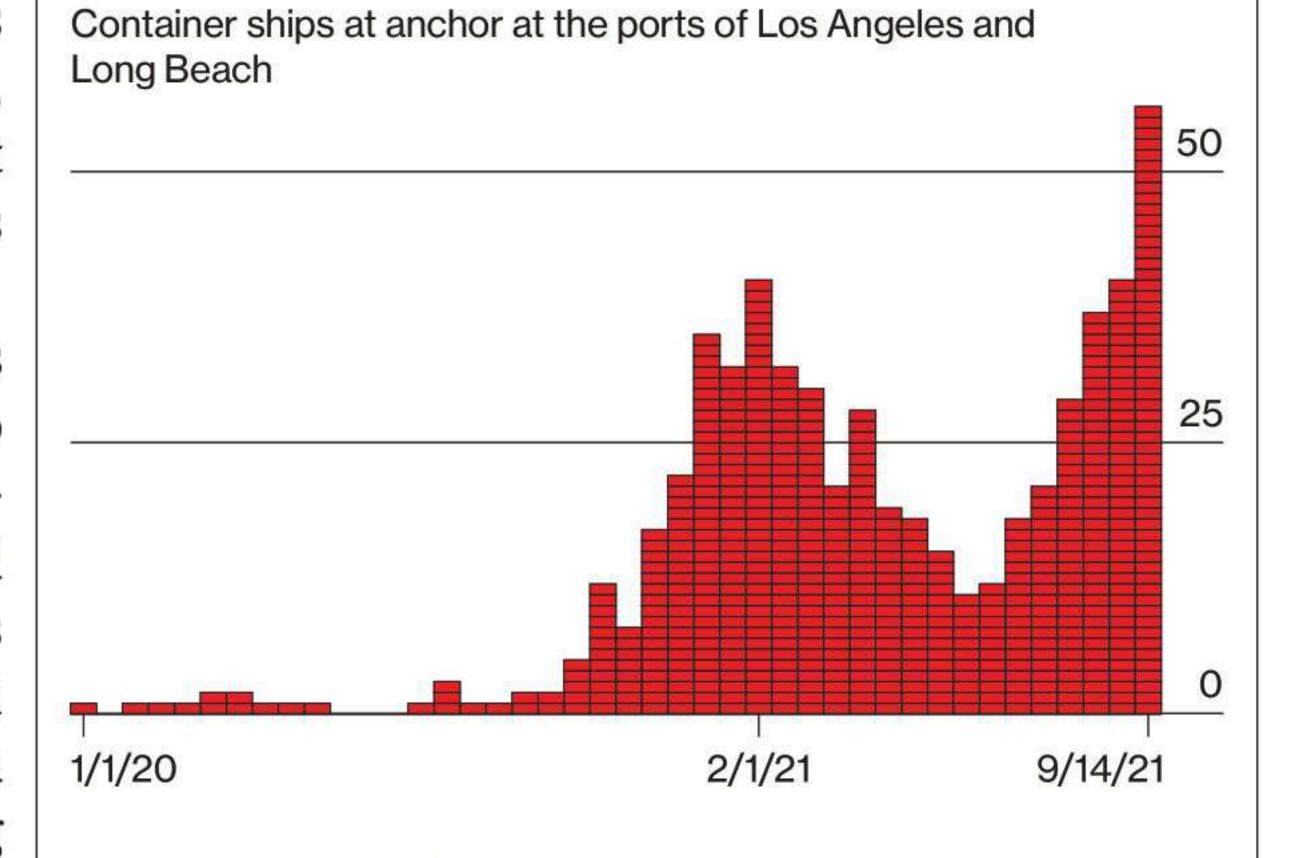
The snarls don't end when Thomas's containers land on a dock in North America. They next need to travel by truck or train to Gerber's distribution centers in California, Illinois, New Jersey, Texas, and Canada. Those journeys got more complicated this summer when western Canadian wildfires slowed rail operations, and when Union Pacific Corp., a rail haulage company, stopped containers moving inland from West Coast ports so it could clear a logjam of the boxes outside Chicago as the influx of goods overwhelmed the system. A couple of containers filled with Gerber products were stuck in the gridlock for 10 weeks after a truck driver Thomas sent to the location couldn't dig them out, she says. So even though the railroad's temporary embargo was aimed at easing congestion, it probably pushed the delays back to the ports. Indeed the number of ships anchored outside the twin ports of Los Angeles and Long Beach more than doubled to 45 from late July to a month later.

"Even if we went to Maersk and said, 'Just let us have the container. We'll unload it in Los Angeles, and we'll give it right back to you,' it just doesn't work that way. It's not that simple," Thomas says. Apple Inc., Walmart Inc., and other companies have deployed armies of supply chain professionals and leading technology to navigate the past 18 months, but the vast majority of people doing these jobs are like Thomas—they wear multiple hats, have only a handful of support staff, and went from office obscurity to holding one of the most important positions at their company almost overnight.

Thomas started this job at Gerber four years ago, after working as both a client of logistics services and at a large trucking company. Transport is a family preoccupation: Her mother, uncle, and grandfather all worked for the railroad, and dinner table chatter would often turn to routes and capacity. But Thomas recently completed a master's in supply chain management at Michigan State University, one of the nation's leading schools in the field, to give herself an extra edge.

Top logistics positions at large global companies can pay \$300,000 to \$400,000, but the median salary for those with an Association for Supply Chain Management (ASCM) certification is about \$90,000, with starting pay closer to \$60,000. Unfilled positions are reaching a 20-year high, and in the

No Room to Unload



U.S. alone, more than 600,000 job openings are projected over the next decade, according to the Chicago-based trade group.

It's easy to see why. About 860,000 inbound containers arrived into the LA and Long Beach ports on average each month this year, 24% more than the typical monthly volume in the five years leading up to the pandemic. Some of that increase is the result of panic orders from companies nervous about running out of parts or products, but the acceleration of online shopping also has an impact. "For logistics professionals this incredible e-commerce spike required a whole new level of alignment and synchronization," says Abe Eshkenazi, chief executive officer of ASCM.

Among her concerns, Thomas must keep sight of whether such strong spending will be sustained, particularly when orders might not arrive for several months. New-home construction has been solid this year, and Gerber's shipments have reached record highs. But to help manage the demand from customers, Gerber is allowing them to order only a certain percentage above their normal purchases.

"The fear is we're ordering all this stuff for demand, and the demand is going to fizzle out before the product gets here," Thomas says. With summer winding down, the big test of the global trading system's resilience might still be ahead. Every October a weeklong national holiday in China marks the unofficial deadline to get shipments out of the world's second-largest economy in time to reach the U.S. and Europe for the holiday shopping season. With lines of ships outside ports at their longest since the pandemic began, the pressure to meet that cutoff is stronger than ever.

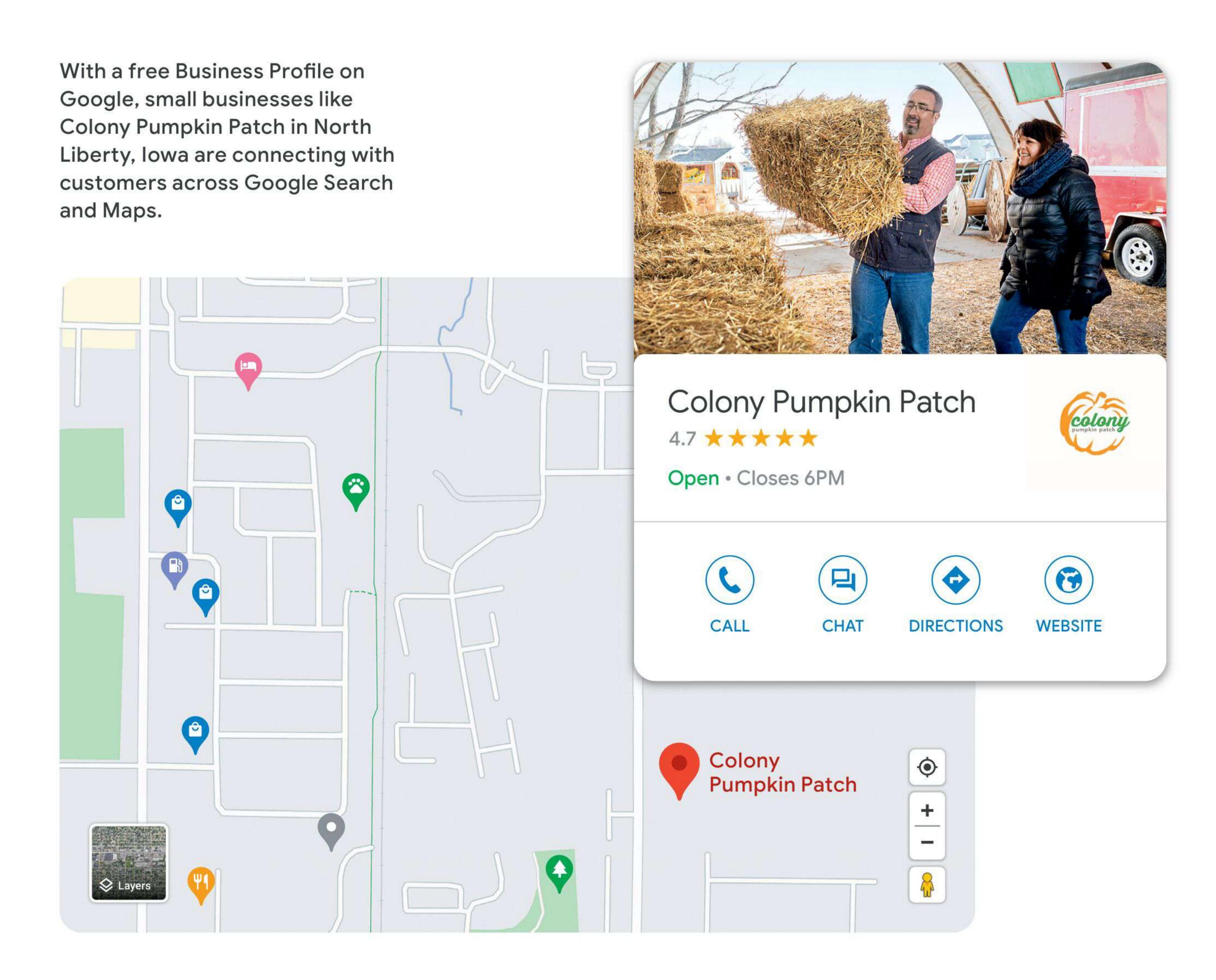
—Brendan Murray

THE BOTTOM LINE Global supply chains are stretched to the breaking point, with disruption set to remain through 2023 as importers fight for shipping containers and space at ports.

"Now I'm saying, 'Just get me a box'"



Helping 17 million small businesses connect with customers



Fox Corp. has always had a larger-than-life persona, from the storied movie studio that provided its name to its outsize clout in American politics. Its \$71 billion sale of entertainment assets to Walt Disney Co. three years ago made billionaire Chairman Rupert Murdoch's family even richer. So the company's Sept. 13 announcement that it's acquiring TMZ, the celebrity gossip site and TV show, might seem like small beer.

But though the price is relatively modest-less than \$50 million, according to people familiar with the deal, who asked not be named because the terms were private—the move is the latest sign that the company plans to build a new entertainment business after selling a large chunk of its assets to Disney. Fox profited handsomely by divesting those properties, including the 20th Century Fox studio and the FX and National Geographic cable channels, but the Murdochs kept just enough resources to begin restoring their media footprint.

"When everybody is trying to move their viewer behind a paywall, we see great opportunity in ad-supported businesses," says Charlie Collier, chief executive officer of Fox's entertainment unit.

Before joining Fox in November 2018, Collier, 52, was president of AMC, the edgy cable-TV network responsible for Mad Men, Breaking Bad, The Walking Dead, and other hits. At the time moving into broadcast TV was hardly an obvious career move. Streaming video-on-demand networks such as Netflix Inc. were the next big thing in home entertainment.

But Lachlan Murdoch, CEO of Fox Corp., made a convincing pitch to Collier. The company, he said, would be keeping the Fox name and its production lot, which would enable it to continue cranking out entertainment content-which has become the most precious commodity in today's media economy. Collier made the leap.

acquired Tubi, an ad-supported streaming service, for \$440 million. Since then, Fox has been moving some of its own hits, such as the brick-building competition show Lego Masters, over to the free service. This fiscal year, Tubi's advertising revenue more than doubled, to almost \$400 million.

The company acquired Bento Box Entertainment,

maker of the animated *Bob's Burgers*, a year earlier. And last month, Fox announced a production partnership with celebrity chef Gordon Ramsay, the star of two shows that aired in the summer on Fox, Hell's Kitchen: Young Guns and MasterChef: Legends.

The TMZ deal will add yet another multiplatform operation to Fox's portfolio of brands. Content from TMZ-with its large online following and a TV show that's run on local Fox stations for 14 years-can be put on Tubi and used to help promote Fox shows. The Fox network is already a TMZ advertiser. And Fox can create more programming around the TMZ name, such as documentaries for the network or



Tubi. "What a broadcast network does is they go broad. What Tubi does is they go deep," Collier says.

For two years in a row, Fox has managed to keep its title as the No.1 network for 18- to 49-year-old viewers, the audience advertisers favor. But running a broadcast network in 2021 remains a challenge. Audiences are turning away en masse from regularly scheduled TV, and Fox isn't immune, with nightly prime-time viewers through the season that ended in May down 15%, to 4.2 million, from 2017.

To combat the slide, Fox has focused on sports The revamp is now in full swing. In 2020, Fox | and reality shows that draw more live viewers. Earlier this year it renewed its NFL contract at a cost of more than \$2 billion a year. The company has also been using the network to promote Fox Bet, a new sports betting venture.

> Ad purchases on broadcast television, measured in the cost to reach viewers, have remained strong, despite the audience declines. "Ratings



Collier

◄ are down. I'm not under any illusion that it's a growing business," says David Campanelli, who heads ad purchases for clients at Horizon Media in New York. "It's still the only place you can reach several million people, with a 30-second ad, at one time." — Christopher Palmeri

THE BOTTOM LINE Fox sold many of its entertainment properties to Disney for \$71 billion three years ago. Now it's using some of its cash to restore its media footprint.

Self-Driving Cars Fuel Space Race 3.0

 Satellites may solve automakers' need for systems that can handle big data

Automakers are looking to the heavens for the next generation of car technology.

Satellites, such as those scattered across the skies by Elon Musk's SpaceX, are emerging as a key tool to handle the huge amounts of data that cars will need to drive themselves. Autonomous vehicles will generate as much as 40 terabytes of data an hour from cameras, radar, and other sensors—equivalent to an iPhone's use over 3,000 years—and suck in massive amounts more to navigate roads, according to Morgan Stanley.

Although most new cars come with a modem under the dashboard and receive data via the same towers that serve your cellphone, coverage can be spotty—a no-no for self-driving vehicles. "Only 10% to 15% of the air surface is covered by cellular networks," says Chris Quilty, founder of Quilty Analytics and a space industry consultant. "As you move down the road toward autonomous vehicles and the need to constantly update information and have real location accuracy, satellites become a credible technology."

But it's not just self-driving that has car executives interested in satellites. Recurring revenue has become the holy grail for automakers looking to break free of the traditional boom-and-bust cycle of vehicle sales. Ford Motor Co. Chief Executive Officer Jim Farley has said his company's future depends not on selling cars but on selling car owners a continuous stream of services, from hands-free driving technology to the latest touchscreen infotainment apps. The connected car is central to that strategy.

"There's always going to be these cellular

deserts where I think a satellite option could be really interesting," says Bryan Salesky, CEO and co-founder of Argo AI, the self-driving startup backed by Ford and Volkswagen AG. Chinese automaker Zhejiang Geely Holding Group Co. is launching its own constellation of satellites, and Iridium Communications Inc., which has long beamed signals from space to the airline industry and U.S. military, says it's also hearing from automakers.

Bloomberg Businessweek

As with electric cars, Tesla Inc. CEO Musk is at the forefront. Through his SpaceX rocket company, he's deployed more than 1,700 satellites that operate in low-Earth orbit, or LEO, which is about 350 miles from the planet's surface, compared with about 22,300 miles for traditional satellites. This relative proximity allows LEO satellites to communicate faster with people and things on Earth, tackling space-based communication's biggest drawback: signal delay.

Musk asked regulators for permission to use his Starlink satellite network to interact with moving vehicles earlier this year. These receivers will at first be for only trucks or RVs, because the satellite dish—about 20 inches in width—is too large for cars.

Tesla has transmitted software improvements straight into cars for years. Now legacy automakers are following suit. Some software will be optional, such as the hands-free driving systems that Ford and General Motors Co. are offering, but something similar to a patch to fix a glitch in the electronic transmission will be mandatory.

"We've gotten a lot of interest on downloading software updates," says Mark Dankberg, co-founder of Viasat Inc., a provider of satellite broadband. "If you do it by satellite, you can reach enormous numbers of vehicles at one time."

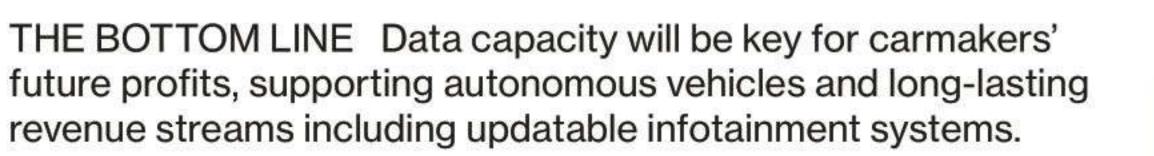
Still, satellite companies must reduce the time it takes for a signal to travel from space to a car, which is now about 50 milliseconds, vs. 10 milliseconds for a cellular signal—though Musk says Starlink has reduced its signal lag to less than 20 milliseconds. Automakers are also weighing the benefits of a terrestrial system such as 5G, which builds on existing cellular technology. Satellites give more comprehensive coverage, but they face challenges not only with speed but also with everyday obstructions—parking garages, for instance, which 5G can navigate.

"It's a big race called Space 3.0," says Iridium Communications CEO Matt Desch of the push to commercialize space. "The last thing a car manufacturer really wants is to pick badly." — Keith Naughton

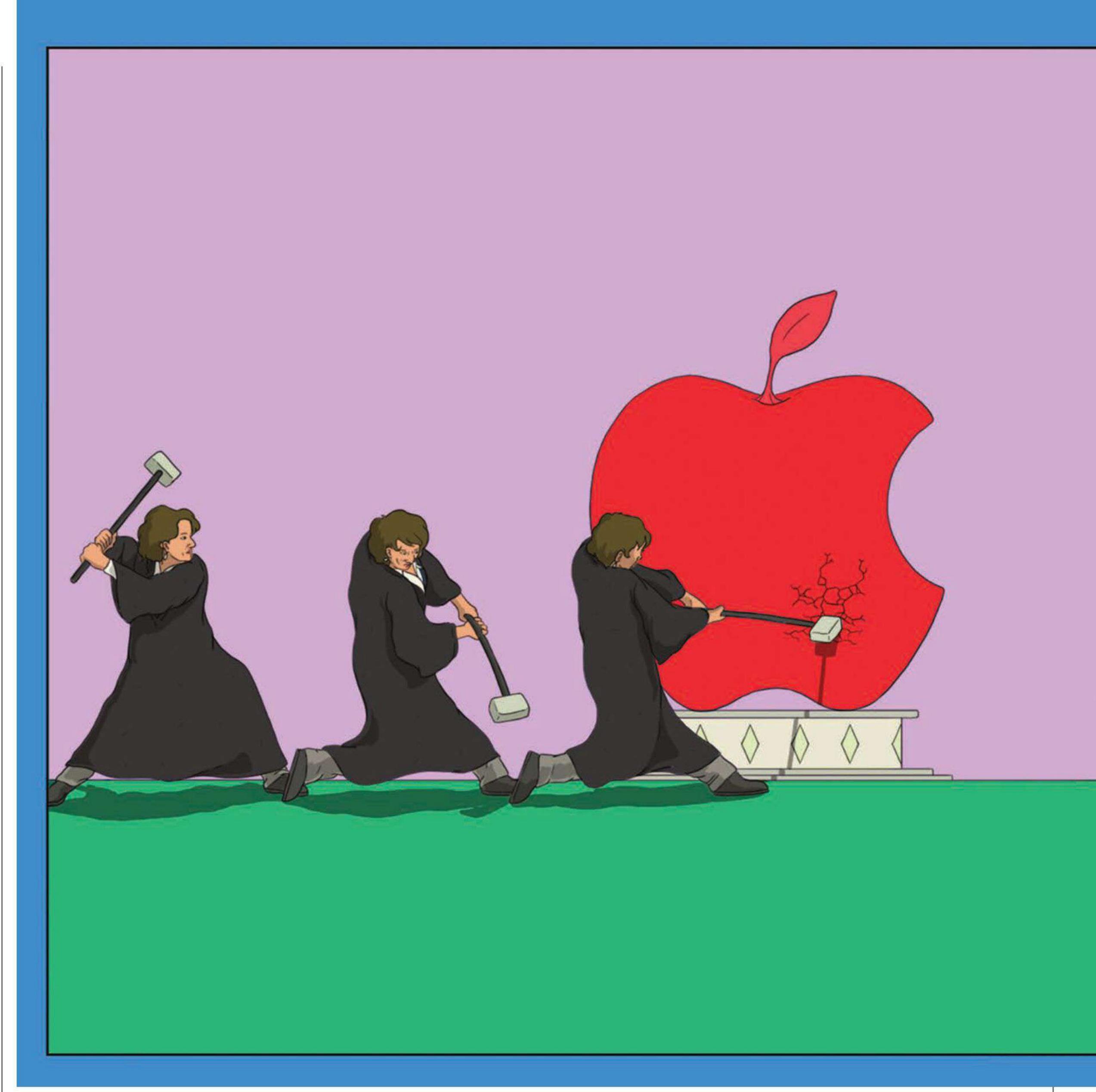
 Autonomous vehicles will generate as much as

40

terabytes of data an hour from sensors and download more for navigation







A Crack in the App Economy

Apple says it won its lawsuit with Epic, but the court's decision shows how app store gatekeepers could lose control

When Apple Inc. introduced its App Store in 2008, the company's founder and chief executive Steve Jobs had a message for iPhone app developers. "We are not trying to be business partners," he told the *New York Times*. Jobs meant that developers didn't have to feel threatened because Apple's main business was selling phones, not taking 30% commissions on app sales. But the comment could be interpreted very differently today, when many

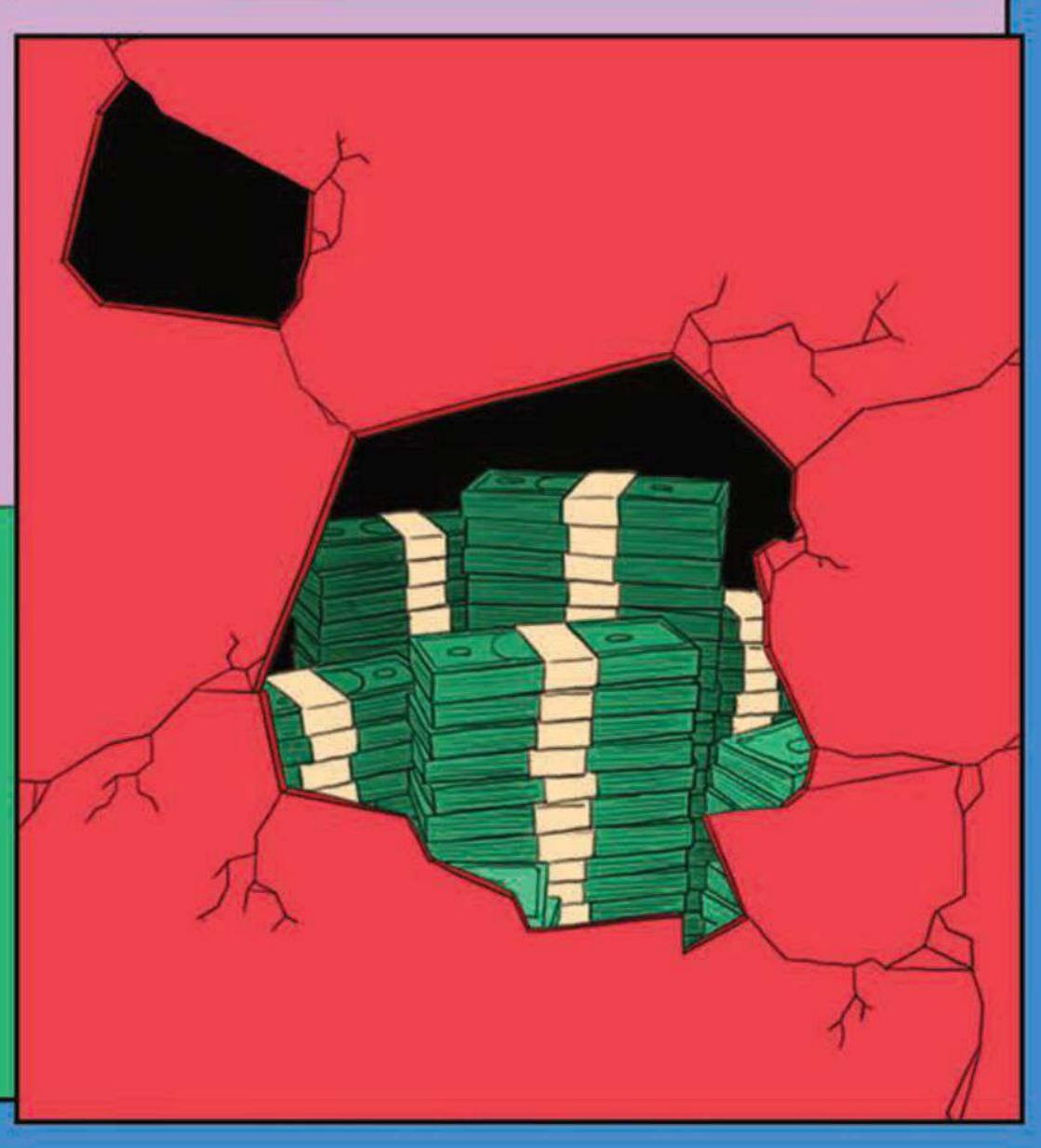
developers—and government officials—see Apple less as a partner negotiating in good faith than as a feudal lord levying an unavoidable tax.

On Sept. 10 a federal judge partially vindicated the critical view of the company by ruling it had to allow app developers to direct users to web payment systems to complete transactions. The decision stems from a feud with Epic Games Inc., the creator of the smash hit *Fortnite*, over whether it could use its own billing service within the game, skirting Apple's standard fee. When Epic did so over Apple's objections the phonemaker removed *Fortnite* from its app store, and Epic sued.

In her ruling on the case, Judge Yvonne Gonzalez Rogers wrote that loosening Apple's payment system would beneficially increase competition. She didn't, however, agree with Epic that Apple was a monopolist. "Success is not illegal," the judge concluded, and she told Epic to pay Apple \$6 million in royalties. Epic intends to appeal; Apple has declared victory. But while Apple avoided the worst possible scenario, the case could be the first major crack in the foundation of the \$142 billion smartphone

Edited by Joshua Brustein





app industry it and Alphabet Inc.'s Google created when they launched parallel app stores 13 years ago. The ensuing wave of mobile apps revolutionized the way consumers interact with devices while concentrating a massive amount of power–financial and otherwise–with the companies who'd established themselves as gatekeepers.

Many app developers have done well with this arrangement, but there's been a growing swell of discontent. Epic, Spotify, and Tinder-owner Match led the charge against the app stores, blaming them for taking huge cuts while promoting their own rival services. (Both Apple and Google run music services that compete with Spotify. Match Group LLC and Spotify praised the Epic decision.)

If the Epic verdict stands, it would apply only to the way people pay app developers rather than extend to concerns about other allegedly anticompetitive behavior. But there is undeniable momentum to overhaul how app stores operate. "It's a huge deal," says David Bos, chief operating officer for Maple Media, a holding company that owns an array of consumer apps, including Stocks+ and

Mahjong. Developers could start steering people who make in-app purchases away from Apple's App Store and toward the web, where payments processors such as PayPal Holdings Inc. and Stripe Inc. typically charge rates of 2% to 3%. (The judge didn't require Apple to allow developers to incorporate their own payment systems within the apps themselves.) There would be some overhead costs for back-end tasks that Apple currently handles, including managing refunds and detecting fraud. Still, in this new world, Bos believes the remaining savings would be a "meaningful percentage."

Richard Crone, an industry strategist, predicts developers could slice a quarter of billing costs by going around Apple. Over the past year, the company has made a few concessions on app payments, cutting fees for smaller developers and announcing that it would allow media subscription services such as Netflix Inc. and Hulu LLC to direct users to web payments, beginning in 2022. Apple might make additional concessions to persuade developers to stick with its billing. Better economics and competition might help developers drive up sales. "The more places people can pay you," says Bos, "generally, the more people do."

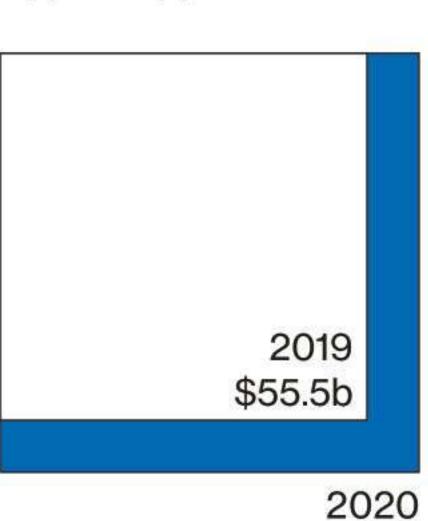
Apple has argued that its fees and strict control over the App Store are necessary to maintain high standards on privacy and security. But irked app developers say the company has used its market power to force them to give it a share of their revenue. Proton Technologies AG, a Swiss company that makes encrypted email and software, has complained that Apple pushed it to institute in-app purchases in 2018 for features it previously billed over the web. Andy Yen, its chief executive, has likened Apple's move to "Mafia extortion."

Proton agreed to do it but raised subscription email prices by 26% on Apple devices. "It's very, very damaging," says Jurgita Miseviciute, the company's policy lead. "Apple tries to paint us like we're some greedy, less-successful rivals. But in the privacy industry, you have to pay for service." Apple changed its policies in September 2020 to allow companies like Proton to avoid in-app payments, but Proton says the changes don't address its concerns.

For many years, Apple was content to make money selling gadgets. But such services as the App Store are growing in importance as the company looks for new, more profitable ways to grow. Apple's revenue from app sale commissions in 2020 was \$21.7 billion, according to market research firm SensorTower. Analysts have guessed that it stands to lose \$1 billion to \$4 billion annually if the Epic verdict stands; it applies only to the U.S.

The area likely to see the biggest

▼ Global spending on Apple's App Store



\$72.3b

on the ruling, will probably have to follow whatever action Apple takes on payments

Apple's biggest critics see payments as just the beginning. After the ruling, members of Congress from both parties called for new antimonopoly laws. Several bills under proposal would curb the special access Apple and Google sometimes give their own apps and would force Apple to let outside app stores operate on its devices. Still, even those measures wouldn't necessarily undo the leaders' dominance. After a regulatory beating in Europe, Google had to set up a choice screen on Android devices letting consumers pick its search engine or smaller rivals.

Most still selected Google.

Developers that imagine windfalls from app store overhauls know these won't come overnight—or that easily. These businesses must still persuade consumers to skip out on payment methods that Apple and Google offer with a few simple taps. "People generally do whatever is easier," says Bos. "And we have more than a decade of people being conditioned to just pay in the app." —Mark Bergen, with Mark Gurman and Olga Kharif

THE BOTTOM LINE A ruling that Apple must allow developers to steer customers to other payment methods weakens the App Store's control as critics push for sweeping change at the company.

The impact on Google, whose app store has more users but makes less revenue, is not as clear. Unlike Apple, Google lets other app stores run on Android phones, and Google also tends to be more lenient on fees. But Epic is also suing Google, and critics have accused the search giant of resorting to intimidation, too. During a Senate hearing on app stores in April, Jared Sine, chief business affairs and legal officer for Match, a big advertiser with Google, testified that Google representatives called his company the night before to interrogate him about the prepared Senate remarks. "They could hurt us in big ways," Sine told the senators. "We're all afraid." A Google lawyer at the hearing said the company would "never threaten" partners.

In the end, Google, which declined to comment

Pictographs of Hate

Moderating emojis is a technical challenge, but critics say Facebook and Twitter make it too hard

In a soccer game in Liverpool's Goodison Park in 1988, player John Barnes stepped away from his position and used the back of his heel to kick away a banana that had been thrown toward him. Captured in an iconic photo, the moment encapsulated the racial abuse that Black soccer players then faced in the U.K.

More than 30 years later, the medium has changed, yet the racism persists: After England lost to Italy this July in the final of the UEFA European Championship, Black players for the British side faced an onslaught of bananas. Instead of physical fruit, these were emojis slung at their social media profiles, along with monkeys and other imagery. "The impact was as deep and as meaningful as when it was actual bananas," says Simone Pound, director of equality, diversity, and inclusion for the U.K.'s Professional Footballers' Association.

Facebook Inc. and Twitter Inc. faced wide criticism for taking too long to screen out the wave of racist abuse during this summer's European championship. The moment highlighted a long-standing issue: Despite spending years developing algorithms to analyze harmful language, social media companies often don't have effective strategies for stopping the spread of hate speech, misinformation, and other problematic content on their platforms.

Emojis have emerged as a stumbling block. When Apple Inc. introduced emojis with different skin tones in 2015, the tech giant came under criticism for enabling racist commentary. A year later Indonesia's government drew complaints after it demanded social networks remove LGBTQ-related emojis. Some emojis, including the one depicting a bag of money, have been linked to antisemitism. Black soccer players have been frequently targeted:

Share of racially abusive tweets sent to soccer players containing an emoji, based on a Professional Footballers' Association and Signify study

29%

The Professional Footballers' Association and data science company Signify conducted a study last year of racially abusive tweets directed at players and found that 29% included some form of emoji.

Over the past decade, the roughly 3,000 pictographs that constitute emoji language have been a vital part of online communication. Today it's hard to imagine a text message conversation without them. The ambiguity that is part of their charm doesn't come without problems, though. A winking face can indicate a joke or a flirtation. Courts end up debating issues such as whether it counts as a threat to send someone an emoji of a pistol.

This matter is confusing to human lawyers, but it's even more confounding for computer-based language models. Some of these algorithms are trained on databases that contain few emojis, says Hannah Rose Kirk, a doctoral researcher at the Oxford Internet Institute. These models treat emojis as new characters, meaning the algorithms must start from scratch in analyzing their meaning based on context.

"It's a new emerging trend, so people are not aware of it as much, and the models lag behind humans," says Lucy Vasserman, who's the engineering manager for a team at Google's Jigsaw, which develops algorithms to flag abusive speech online. What matters is "how frequently they appear in your test and training data." Her team is working on two new projects that could improve analysis on emojis, one that involves mining vast amounts of data to understand trends in language, and another that factors in uncertainty.

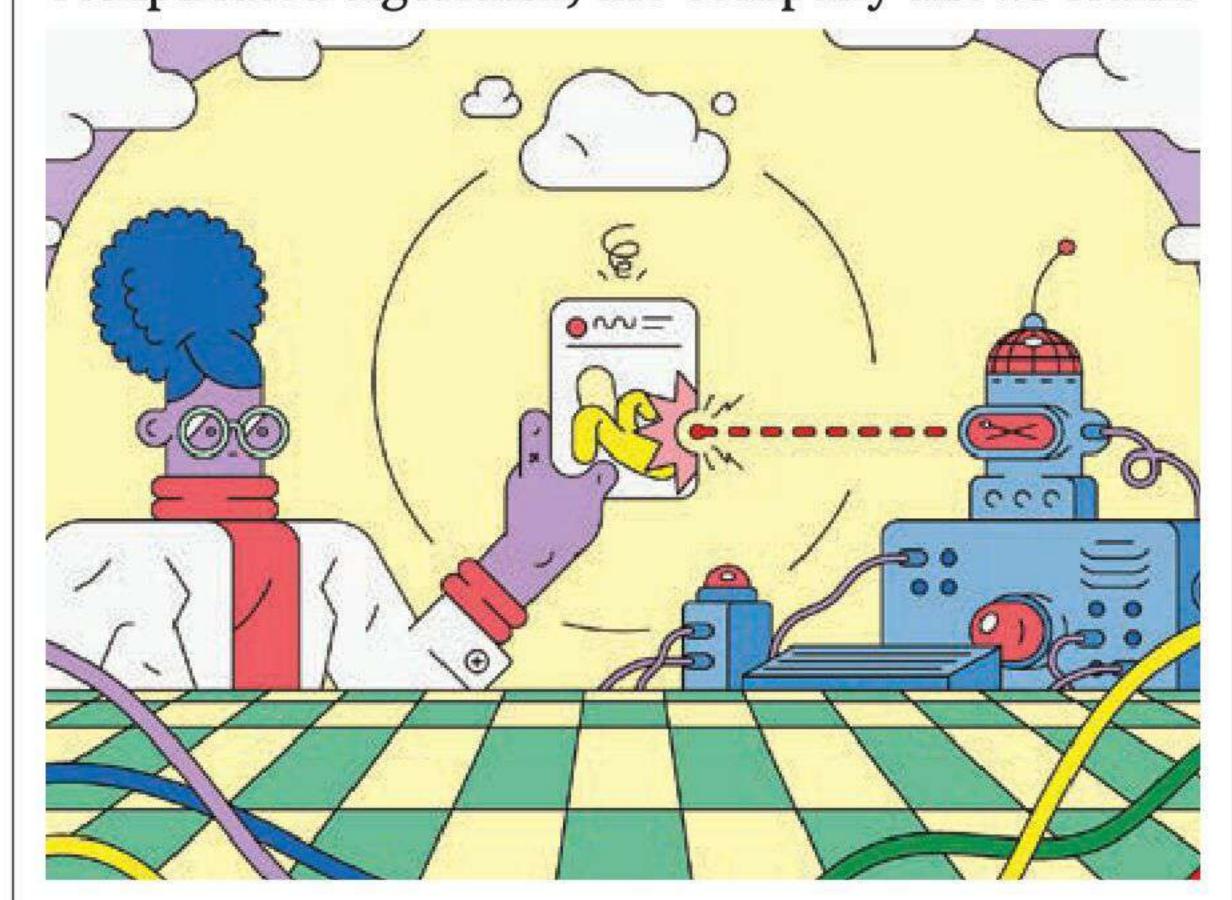
Tech companies have cited technical complexity to obscure more straightforward solutions to many of the most common abuses, according to critics. "Most usage isn't ambiguous," says Matthew Williams, director of Cardiff University's HateLab. "We need not just better AI going forward but bigger and better moderation teams."

Emoji use has been underanalyzed relative to its importance to modern online communication, Kirk says. She found her way to studying the pictographs after earlier work on memes. "The thing we found really puzzling as researchers was, why are Twitter and Instagram and Google's solutions not better at emoji-based hate?" she says.

Frustrated by the poor performance of existing algorithms at detecting threatening use of emojis, Kirk built her own model, using humans to help teach the algorithms to understand emojis rather than leaving software to learn on its own. The result, she says, was far more accurate than the original algorithms developed by Jigsaw and other academics that her team tested. "We demonstrated, with relatively low effort and relatively few examples,

you can very effectively teach emojis," she says.

Mixing humans with tech, along with simplifying the approach to moderating speech, has also been a winning formula for startup Respondology in Boulder, Colo., which offers its screening tools across Nascar, the NBA, and the NFL. It works with the Detroit Pistons, Denver Broncos, and leading English soccer teams. Rather than relying on a complicated algorithm, the company allows teams



to hide comments that include certain phrases and emojis with a blanket screen. "Every single client that comes to us, particularly the sport clients—leagues, teams, clubs, athletes—all ask about emojis in the first conversation," says Erik Swain, Respondology's president. "You almost don't need AI training of your software to do it."

Facebook acknowledges that it told users incorrectly that certain emoji use during the UEFA European Championship this summer didn't violate its policies when in fact it did. It says it's begun automatically blocking certain strings of emojis associated with abusive speech, and it also allows users to specify which emojis they don't want to see. Twitter said in a statement that its rules against abusive posts include hateful imagery and emojis.

These actions may not be sufficient to quell critics. Professional athletes speaking out about the racist abuse they face has become yet another factor in the broader march toward potential government regulation of social media. "We've all got hand-wringing and regret, but they didn't do anything, which is why we have to legislate," says Damian Collins, a U.K. Parliament member who's leading work on an online safety bill. "If people that have an interest in generating harmful content can see that the platforms are particularly ineffective at spotting the use of emojis, then we will see more and more emojis being used in that context." —*Ivan Levingston, with Adeola Eribake*

THE BOTTOM LINE The fix to a deluge of racist emojis might not be fully automated moderation systems, but more humans making what are often pretty simple judgments.

"The impact was as deep and as meaningful as when it was actual bananas"



3

I A N C E

The SEC Is On the Prowl For Crypto



 Digital upstarts and securities regulators are playing a cat-and-mouse game

By now, people are used to unusual goings-on in cryptocurrency markets. But little could have prepared Wall Street for the spectacle of Sept. 8, when it awoke to find the head of a \$50 billion digital-assets exchange bashing a powerful regulator in a 21-tweet tirade. There was Brian Armstrong, chief executive officer of Coinbase Global Inc., accusing the U.S. Securities and Exchange Commission of "sketchy behavior" and "intimidation tactics" after it effectively blocked his company from rolling out a

product that would let users earn 4% by lending their tokens. Finance Twitter spectators were agog surely the leader of a public company knew better than to infuriate an agency with the ability to make or break his industry?

But in the us-against-them world of crypto finance, even securities cops aren't immune to public expressions of outrage. Armstrong's tweets were accompanied by a blog post, in which Coinbase disclosed that the SEC had served it with a Wells notice—meaning it may pursue enforcement action—and opened a formal investigation into its proposed lending product. That program, Coinbase Lend, promised above-market interest rates for clients who allowed the company to use their cryptodenominated funds to make loans.

Edited by Elizabeth Fournier and Pat Regnier



■ This isn't the first time regulators have cracked down on crypto: They all but shut down the initial coin offering boom in 2018. But it's an unusually public skirmish with the SEC for a large, well-known crypto company—a dust-up that puts the brakes on a product it had hoped would be a hit with investors. It also marked the loudest statement yet from the SEC under Gary Gensler, who took over the agency in April, and has vowed to beef up crypto regulation. "If he wanted to, he could practically focus on crypto regulation his entire tenure," says Stéphane Ouellette, CEO and co-founder of FRNT Financial Inc., a crypto-focused capital markets platform.

The SEC, born in the Great Depression, operates in a legal framework that many crypto devotees believe to be outdated. (Coinbase alludes to this in its S-1, a registration form companies file before going public, saying many regulatory regimes were created before the advent of the internet and don't address crypto.) The agency considers any security to be its business.

There are aspects of Coinbase's program that critics say could bring it under the SEC's purview. To make such a determination, the agency relies on a 1940s U.S. Supreme Court legal test for whether a product involves "the investment of money in a common enterprise with a reasonable expectation of profits to be derived from the efforts of others." Going by Armstrong's account of discussions with the regulator, that was enough to put the crypto exchange in its crosshairs. It's safe to say he disagrees with the outcome.

"They responded by telling us this lend feature is a security. Ok—seems strange, how can lending be a security? So we ask the SEC to help us understand and share their view," Armstrong told his 825,000-plus followers. "They refuse to tell us." On Twitter, where a lot of crypto discourse plays out, critics mocked his tirade. Coinbase is a high-profile, publicly listed company with a chief legal officer, Paul Grewal, who previously worked as a Facebook Inc. lawyer and clerked for a U.S. appeals court early in his career. "Them saying, 'Why don't we know?' sounds like they're looking for the court of public opinion to help them out in the courtroom," says Tim Swanson, head of market intelligence at Clearmatics, a London-based blockchain company.

The SEC's threat to sue Coinbase came after a lengthy back-and-forth between lawyers for the company and the regulator, according to two people familiar with the matter, who asked not to be identified discussing private deliberations. It's common for financial companies to run plans by their regulators privately before going ahead, and those conversations often lead to a product getting tweaked

to be approved. In this case, the SEC never signaled it was comfortable with Coinbase's plan, said the people. Representatives for the SEC and Coinbase declined to comment.

As Lend was being discussed behind the scenes, Gensler was publicly promising a tougher approach to crypto. In an interview with *Bloomberg Businessweek* in July, Gensler said platforms that pool assets could get swept up in the agency's rules, as could those offering services to borrow or lend coins. He also raised concerns about companies advertising an interest-rate return on a crypto asset. "It's not just a matter of law, it's a matter of 'How do we protect investors?" Gensler said.

On Sept. 14, in front of the Senate Banking Committee, Gensler drilled down on one of his concerns about exchanges like Coinbase, without discussing Lend specifically. "Stablecoins may well be securities," Gensler told the committee, without mentioning any specific one. Stablecoins are tokens whose value is pegged to a dollar or other traditional currency. Of Coinbase, he said the exchange could have "dozens of tokens that may be securities."

Cornell Law School professor Robert Hockett says regulators are cognizant of past instances of shadow banking, or banklike activities that grow largely unabated until officials can no longer ignore them. It happened with money-market mutual funds in the 1980s and '90s. "There's a cat-and-mouse game going on constantly," says Hockett, a former Federal Reserve Bank of New York lawyer. "What regulators are saying is, 'Look, let's not wait for another crash before the cat springs. Let's, this time, have the cat catch the mouse the moment it comes out of the hole rather than waiting for it to eat half the pantry."

Little is known about Lend beyond what's on its website (which mainly focuses on the 4% annual return), but analysts have an idea of how it might work: Customers deposit stablecoins to Coinbase, which it then re-lends to market participants—hedge funds or other exchanges, for instance—which might use those coins to short an asset, hedge a position, or be part of a complex trade. In return, market participants pay Coinbase a higher rate than it offers its customers, and Coinbase pockets the difference.

The appeal to clients with stablecoins sitting in their Coinbase wallets is obvious: Good luck finding a traditional savings account that yields more than 0.60% annually. Interest rates on conventional bank deposits are often below 0.50%, whereas a 10-year government bond yields about 1.30%. Crypto investors can find higher rates with other platforms (the market rate on peer-to-peer lending platforms such as Bitfinex is about 8%), but BTIG LLC analyst Mark

"They responded by telling us this lend feature is a security.
Ok—seems strange, how can lending be a security?"



Palmer says the payout matches the perceived risk of the particular coin as well as its liquidity. Coinbase has 68 million verified users and offers USD Coin, which is pegged to the U.S. dollar.

Concerns from critics and regulators often focus on risks involved, including volatility in crypto markets and a lack of insurance against losses. (Coinbase says the crypto that clients lend to it—their principal-is guaranteed by the company.) It's not a totally new invention: BlockFi Inc. and other crypto companies have been offering loan products for years. As the crypto army sees it, the rules simply don't fit the latest innovations.

"There are lots of people questioning whether laws from 1933 and legal precedent from 1946 should govern new technology," says Max Schatzow, a partner at law firm Stark & Stark, which represents financial institutions. "But that's the reality. The law is the law. The precedent is the precedent."

Crypto backers, including Coinbase, have said they'd welcome greater regulatory involvement. After all, if the head of the SEC is preoccupying himself with their business, he must see how prodigiously crypto has grown and changed finance. A framework and clearer rules also would allow the industry to evolve. That isn't only crucial to crypto companies, but also to their potential counterparties that might get involved in a loan product.

"The first time anyone runs through a wall, blood is going to be spilled," says BTIG's Palmer. "What we have right now is a number of entrepreneurs in the cryptocurrency space who are running through a wall and trying to get through to the clarity they hope to see on the other side." —Vildana Hajric and Ben Bain

THE BOTTOM LINE As crypto companies get bigger and more mainstream, regulators are trying to clamp down on their innovations.

The Inflation Guy Is Feeling Pumped

After a spike in consumer prices, Michael Ashton finds himself very busy

Michael Ashton, who styles himself "Inflation Guy" | surged this year, and while Federal Reserve Chair on Twitter, has been preparing for this moment for almost 20 years. In the early 2000s, he was a derivatives trader at Barclays Capital in New York when he was tapped to build a business around inflation swaps, contracts that let traders bet on a rise in consumer prices. Ashton says he was a "good enough" trader-the real job was to build a market by being "an evangelist for the product."

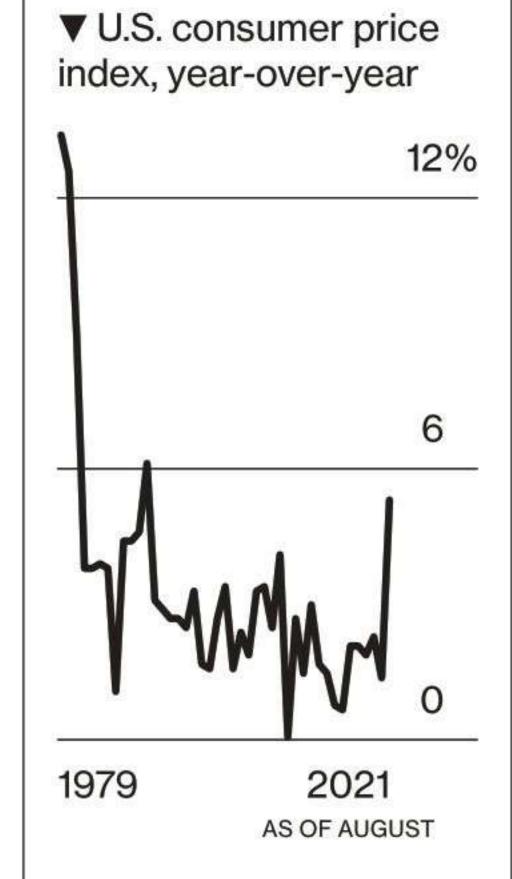
He became one even though, until recently, he expected inflation to be low and stable. Correctly so: In recent years, the U.S. consumer price index has often grown by less than 2% annually. Ashton says his measured outlook irritated his bosses at Barclays, who viewed it as an impediment to drumming up business. He thought it didn't matter: Inflation was an ever-present risk, he was inventing ways to insure against it, and low inflation made it cheap to do so. Although the market grew, and Ashton in 2009 founded an advisory business for hedging large or unusual inflation risks, he remained a voice in the desert crying out that he had rain boots for sale. "The lack of interest was amazing," he says. "It's incredible how little people thought about it—what that risk was."

Suddenly, that's no longer true. Inflation has

Jerome Powell says it's probably a temporary supply shock as the economy emerges from lockdown, Ashton sees more on the way. And he says business is booming. New customers include two private equity firms that he says are "very concerned about the effect inflation has on portfolio companies." He's starting a fund for wealthy and institutional investors to track the monthly change in the U.S. consumer price index via a combination of inflation-protected bonds, whose principal value is adjusted to changes in the CPI, and futures linked to energy, Japanese yen, and an index of home prices.

At the same time, Ashton is having to defend his turf. "All of a sudden there's all these inflation experts around," he says. "I put in 10,000 hours waiting for this to happen. Now that it's happened, I'm positioned to save the day, as it were." So Inflation Guy, who until recently limited his public-facing activity to a Twitter feed that mainly dissected the monthly CPI reports, created a podcast. Its logo shows him wearing a superhero cape emblazoned with the letter "i."

Its objective is inflation education for an investing population that has had the luxury of ignoring it for a long time. Although people younger ▶



◀ than 40 have barely experienced it, inflation, he says, "is the risk that every investor is born with, and if you do nothing to address that inflation risk, you have it until the day you die." The difficulty in making that argument is that some people banging the same drum are conspiracy theorists, Ashton says. It doesn't take long to find the corners of the internet dedicated to the proposition that the government has been intentionally understating inflation by a wide margin for half a century. "The crazy train," he calls it.

Even outside those fevered quarters, there's plenty of debate about what causes inflation. Ashton says his views "are distinctly non-mainstream"meaning he's a monetarist, or someone who believes that inflation is mainly a consequence of too much money in the system, rather than overheated economic growth or other factors. The idea once held tremendous sway, but in recent years it has fallen out of favor with economists and central bankers. The Fed under Alan Greenspan finally stopped targeting money supply growth in 2000 because, he'd said, it was no longer "a reliable indicator of financial conditions in the economy."

With the Fed's M2 money supply index having increased about 33% since February 2020, roughly five times faster than the economy, we may be about to find out if monetarism can make a comeback. A counterpoint is that even though the Fed's pandemic recovery efforts have created more money by some measures, the velocity of those dollars-how often they change hands in a given period of time-is still low. If people and businesses are hanging on to their money, there's less pressure on prices. For the past 18 months, "we haven't seen any of the pass-through from increased money supply to increased lending and spending," says Omair Sharif, president of the research company Inflation Insights. Inflation skeptic Lacy Hunt, chief economist at Hoisington Investment Management Co., predicts velocity will keep falling because of rising debt levels dampening growth.

Ashton says the appeal of monetarism is that it keeps things relatively simple. He became a convert after a couple of years of constant tinkering with inflation models that used economic growth inputs. "I stepped back and said, if you have to keep re-parameterizing the model, it probably means there's something wrong with the fundamental theory," he says. A monetarist view of the past several decades is that there's been a virtuous cycle in which lower inflation led to lower interest rates, which in turn is what actually caused the lower velocity. (People were in less of a hurry to invest their cash because low interest rates also



▲ Ashton thinks more inflation is on the way

mean lower returns.) Ashton says the Fed's recent stimulus efforts risk reversing that cycle. Although the Fed assumes it can eventually bring inflation under control by raising rates, he says this may instead goose velocity by making people less willing to hold cash.

Ashton thinks it's possible sustained higher inflation won't come to pass, but he says he has about 70% confidence in his forecast. His broader point is that people should be mindful of inflation risk even when they think it's low. After all, with 10-year Treasury notes, a benchmark for safe long-term investments, yielding just 1.3%, even a fairly modest amount of inflation can erode the value of savings over time. For retail investors looking for a simple hedge, Ashton points to Series I savings bonds from the U.S. Treasury, which pay a rate linked to inflation. "A rare good deal from the government," he says. —Elizabeth Stanton

THE BOTTOM LINE No one younger than 40 in the U.S. has much experience with inflation, but Ashton has still been able to build a career around helping people hedge the risk.

Helping Families Talk About Wealth

"When wealthy families disagree about money, something deeper is generally going on. It's the desire, the want, the need that's not being communicated effectively. So you need an active listener to help peel back that onion."

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• A German auto parts maker seeks to engineer itself a future for the post-Merkel era

Klaus Rosenfeld was making a routine visit to a potential supplier in the fall of 2018 when, unexpectedly, a big opportunity presented itself. Executives at the company let it slip that it was about to be sold. The terms hadn't been finalized, and Rosenfeld's Schaeffler AG could cut in if it acted fast.

On the drive home to Frankfurt, Rosenfeld called Georg Schaeffler, the son of one of the company's founders and now its chairman and main

shareholder, to brief him. Before hanging up, the two men agreed to sleep on it. Less than 12 hours later, Rosenfeld had the green light to make a bid for Elmotec Statomat, a world-leading supplier of equipment used in the manufacture of electric vehicles. "We've never turned around a deal so fast," says Schaeffler's chief executive officer. "It was clear the technology would accelerate our transformation—a small step with a big impact."

Impulse buying runs against the grain of German capitalism, which is more measured and methodical than the U.S. version. Yet in boardrooms from the Black Forest to the Baltic coast, a sense of urgency is taking hold with the realization that the German economic model is reaching

Germany's auto industry has been on the back foot since the 2015 emissions-cheating scandal involving Volkswagen AG, and it faces an existential threat from the looming extinction of the internal combustion engine. Yet Europe's largest economy is ill-equipped to make the transition into cleaner, digital technologies. The country's carbon dioxide emissions are the sixth-largest in the world, and it ranks 30th in mobile broadband speeds, with download rates less than half as fast as in China.

Even a success such as BioNTech SE's development of one of the leading Covid-19 vaccines is tempered by the fact that the Mainz-based biotech needed Pfizer Inc. to bring the shot to the world. Then there's the sensational collapse last year of electronic-payments company Wirecard AG, which was seen as a rare homegrown digital champion before being outed as Germany's biggest postwar fraud.

The Sept. 26 election, which will mark the end of Angela Merkel's 16-year tenure as chancellor, adds to the collective sense of unease. Her successor, whoever he or she may be, will inherit a nation that's reliant on the U.S. for security, China for growth, and the European Union for clout. Finding Germany's place in the world while guiding an economic makeover will be a monumental task.

Germany's manufacturing prowess, which was on full display at Schaeffler's headquarters in Herzogenaurach, a hamlet in northern Bavaria, when *Bloomberg Businessweek* visited this summer. Inside one of the plants, the air is filled with the smell of lubricants and the clang of machines pounding metal bands into precisely contoured rings that will be fashioned into bearings. The friction-reducing parts are the company's mainstay, ranging from thumbnail-size ones found in car transmissions that sell for less than €1 (\$1.18) apiece to others for wind turbines that are so big you could drive a van through them and cost upwards of €100,000 each.

Every pass through a metal press adds a new detail in a process that's been engineered over decades to minimize the need for humans, as indicated by the presence of just a handful of technicians. An old press dating from the 1950s—little bigger than a stand-up piano—is positioned prominently on the factory floor. It's a monument to

the company's humble beginning as a maker of handcarts, a cheap and convenient conveyance for everything from rubble to coal to hay in a battered Germany emerging from the ruins of World War II.

Schaeffler's management isn't overly sentimental about the past, even though relatives of its founders still control the company. Elsewhere on the campus, a building that once housed a paper plant is set to be bulldozed to make way for an €80 million lab, where it will carry out research and development in traditional fields like materials science as well as new ones, such as artificial intelligence and electrochemistry. The company's evolving ambitions are visible on a line that churns out axles embedded with motors and other components for electric cars from Audi AG and Porsche AG. The complex in Herzogenaurach will also house a center dedicated to accelerating development of components for hydrogenpowered vehicles, which many regard as the industry's next frontier.

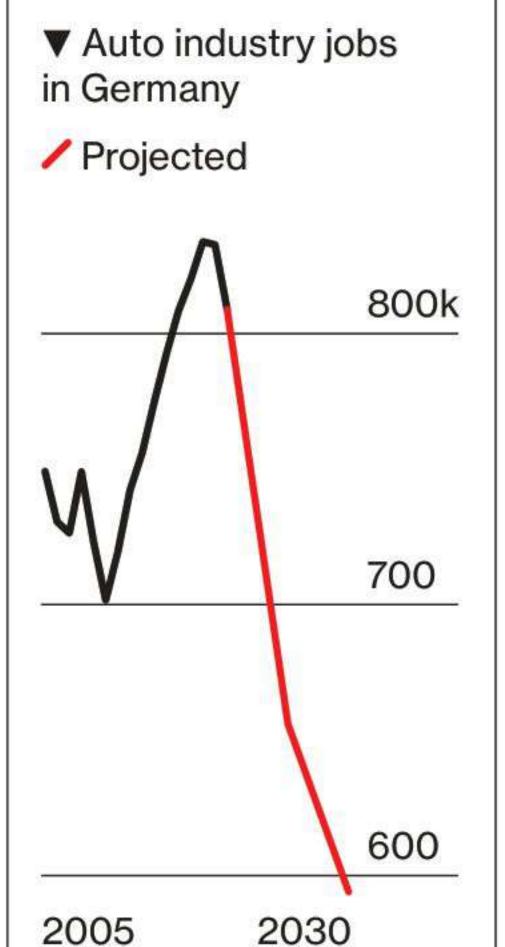
"You need to be optimistic about the future to make it in business," says Georg Schaeffler, 56, who as a child could see the lights of the factory from his bedroom window across the Aurach river. "If my father and my uncle had the confidence to start a company right after World War II, then we can be successful in this current transformation."

Georg's father invented and patented the caged needle-roller bearing—essentially small rods held steady in metal casings. The component found its way into the axles, rotors, and transmissions of cars manufactured by VW, Mercedes-Benz, and BMW. When German carmakers began opening plants abroad, Schaeffler tagged along. Today the business has operations in 50 countries and more than 80,000 employees. Every day it molds about 7,000 tons of steel—roughly the amount of metal used to build the Eiffel Tower. Sales of auto components contributed three-quarters of the €12.6 billion in revenue it booked in 2020.

Although it's a global enterprise with shares listed on the Frankfurt Stock Exchange, Schaeffler remains a prototypically German business: family-owned, tradition-bound, export-driven, and focused on factory floors rather than shop windows or the internet. It, along with much of German industry, faces a reckoning. Based on the various targets announced by governments from China to the U.K., battery-powered vehicles will outsell those with combustion engines within a decade.

To barrel down the autobahn, a Tesla still needs bearings. But Schaeffler also makes clutches, transmissions, and other components that will be mothballed or at least marginalized in the ▶

"We want to be one of the winners of this transition. But there will be casualties"



FOGRAPHS BY IIII IAN RAI IMANN FOR RI COMRERG RI ISINESS

■ migration to electric vehicles. The shift will eliminate at least 215,000 jobs across Germany's auto industry by 2030, about a quarter of the sector's workforce, according to forecasts by the country's auto lobby. To weather the transition, the company will need to replace about €6.8 billion in revenue.

Rosenfeld and Georg speak almost daily—sometimes from across the Atlantic. Georg often rises at 3 a.m. to participate in board meetings from his home in Texas, where he's lived for decades after seeking to chart his own course outside the comfortable confines of the family business.

To future-proof Schaeffler, the two men are spearheading a plan to sell or close some units—the company recently unloaded one that makes sprockets and other chain-drive components for combustion engines—while milking others for cash to invest in new endeavors. "There's still a long way to go," says Rosenfeld. "The challenge is to harvest the foundation businesses and grow the new business, both at the right pace."

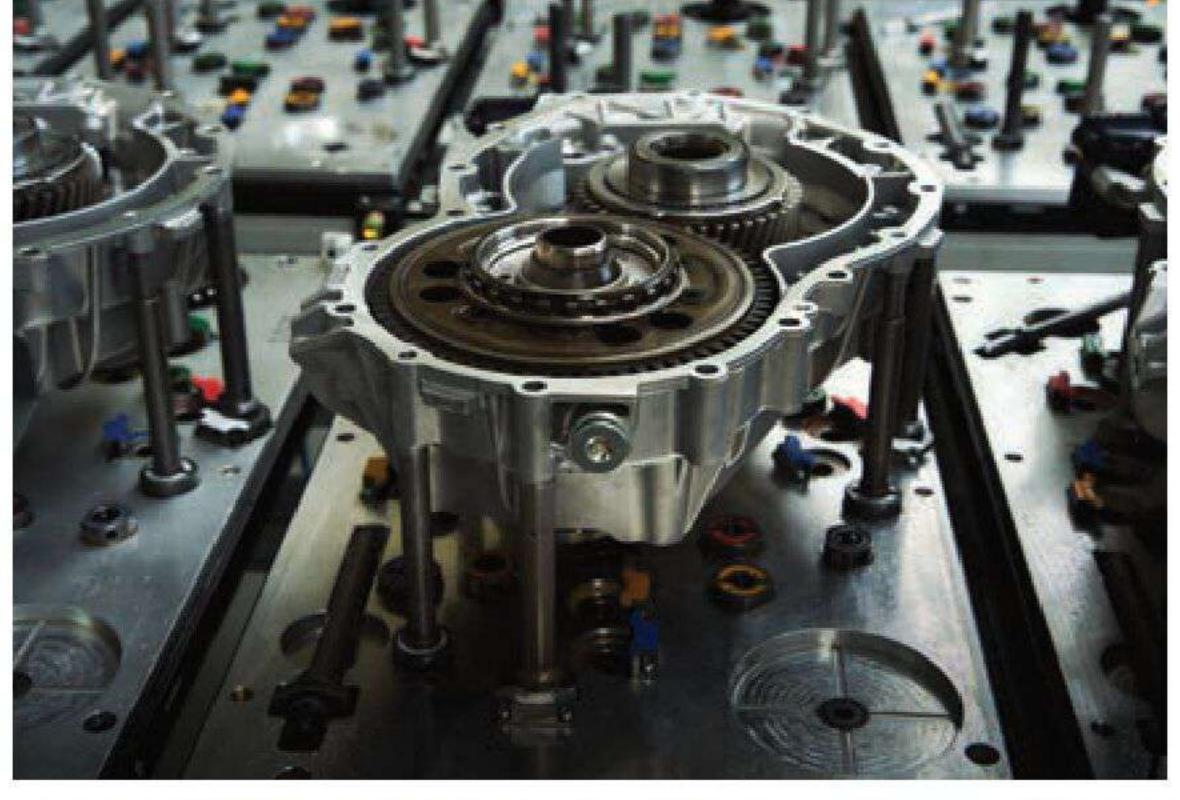
Some of the seeds he and Georg planted are starting to put forth shoots. New products include metal sheets coated with nanomaterials to conduct current in fuel cells, electric steering systems for autonomous vehicles, as well as plug-and-play sensors backed by cloud-based software that monitors and predicts breakdowns on assembly lines. "We want to be one of the winners of this transition," Rosenfeld says. "But there will be casualties," he adds.

Many of the giants of Germany Inc. are also overhauling themselves to remain relevant. Daimler AG is moving ahead with a separate listing for its truck unit. Siemens AG, the giant industrial conglomerate, is breaking itself into smaller, more agile entities. VW is undertaking a €73 billion transformation to put software and batteries at the heart of its vehicles.

Corporate transformations can be perilous, as Georg Schaeffler well knows. In 2008 the company—which even then knew it needed to expand beyond mechanical components—made a disastrously timed bid for Continental AG, a larger German auto parts maker that had just acquired electronics businesses from Siemens. The aim of the tender offer was to secure a sizable minority so as to have a say over company strategy. But with the financial crisis playing out in the background, investors jumped at what was intended as a lowball bid, and Schaeffler ended up with 90% of Continental's shares.

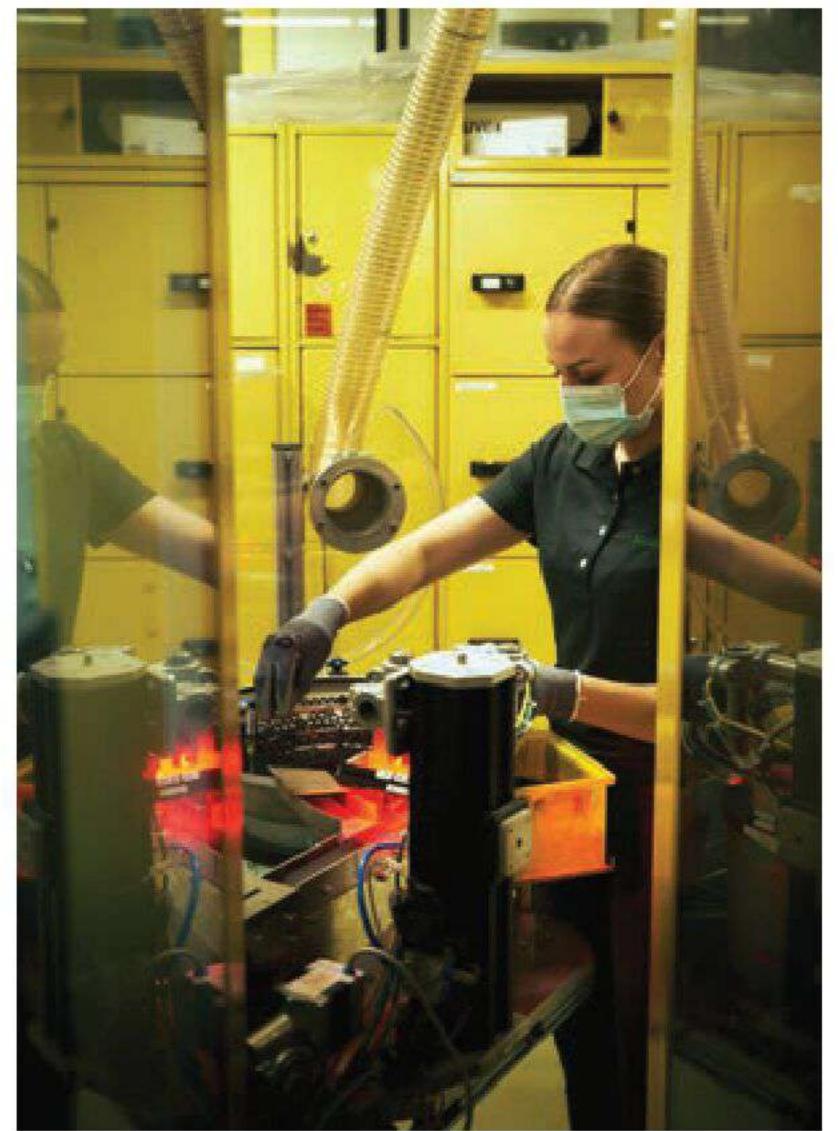
So as Merkel was battling to prevent the euro from collapsing under the weight of accumulated government deficits in Greece, Portugal, and





▲ Schaeffler's campus in Herzogenaurach

- An axle for an electric car
- A machine operator checks a sorting system (left); Rosenfeld





LUDES OCCUPATIONS WITH ABOVE-AVERAGE CYCLICAL RECOVERY BECAUSE OF THE PANDEMIC. DATA: BUREAU OF LABOR STATISTICS

Spain, Schaeffler found itself contending with its own debt crisis—a hangover from the tender offer. Georg, who'd been pursuing a career in corporate law in the U.S., was sucked back into the day-to-day affairs of the family business, which since his father's death in 1996 had been run by hired hands. Rosenfeld, a former banker, was brought in to clean up the mess. He restructured some €11 billion of debt, partly by paring back the Continental stake. Then in 2015 he managed a public offering of nonvoting shares that raised €938 million, with Georg and his mother, Maria-Elisabeth, retaining full control of the business.

After teetering on the brink of collapse, Schaeffler has developed a willingness to make tough choices—maybe more so than some of its peers in German industry. Last September it announced plans to sell or close several plants in Germany and cut 4,400 jobs in Europe by the end of 2022, about 8% of its workforce in the region.

Current trends are promising. In the first half of 2021, Schaeffler's e-mobility business, the umbrella for all its EV endeavors, secured €2.1 billion in orders, already meeting its full-year target. Operating margins rebounded from last year's pandemic hit, and the company raised its cash-flow target by one-third to at least €400 million.

"It's critical that we get the mindset right," says Georg over dinner in Herzogenaurach in a rare interview, adding that the company needs to "stay positive and confident, because culture eats strategy for breakfast."

As the company pushes ahead with its revamp, its leaders look to Berlin with a degree of trepidation. They fret about the security and cost of energy as Germany phases out coal and nuclear power, about underinvestment in digital and physical infrastructure, and about red tape that bogs down projects such as a new Tesla Inc. factory outside Berlin. Schaeffler, along with much of German industry, also fears it will get caught in the middle of U.S.-China tensions.

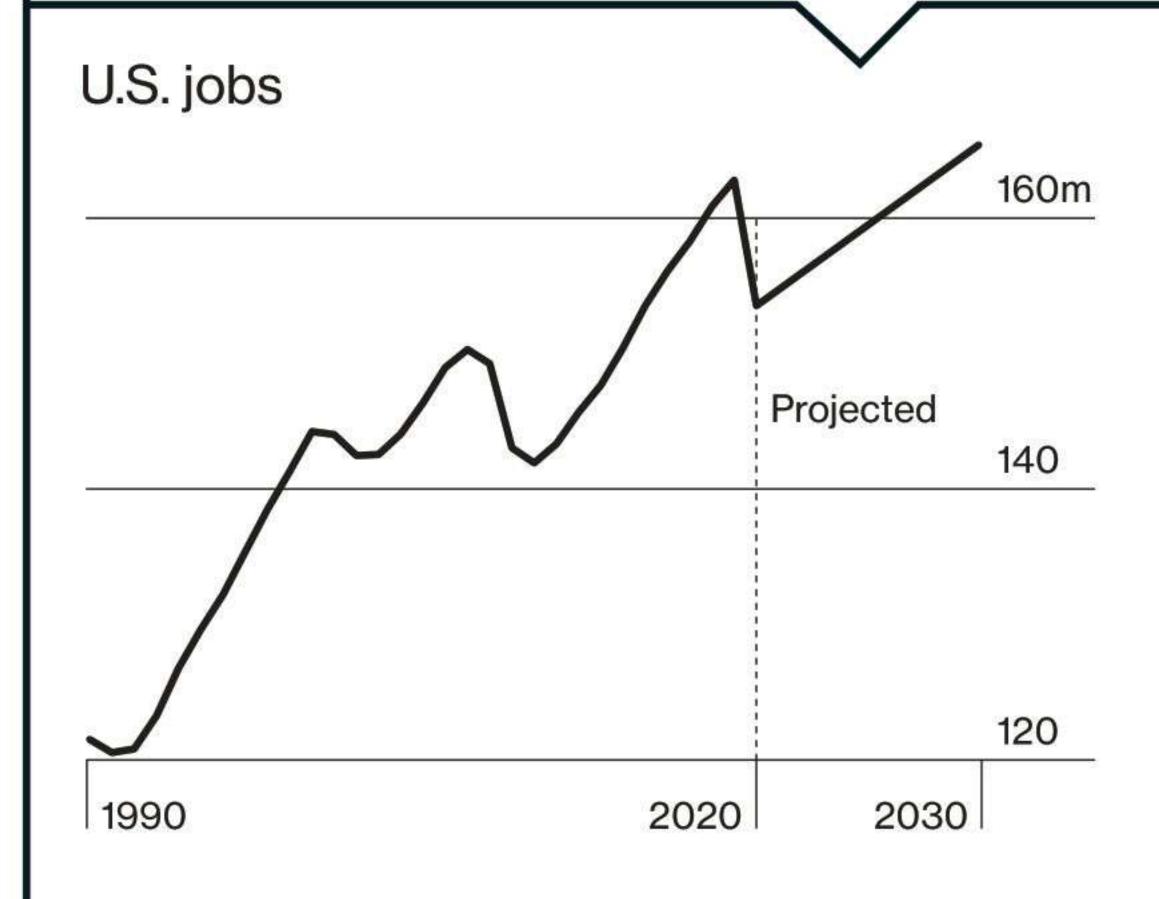
It's difficult to see how a government with the vision and focus needed to overcome such challenges will emerge from the September vote. With loyalties fragmented among six parties, a messy three-way coalition will almost certainly be needed to secure a majority in parliament, which presages policy gridlock. That's the last thing German business needs, according to Rosenfeld. "This is a global competition," he says. "From Berlin we need a more pragmatic can-do attitude." —*Chris Reiter*

THE BOTTOM LINE German industry is filled with trepidation as the extinction of the combustion engine nears. Schaeffler's blueprint for negotiating the transition may show others the way.

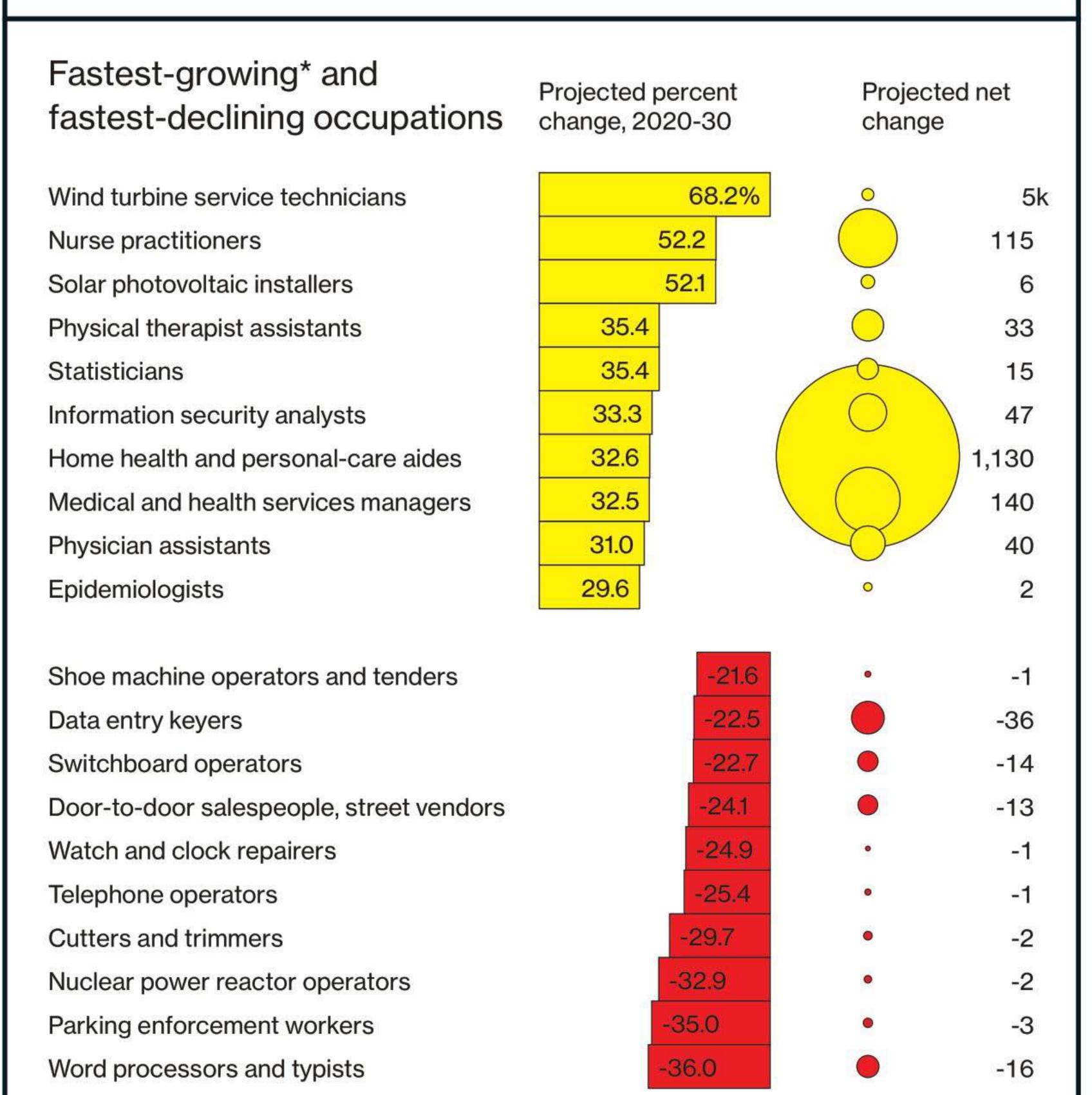
Jobs

U.S. Outlook

The latest U.S. job creation projections from the Bureau of Labor Statistics are grim: The number of workers added to payrolls annually in the rest of the decade will be about half what it was in the past 10 years. —*Alex Tanzi and Katia Dmitrieva*



The BLS predicts an increase of 11.9 million jobs through 2030. But most of that will be the reversal of pandemic losses. The net gain will amount to just 2.6 million jobs.



The health-care and social assistance sector is projected to add more jobs than any other, about 3.3 million, in response to the needs of an aging population, while automation will eat into the ranks of watch repairers and telephone operators.



Chronic pain can make a new day seem daunting.

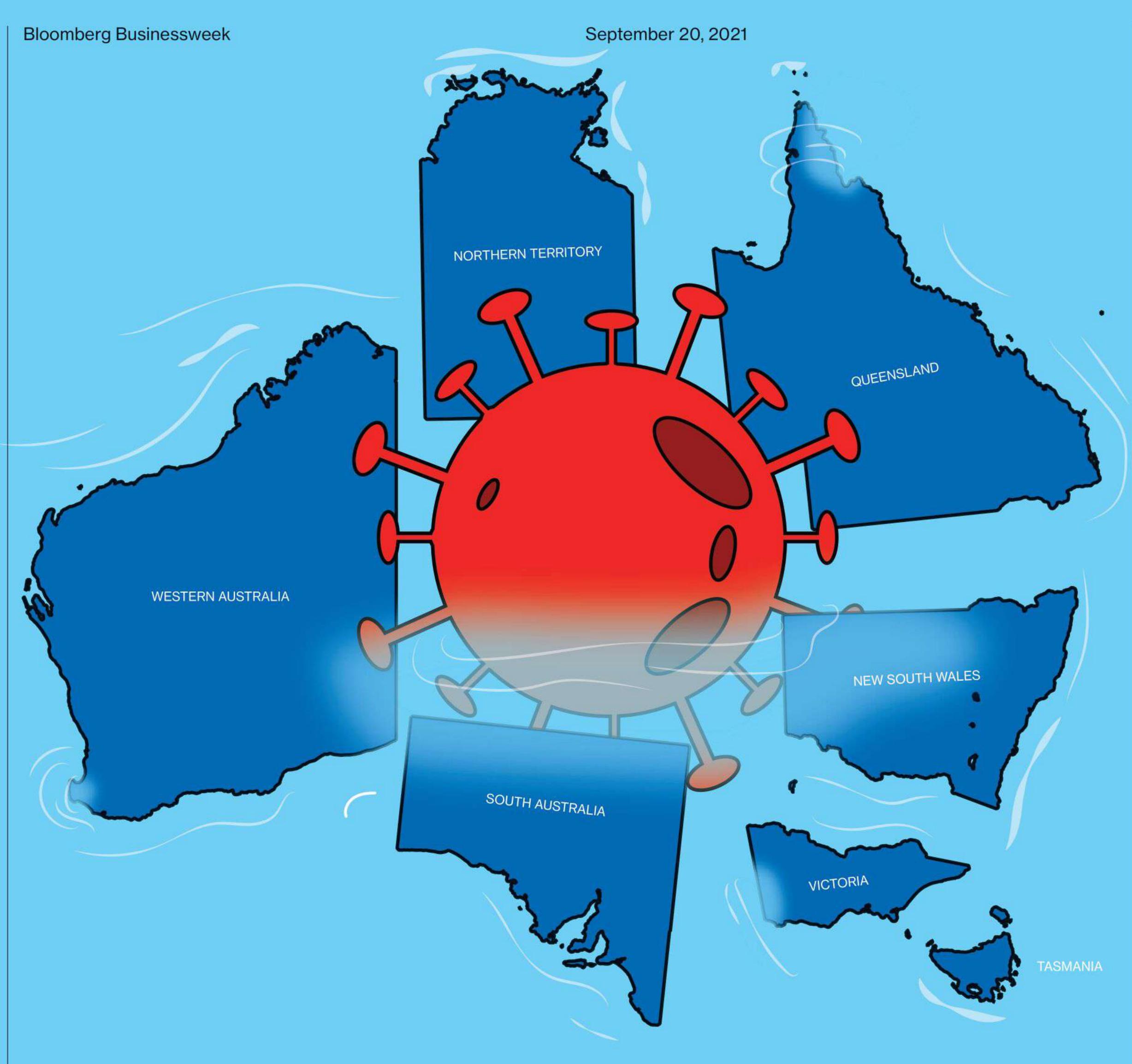
The burden of chronic pain can limit everyday life.

Abbott's neurostimulation system changes the signals that tell your brain you're in pain, giving you the relief you need.

Dignity demands that you can live each day to its full potential.

So it demands life-changing technology from us.





BOKCEK Conficts

"Covid Zero" kept Australia safe, if isolated, for 18 months. Now its states are split over how to move on

biggest crisis for Australia's federal system since 1901, when six disparate British colonies in the so-called Great Southern Land united to win collective independence. The country has never been as divided as it is now.

State borders that were previously little more than photo opportunities are now fortified in a

The coronavirus pandemic is creating perhaps the | bid to keep out residents from Covid-hit places. Separated family members are defying police orders by hugging each other across the barricades, and some Australians have been denied the right to retrieve their children or visit dying relatives.

In the densely populated southeastern states where Sydney and Melbourne are located, governments are abandoning the aim of eliminating

Edited by Amanda Kolson Hurley 38

■ Covid-19 and want to start reopening closed businesses and schools as early as next month and borders later this year. But the country's more sparsely populated north and west are doubling down on "Covid Zero," zealously defending a strategy that's allowed local residents to live maskless and with ease, though cut off from the rest of the country and the world.

"Before this pandemic, no one would have cited freedom of movement—between states and to and from overseas—as being important or significant to Australians, because it was just assumed," says Frank Bongiorno, a professor of history at the Australian National University in Canberra. "But those rights have been drastically reduced, and that will forever change people's conceptions of where they fit in the political order and even how they relate to authority."

Things were very different last year. In March 2020 the country closed its international borders to noncitizens and nonresidents. It won global praise for stamping out local outbreaks with snap lockdowns. Australia's 26 million residents were able to lead largely normal lives, and deaths from the virus stayed below 1,000 even as hundreds of thousands died in the U.S. and Europe.

The tradeoff was international isolation. That was a burden the vast majority of Australians were happy to endure—until parts of the world once paralyzed by Covid got vaccinated and started opening up again. Now, with the pandemic curbs lingering, the elimination strategy is increasingly disparaged as overly cautious and unsustainable. Australia's limits on its own citizens abroad are seen as cruel: Strict caps on international arrivals have left tens of thousands of Australians waiting to return home.

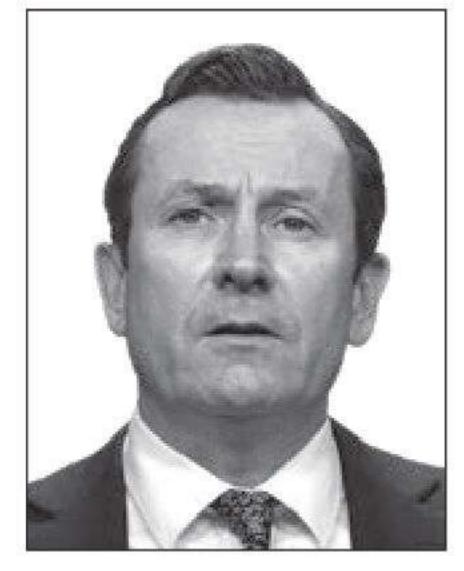
Delta was the turning point. One case of the highly transmissible variant broke through Australia's defenses in June, when a limousine driver in Sydney was infected while ferrying an international flight crew between the airport and hotels used to quarantine arrivals from overseas. Now the strain is infecting close to 2,000 people a day in New South Wales and Victoria.

In those states the focus has shifted away from containment and toward opening up. Although half of the nation's population is now in lockdown, leaders in New South Wales, where Sydney is located, have promised "freedoms" such as visiting pubs, restaurants, and gyms to those who have received two mRNA or AstraZeneca Plc shots once 70% of people 16 and older are fully vaccinated. The milestone is expected to be reached next month; the current share of fully vaccinated adults is about 48%.

Meanwhile, 2,000 miles from Sydney, Mark McGowan, the premier of Western Australia, is adamant that he doesn't need an "exit plan," because his state remains free of delta and free of restrictions. "Our policy to crush and kill the virus means Western Australians are living in one of the freest and most open societies in the world," McGowan said in a statement on Sept. 9. He's leading a group of states that want to keep the virus out for as long as they can, or until vaccination reaches extremely high levels. In Western Australia, the premier says that could be two months after 90% of adults are fully vaccinated; that figure now stands at about 39%. The vaccination rate in Western Australia has been the slowest of all eight states and territories, meaning its hard border may remain well into next year.

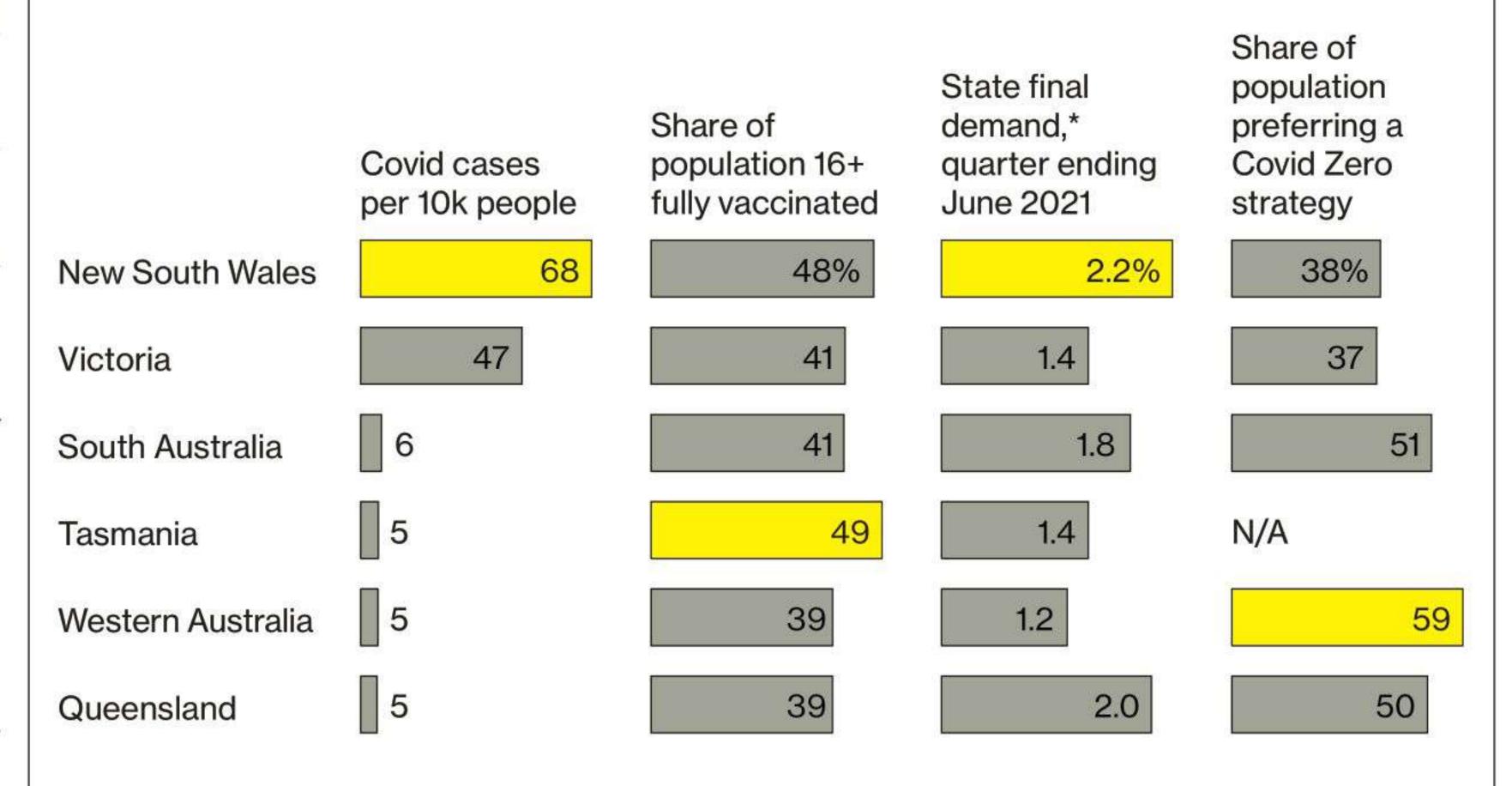
Australia's internal rift reflects the broader dilemma facing countries that have largely succeeded at blocking or stifling the pathogen. With most of the world failing to contain it and now treating it as endemic, the outliers are realizing they may have won a Pyrrhic victory. The strength of these countries' commitment to Covid Zero has varied according to how much isolation their economies can tolerate. China continues to try to stamp out all infections, while Singapore wants to shift toward living with the virus. Australia is stuck somewhere in between, and its political system is showing the strain.

McGowan-known as "Mr. 89%" for his favorability rating while guiding the progressive Australian Labor Party to a landslide win in March's state election—has emerged as a figure of resistance against Prime Minister Scott Morrison, who's pressuring states to reopen their borders later this year. Even as Morrison, the leader of the Liberal Party,



McGowan

The State of Australia's States



struggles for traction in the west, he's desperate to sell a message of hope to pandemic-weary voters in the eastern states, especially with polls showing his coalition government trailing Labor ahead of elections that must be held by May 2022.

After telling voters as recently as March that the vaccine rollout wasn't a race, Morrison is now urging all state and territory leaders to commit to a "national plan" of easing lockdown rules when 70% of all Australians aged 16 and older are fully vaccinated and allowing unrestricted domestic and international travel at 80%. "Any state and territory that thinks that somehow they can protect themselves from Covid with the delta strain forever, that's just absurd," Morrison said in a television interview in August. "We need to get out of there and live with it. We can't stay in the cave."

Such comments don't resonate well in parochial Western Australia. The state has a history of flirting with secession, including a 1933 referendum that showed a majority favored splitting from the rest of the federation. In recent years, state leaders have been aggrieved by what they perceive as the federal government siphoning off the largesse from its iron ore, natural gas, and gold exports to bolster poorer states.

One group in Western Australia is keen for McGowan to follow the eastern states' lead in planning a quick exit from pandemic limbo: the business community, which says there will be severe economic repercussions if borders remain shut. National carrier Qantas Airways Ltd. has warned that Perth, the state capital, may lose its status as a transit hub for flights to London.

And there are signs that isolation is adding to the costs of doing business in a city already off major shipping routes. Although demand for Western Australia's commodities remains strong, its quarterly growth rate of 1.2% trails the national average of 1.7%. Ai Group, a lobby group representing employers, says this could be a result of labor shortages related to the hard border. There are anecdotal reports of major delays in shipping to and from the state, Ai Group's Western Australian State Manager Kristian Stratton says.

"The longer it goes on, the more difficulty we have," says Steve Pollard, who oversees about 50 employees as chief executive officer of Perth-based Barclay Engineering. "There has to be recognition from the community that we're not going to stay Covid-free and we need to end the uncertainty about when we can open back up." —Jason Scott

THE BOTTOM LINE Now that delta has punctured Australia's defenses, some states are eager to open up. Others want to maintain hard borders, creating a political test for the prime minister.

Can Public Election Funding Scale Up?

 After spreading in cities and states, the idea faces hurdles in Congress

When Christina Henderson, a new at-large member of the Council of the District of Columbia, first considered running for office, one of her worries was whether she could raise enough money to be competitive. "I was not independently wealthy. Most of my friends worked in the public sector," says Henderson, who was previously a staffer on the Council.



▲ Henderson

But D.C. had begun public financing before the 2020 election cycle. The program provides candidates who agree to accept only small contributions with a 5-to-1 match for every dollar raised from a D.C. resident. Henderson took her chance, won her seat, and credits the program with giving her a path.

"One of the best things, as an elected official who plans to continue to participate in public financing, is that I don't have to spend my term fundraising or worrying about resources for the next election," she says. "I can just do my job."

A report in August from the D.C. auditor found

◀ the program, which distributed almost \$4 million to candidates in 2020, increased both the number of people who ran for office and those who donated to local campaigns.

Public financing of elections has been around for decades in the U.S. Today there are at least 27 programs in states, cities, and counties (most but not all of them Democratic), with models ranging from direct candidate grants to small-dollar matching. Advocates say public financing can stem corruption, empower a public that too often feels marginalized by special interests, and diversify public bodies from school boards to Congress.

The idea has been gaining traction: New York City and San Francisco both moved to bolster their existing programs, and new programs in Baltimore and Portland, Ore., as well as the one in Washington, have gotten off the ground. But there are still questions about how much public financing can mobilize new donors at the local level. And it faces a test in Congress this fall as part of a voting rights package.

November will be the first time Democracy Vouchers are used in a mayoral election in Seattle. Under this program, introduced in 2017, vouchers are mailed to registered voters, who can then donate them to candidates. "Seattle's model is really unique, because it doesn't require residents to have disposable income to participate," says Jennifer Heerwig, a sociologist at the State University of New York at Stony Brook. After a nonmayoral Seattle election in 2017, Heerwig and other researchers found that voucher donors were more representative of the population in age, income, and race than cash donors. In 2019, the program's second cycle, the number of residents using vouchers almost doubled, to about 7%.

This year the top two vote-getters in August's mayoral primary, Bruce Harrell and Lorena González, redeemed the fewest vouchers among the five candidates who chose to use them, and outside spending soared. The two leading PACs that supported Harrell and González, for example, raised almost seven times more money than the top vote-getters did combined in the last election.

Alex Koren, González's campaign manager, says they're seeing a significant uptick in voucher contributions since the primary ended and expect to max out on redeeming vouchers this month. Harrell's campaign didn't respond to a request for comment, but data shows it's already maxed out.

Not everyone is sold on the merits of public funding, even in blue cities. In May voters in Austin rejected a ballot proposal that would have established a city voucher program such as the one Seattle uses. Polls suggest voters like the idea of reducing the influence of money in politics, but they're less keen to put their own tax dollars toward a solution.

Experts say public-financing programs can suffer from not being generous enough, hampering candidates who might choose to participate—as is the case with the system for presidential campaigns, which no general election candidate has taken part in since 2012. When Republican Doug Ducey ran for Arizona governor in 2014, he declined public financing and was able to raise more than double the amount of his primary competitors who opted in.

"The programs will say, 'Take these public funds, but don't spend over this amount or else you're not eligible to take the public money,' which is an invitation for all these outside groups to spend tons of money," says Raymond La Raja, a political scientist at the University of Massachusetts at Amherst. "And that's exactly what happens."

HR 1, the comprehensive voting rights bill the House of Representatives passed in March, has a provision for voluntary 6-to-1 matching for small campaign donations up to \$200. To avoid political blowback from using taxpayer funds, it would be financed through a new fee on criminal and civil fines, fees, and settlements with banks and corporations. The Congressional Budget Office estimated the new fees would reduce the federal deficit by almost \$1 billion over a decade. HR 1 would also authorize a voucher program to be piloted in three states, where voters would receive \$25 to donate to congressional candidates.

Democratic Representative John Sarbanes of Maryland, the lead sponsor of HR 1, says there's "good momentum" for the public-financing provision. While key Senate swing voter Joe Manchin of West Virginia has expressed reservations about the size of HR 1, he co-sponsored a compromise bill that Senate Democrats introduced on Sept. 14 that included 6-to-1 small-donation matching. Even a trimmed-down package may not garner the 10 Republican votes it would need in the Senate. Minority Leader Mitch McConnell has attacked the public-financing proposal specifically as "piles of federal dollars going to yard signs, balloons, and TV ads for candidates at least half of Americans disagree with."

Federal public financing may hinge on the fate of the filibuster. "I think whatever represents real reform, sadly, by definition, will be something that the current Republican leadership in the Senate will stand against," Sarbanes says. "If that's the reality we face," he says, "then you have to look at resetting the rules. And I think that conversation is ongoing among Senate Dems." —*Rachel M. Cohen*

THE BOTTOM LINE Public funding of elections has gained steam in cities and states as voters seek to curb the influence of big money, but change at the federal level via HR 1 seems less likely.

"I don't have to spend my term fundraising or worrying about resources for the next election"

Afghanistan

Gone to Ground

Since the Taliban returned to power in Afghanistan, it's tried to present a moderate image, saying it will respect women's rights within the limits of Islamic law. But fighters from the group have fired shots in the air in Kabul and other cities to disperse women protesting to have a role in government and the right to education and jobs. There are no women in the Taliban's new cabinet, a step backward from U.S.-backed governments that included female lawmakers and technocrats. Many of Afghanistan's prominent female leaders have left the country, fearing reprisals from the Taliban, or gone into hiding. Here are a few of them. — Archana Chaudhary and Eltaf Najafizada

Fawzia Koofi Former member of parliament, 46

Naheed Farid Former member of parliament, 37

Sima Samar Former human rights commissioner, 64



Koofi, who represented the northern Badakshan province, was the vice president of the National

Assembly, the country's parliament. A single parent who advocated for women's issues, Koofi was unpopular with conservatives, and there have been multiple attempts on her life. Shortlisted for the Nobel Peace Prize in 2020, Koofi left Afghanistan and is lobbying governments to give the country humanitarian aid.



Farid chaired the parliament's women's affairs commission. Last year she drafted and successfully implemented a

proposal to include mothers' names on birth certificates. Farid has warned that a Taliban government without international oversight will be a "regime of terror." She fled the country, fearing for her safety and that of her children, the BBC reported.



A doctor from the minority Hazara community, Samar was minister for women's affairs in Hamid Karzai's government in

the early 2000s. She survived assassination attempts in office but resigned after questioning how conservatives interpreted Islamic law and advocating for a woman's right to not wear a burqa. She later ran hospitals and lead the Afghanistan Independent Human Rights Commission. Her whereabouts are unknown.

Habiba Sarabi
Former negotiator in
Taliban talks, 65

Shukria Barakzai

Former ambassador to Norway, 51





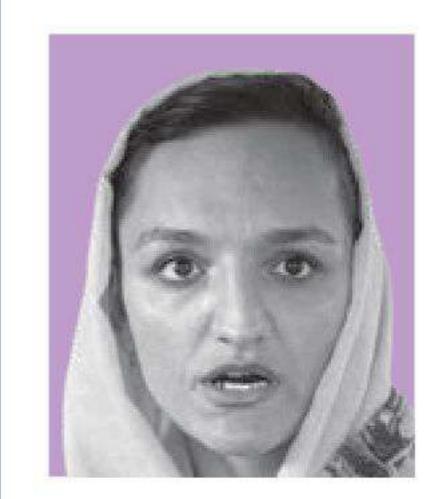
An ethnic Hazara leader and doctor, Sarabi was one of only four women to take part in the peace negotiations

ahead of the U.S. withdrawal. She was minister for women's affairs for two years, starting in 2002, and the first female governor of Bamyan province, west of Kabul. She continues to criticize the Taliban from an undisclosed location in Afghanistan.



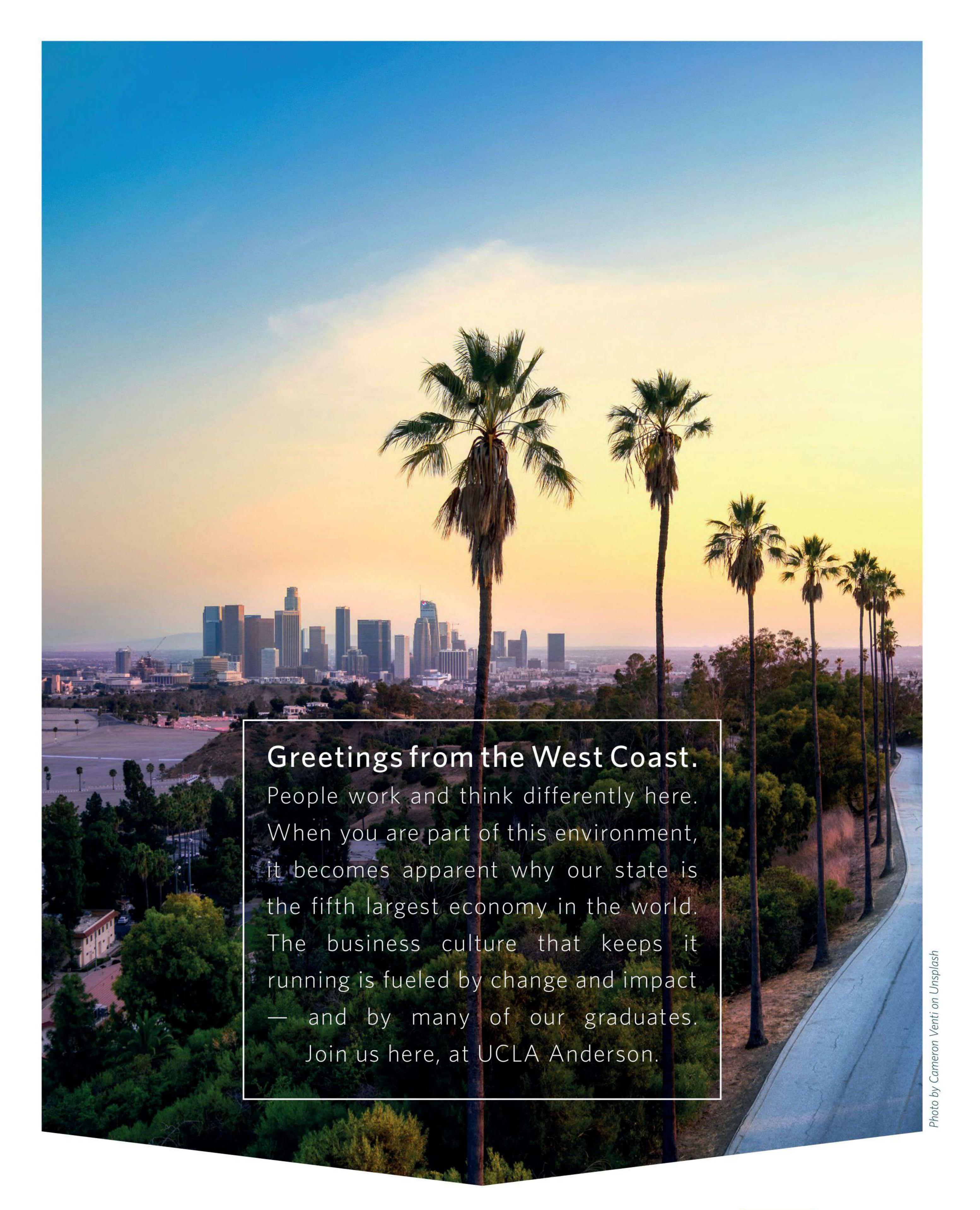
Barakzai, a former journalist, survived a targeted suicide-bomber attack in 2014. An ethnic Pashtun from Kabul, she's been

a leading advocate for women's rights since 2001. Just months after the Taliban's fall, she founded a magazine called *Aina-e-Zan*, or "the Women's Mirror." She helped pass a new constitution in 2004, the same year she was elected to parliament. Barakzai has fled the country.



Ghafari was mayor of Maidan Shahr, just north of Kabul, before she and her family fled to Germany in August. She's

survived six assassination attempts, and unknown gunmen killed her father last year in a bid to force her to quit. Former U.S. Secretary of State Mike Pompeo gave Ghafari the International Women of Courage award in 2020.





Business Schools





Women and most minority groups are underrepresented in U.S. MBA programs

The C-suite trainees enrolled in today's MBA programs are a microcosm of the challenges playing out across America's corporate landscape. By and large they are still too male and lack the diversity to reflect the demographics of future business culture.

The historic national reckoning on race that was triggered by the killing of George Floyd has touched off a reexamination of corporate America from top to bottom. We created the Bloomberg Businessweek Best B-Schools Diversity Index to assess and rank B-schools which are developing the next generation of business leaders—based on the degree to which they are addressing the institutional racism and discrimination that have excluded certain minority groups and women from MBA programs in the U.S.

In this inaugural installment of the diversity index, women had parity at only five of the 84 schools. Fewer than two dozen schools had enough Black and Hispanic students to equal their respective shares of the broader population. Seven MBA programs failed to attract even one Black student, and four programs showed the same absence of Hispanic students.

Some schools, including North Carolina State University and George Washington University—Nos.1 and 2 in the diversity ranking-stood apart, but many were mediocre at best. With the White population set to shrink steadily over the next several decades and



September 20, 2021

Edited by Rebecca Penty and Caleb Solomon ■ people of color set to account for a bigger share, even holding ground is falling behind. "The future boardroom will be much more diverse, and it will be more representative of the kind of class that we are recruiting," says Anuj Mehrotra, dean of George Washington University School of Business. In the ranking, his school's program was 55% female and only 36% White. The school is one of 13 where White MBA students were in the minority.

Investors such as BlackRock Inc. and Vanguard Group Inc. have been bringing pressure on companies with non-diverse boards for several years. Nasdaq Inc. is asking listed companies to have minimum levels of women and minorities on their boards or to explain why they can't, and Goldman Sachs Group Inc. has halted underwriting public offerings for companies that don't meet minimum standards. California companies that lack women and people of color on their boards can be fined. MBA classes represent a unique opportunity for future executives to operate in an environment that's more diverse than the current office. More than half of the cohorts have 100 or fewer students, meaning even a small change in enrollment can translate into significant improvements, or losses, in diversity.

In the index, which relies on data from schools' most recent classes, race and ethnicity count for 50% of the diversity score and gender the other 50%. The racial results are weighted to take into account the existing underrepresentation in registrations for the Graduate Management Admission Test. On that basis, Black students made up 8% of MBA students, while Hispanic students were 9.4%, Asian students were 18%, and women were 39%. The B-schools at Howard University, the University of California at Irvine, and Florida International rounded out the top five after George Washington and NC State.

The business school at the College of Charleston in South Carolina had the largest share of women in an MBA class (66%). Howard, an historically Black university, had the highest share of Black students (100%), followed by American University (29%). For Hispanic students, the top programs were at Florida International (67%) and Miami Herbert Business School at the University of Miami (38%). Asian students, who are overrepresented in the GMAT relative to the broader population (16% vs. 6.6%), have the largest share of all minority groups in B-school classes (18%).

The effort to create diversity has to be intentional and sustained, Mehrotra says. George Washington leverages its location in Washington, D.C., to tap local diversity as well as encourage current students to work with local minority businesses to help them improve operations. A majority of the deans at GWU are either women or underrepresented minorities, he says.

Another challenge for the MBA programs is to make sure that diverse groups of students are prepared for the lack of diversity in most workplaces, says Anthony Wilbon, dean of the Howard University School of Business. Howard students attend meetings and work in collaboration with corporate leaders to address the students' potential concerns and anxieties as well as help business leaders better prepare for a more diverse executive base and improve retention, he says. "We try to expose them to all those soft skills or social skills so that by the time they finish they will have the technical expertise but also be able to work in environments that

Top 30 U.S. B-Schools

Rank	Div	ersity rank	Compensation
1	Stanford	16	1
2	Dartmouth (Tuck)	17	2
3	Harvard	17	3
4	Chicago (Booth)	43	4
5	Northwestern (Kellogg)	38	5
6	Columbia	44	7
7	UC Berkeley (Haas)	30	9
8	MIT (Sloan)	41	6
9	Pennsylvania (Wharton)	24	8
9	Virginia (Darden)	54	11
11	NYU (Stern)	29	10
12	Yale	40	13
13	Michigan (Ross)	25	15
14	USC (Marshall)	27	17
15	Duke (Fuqua)	15	14
16	UCLA (Anderson)	38	18
17	Georgetown (McDonough)	57	19
18	Emory (Goizueta)	55	20
19	Carnegie Mellon (Tepper)	72	16
20	Cornell (Johnson)	63	12
21	Texas at Austin (McCombs) 47	21
22	Rice (Jones)	46	25
23	Howard	3	40
24	Vanderbilt (Owen)	61	22
25	Rochester (Simon)	11	27
26	Indiana (Kelley)	58	28
27	Florida (Hough)	26	32
28	Maryland (Smith)	14	30
29	Georgia Tech (Scheller)	50	26
30	Washington (Foster)	69	23

organization of business

schools, which adminis-

For Syracuse's Martin

J. Whitman School of

Management, the pan-

demic might explain the

29% female class for the

2021-22 cohort, which put

the school near the bot-

tom of the rankings. That

was an anomaly, because

the share of women in

both the previous-year

class and the most recent

one was just shy of 60%,

says Alex McKelvie, asso-

ciate dean of under-

graduate and master's

education at Whitman.

Still, improving the poor

showing in Hispanic stu-

dents (3%) is a work in

progress for the upstate

ters the GMAT.

1 North Carolina State (Jenkins)

Schools with top diversity

rankings

4 UC Irvine (Merage)

5 Florida International (Chapman)

6 Pittsburgh (Katz)

7 Hult

7 University of Miami

9 American (Kogod)

10 UC Davis

11 Rochester (Simon)

12 Bentley

13 Charleston

14 Maryland (Smith)

15 Duke (Fuqua)

16 Stanford

17 Dartmouth (Tuck)

17 Harvard

17 Willamette (Atkinson)

20 Pepperdine (Graziadio)

might not be similar to what they see in this academic space at Howard," says Wilbon.

The pandemic may have exacerbated the potential disparities: Surveys done by the Graduate Management Admission Council indicated female candidates had an inclination to shift to online programs and Black and Hispanic students had fewer financial resources to pursue their studies, says Rahul Choudaha, director of industry insights and research communications at the nonprofit

The complete list of schools and a detailed methodology are available at bloomberg.com/business-schools/

Networking	Learning	Entrepreneurship	Overall Score
1	7	1	100.0
6	12	36	91.8
15	37	14	89.2
11	22	4	87.8
2	25	23	87.5
9	32	19	85.4
26	50	3	83.6
33	64	8	82.2
18	78	34	81.3
14	13	31	81.3
25	52	49	80.9
20	14	26	80.6
7	40	32	78.5
17	47	11	76.7
21	59	65	75.9
7	53	20	73.9
16	10	18	71.8
10	5	43	71.6
19	27	11	71.5
38	55	58	71.2
21	39	17	70.8
28	8	5	70.5
5	11	38	68.3
27	27	35	67.1
47	44	54	66.6
13	18	29	65.2
3	27	51	64.4
55	19	21	63.9
34	34	30	63.0
49	34	46	62.2

New York school, he says. While none of the B-schools included in the top 10 Bloomberg Businessweek Best B-Schools ranking finished higher than 16th in the diversity index, the top-three-ranked MBA programs overall-Stanford, Dartmouth, and Harvard—were in the top 20. Even at the lowest-ranked school in that index, diversity is increasingly front and center, says Brigitte Madrian, dean of the Brigham Young University Marriott School of Business. Efforts to improve mentorship and focus on diversity have helped the share of women rise to a quarter of the MBA class from less than 20% about three years ago, she says. To improve enrollment of underrepresented minorities in the MBA program, there's now an initiative to identify high-potential undergraduate students from underrepresented groups and encourage them to join the program, she says. In January and February, the performance evaluation of every BYU Marriott employee for the first time included a conversation about their efforts to improve diversity in the previous year and their plans for the next, Madrian says. Employees had a three-page checklist providing examples of changes they could consider. "The most important thing is that everyone is thinking about this," she says. "People are taking responsibility. This put the fire to their feet." — Jeff Green

THE BOTTOM LINE U.S. MBA cohorts generally aren't diverse. Out of 84 schools ranked, five had women at parity, seven had zero Black students, and four had no Hispanic students. Covid-19 may have exacerbated disparities.

B-Schools Seek More Women

They still fill fewer
MBA spots than men, and
Covid isn't helping

The U.S. MBA is no more immune to the gender gap than the rest of corporate America. Even as women make up a majority of all college students and fill more than 6 out of every 10 seats in U.S. master's degree programs, the number of aspiring female executives continues to lag in MBA programs, which are often the surest route to the corner office.

The inaugural Bloomberg Businessweek Best B-Schools Diversity Index shows women secured fewer than 40% of MBA spots at the 84 U.S. schools included in the study, reaching parity or better at only five schools. In 27 of the 84 schools, women made up one-third or less of the class. It shouldn't be a surprise. Despite being half the workforce, less than 10% of S&P 500 chief executive offi-

cers are women. Women captured 30% of board seats at S&P 500 companies for the first time only this year.

MBAs join engineering, math/computer science, and physical science among the master's programs in which men remain a majority of enrollees, according to 2019 data from the Council of Graduate Schools. The only programs in the diversity index in which women were a majority of the cohorts were at the College of Charleston

 MBA programs with highest shares of female and nonbinary students

Charleston	66%
North Carolina State (Jenk	ins)65%
UC Irvine (Merage)	61%
George Washington	55%
Pittsburgh (Katz)	53%
Dartmouth (Tuck)	49%
Boston University (Questr	om)48%
UC Davis	48%
Bentley	47%
Willamette (Atkinson)	47%
Stanford	47%
Tennessee (Haslam)	47%

School of Business in South Carolina, North Carolina State University's Jenkins School of Business, the Paul Merage School of Business at the University of California at Irvine, the George Washington University School of Business in Washington, D.C., and the University of Pittsburgh's Katz Graduate School of Business.

Undergraduate business students also tend to skew male, perpetuating the trend, says Ron Magnuson, director of MBA and professional programs at the College of Charleston. At 66% female, Charleston's MBA class had the highest proportion of women among schools in the Bloomberg Businessweek Best

B-Schools Diversity Index. Charleston actively pursues undergraduate students who aren't in business programs, Magnuson says, including women with degrees in fields as varied as art, dance, and Spanish. To level the playing field, the school requires all students to take a series of online summer courses on topics such as accounting, finance, and quantitative methods and to work with case studies before beginning their MBA.

Grace Orr, who has a public-health degree from Ohio State University, moved to Charleston to work at a non-profit focused on homelessness. The 26-year-old Ohioan says she enrolled in Charleston's MBA program to have a better shot at getting a manager or executive director role in her field. With a focus on mentorship and career development from the school, Orr has found support and plenty of opportunities to collaborate with other women, who "build each other up," she says. "There are a lot of things in the workplace where women face a glass ceiling."

Leadership is key, says Lindsay Haberman, associate director of recruitment for full-time MBA students at UC Irvine's Paul Merage School of Business. The school, which finished fourth in the diversity index, was also ranked No.1 for female faculty at B-schools by the *Financial Times*. Women MBA students at Paul Merage mentor undergraduates, and female student ambassadors also work in admissions, Haberman says.

Still, the same societal pressures that can derail the career of a working mother can be a roadblock for one pursuing an MBA. During the pandemic, millions of women were forced to leave the workforce to care for dependent children or other family members. The percentage of women willing to consider an online degree vs. an in-person program rose from 15% in 2020 to 24% in 2021, according to survey data from the Graduate Management Admission Council. "For many female candidates, Covid was a much harsher blow in terms of balancing personal and professional life," says Rahul Choudaha, director of industry insights and research communications at GMAC. "That has made it more challenging for many female candidates." — Jeff Green

THE BOTTOM LINE Women account for less than 40% of MBA students in the U.S. Creative recruitment at the College of Charleston in South Carolina helps its program, where 66% of students are female, stand out.

Reserving Space

The results are striking at some MBA programs that have worked to attract Black and Hispanic students

Jaeden Powell says she was hesitant to share her opinion with co-workers in her first job at a New York investment bank. As a young Black woman, she wasn't sure where she fit in. "There weren't a lot of people who looked like me in the room," Powell says.

Now the 24-year-old is the first to occupy a spot aimed at students from underrepresented groups at North Carolina State University's Jenkins MBA program. The new effort from NC State may eventually account for 10 of the 50 MBA seats being offered each year, says Jen Arthur, director of admissions.

NC State was the top school in the first Bloomberg Businessweek Best B-School Diversity Index, which ranks business schools based on their success in attracting female students and those from minority ethnic groups—two demographics that have long been excluded from the programs that supply corporations with their leaders. NC State's MBA class in the ranking was 65% female, the second-largest share for women of any school, and Black and Hispanic students made up an unusually high one-quarter of the cohort. Howard University, an historically Black school, had the highest share of Black students, followed by American University. For Hispanic students, the top programs were at Florida International University and the University of Miami.

Across U.S. schools, however, the data show most minority populations are underrepresented. Students of Hispanic background made up 9.4% of MBA enrollment, half the Hispanic share of the U.S. population. Black students had 8% of MBA seats, vs. a 14% share of the population. Asian students, the best represented group, exceeded the Asian share of the population at 62 of 84 schools.

With people of color making up a growing proportion ▶



17

◄ of U.S. society—soon to be a majority—diversity in the business world is a critical issue. Even after the racial awakening prompted by the murder of George Floyd, enrollment in MBA programs trails the diversity of the population, and minority applicants have fewer financial resources to pay

for studies than their White peers.

Companies that lack Black directors have been the target of investors and activists, leading to a surge in board appointments over the past 18 months. Data show that Latino board members have experienced fewer gains and are even further behind their share of the population, according to executive recruiter Heidrick & Struggles. Only five S&P 500 companies are run by a Black chief executive.

Some schools have been working to boost representation of different ethnic groups for years and have the numbers to show for it. In 1968 the Simon Business School at the University of Rochester was the fourth school to join the Consortium for Graduate Study and Management, which promotes enrollment and leadership for people of color. Now a majority of the school's MBA students are people of color. Simon ranked 11th in the diversity index, in which race and ethnicity counted for 50% and gender the other 50% of the total score.

"We fundamentally believe that diversity in business leadership will create a competitive advantage for the companies where our students ultimately work and ultimately lead," says Rebekah Lewin, senior assistant dean of admissions and programs at Simon. "Not only is there going to be an impact on the diverse students that we enroll, but I think on the nondiverse students as well."



 MBA programs with highest shares of Black students

Howard	100%
American (Kogod)	29%
Rochester (Simon)	25%
George Washington	20%
Pittsburgh (Katz)	20%
Purdue (Krannert)	19%
Hult	16%
Emory (Goizueta)	16%
Georgia Tech (Scheller)	16%
Tulane (Freeman)	16%

 MBA programs with highest shares of Hispanic students

Florida International (Chapman)	67%
University of Miami	38%
Florida (Hough)	24%
Hult	22%
Rochester (Simon)	20%
Pepperdine (Graziadio)	20%
Texas Christian (Neeley)	19%
American (Kogod)	18%
George Washington	16%
Baylor (Hankamer)	14%
South Carolina (Darla Moore)	14%

MBA programs need to recognize that increasing the diversity of their students is the right business decision, says Ayman Omar, associate dean of graduate programs at American University's Kogod School of Business. "There's also been a climate change among the students," Omar says, noting that Black and Hispanic students are twice as likely as others to recommend the school to peers, according to student surveys done by the school. Just under a third of Kogod students are Black, best among all MBA programs after Howard. Howard is ranked third in the diversity index, while Kogod is ninth. The proportion of Black faculty at Kogod has more than doubled since 2014, and since 2015 the share of Black MBA students has increased 47%.

Even in areas like Florida, where MBA programs such as the Florida International University College of Business and University of Miami Herbert Business School can take advantage of a large Hispanic population, the focus on diversity has to remain intentional, says William Hardin, interim dean at Florida International's B-school and associate dean for graduate programs. The school, which at 67% has the highest proportion of Hispanic students, was ranked fifth in the diversity index. It has no Black students in the current class; Hardin says that attracting Black students is a continuing focus. Overall, 15% to 16% of those in grad programs at Florida International are Black.

The system remains precarious. About 3 in 4 under-represented minority students indicated plans to cover tuition using external funding sources such as grants, fellowships, and scholarships, vs. just over half of nonminority candidates, according to survey data from the Graduate Management Admission Council. That means minority students rely more on funds that are less under their control, compared with majority students who can pay a larger share of their own education. So even if they want to get an MBA, for many minority students the funding is more at risk of falling short. — *Jeff Green*



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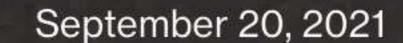
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- Financial Times, 2021

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AN EXCLUSIVE EXCERPT FROM THE CONTRARIAN, A NEW BIOGRAPHY

BY MAX CHAFKIN

ADS, EILLANCE, ONISTS, 5

President-elect Donald Trump was planted at a long table on the 25th floor of his Manhattan tower. Trump sat dead center, per custom, and, also per custom, looked deeply satisfied

THE MEETING STARTED WITH A THANK-YOU.

ter, per custom, and, also per custom, looked deeply satisfied with himself. He was joined by his usual coterie of lackeys and advisers and, for a change, the heads of the largest technology companies in the world.

"These are monster companies," Trump declared, beaming at a group that included Apple's Tim Cook, Amazon's Jeff Bezos, Microsoft's Satya Nadella, and the chief executives of Google, Cisco, Oracle, Intel, and IBM. Then he acknowledged the meeting's organizer, Peter Thiel.

Thiel sat next to Trump with his arms tucked under the table, as if trying to shrink away from the president-elect. "I want to start by thanking Peter," Trump began. "He saw something very early—maybe before we saw it." Trump reached below the table groping for Thiel's hand, found it, and raised it. "He's been so terrific, so outstanding, and he got just about the biggest applause at the Republican National Convention," he said, patting Thiel's fist affectionately. "I want to thank you, man. You're a very special guy."

The moment of bro tenderness may have been awkward for Thiel, but it was kind of an achievement. Until the Trump Tower meeting, in December 2016, he'd been known as a wealthy and eccentric venture capitalist—a key figure in Silicon Valley for sure, but hardly someone with political clout. His support of Trump, starting in May 2016, when fellow Davos-goers were mostly bedded down with other candidates, had changed that. He'd gotten a prime-time slot at the Republican National Convention, and then, days after the leak of the Access Hollywood tape, in which Trump bragged about sexual assault, kicked in a donation of \$1.25 million. Ignore the sexist language, Thiel advised; voters should take Trump "seriously, not literally." The argument prevailed, and now Thiel was in an enviable position: a power broker between the unconventional leader-elect of the free world and an industry that was said to hate him.

Much had been made during the campaign about the gulf between Silicon Valley and the Republican Party. The Valley favored immigration and tolerance; Trump wanted to build the wall and roll back rights for LGBT Americans. The Valley prized expertise; Trump used his own coarseness as a credential. Pundits had predicted that these differences would be insurmountable—and indeed early accounts of the meeting, based on the four or so minutes during which media were allowed in the room, suggested that this was what had happened. *Business Insider* published a photo of Facebook's Sheryl Sandberg, Google's Larry Page, and Bezos grimacing under the headline "This Perfectly Captures the First Meeting Between Trump and All the Tech CEOs Who Opposed Him."

But Silicon Valley also reflected the values of the man who'd organized the meeting, and Thiel—a gay immigrant technologist with two Stanford degrees, who'd somehow found his way to becoming a fervent Trump supporter—seemed to value the expansion of his own wealth above almost all else. After

the press left, according to notes from the meeting and the accounts of five people familiar with its details, the tech CEOs followed his lead. They were polite, even solicitous, thanking Trump profusely and repeatedly as he cracked wise at their expense. Trump negged Bezos over his ownership of the *Washington Post* and Cook over Apple's balance sheet. "Tim has a problem," Trump said. "He has too much cash." The CEOs listened politely.

Trump moved on to mass deportations. "We're going to do a whole thing on immigration," he said. "We are going to get the bad people." These were promises that Thiel supported and the tech CEOs ostensibly opposed. Now, in private, no one objected. They implied that it would be fine to crack down on illegal immigrants as long as Trump would be able to supply their companies with enough skilled foreign workers. "We should separate the border security from the talented people," Cook said. He suggested the U.S. try to cultivate a "monopoly on talent." Google former Executive Chairman Eric Schmidt, a longtime friend of Thiel's despite being a major Democratic Party donor, offered a way to brand Trump's carrot-and-stick approach to immigration reform in a friendlier way. "Call it the U.S. Jobs Act," he offered. When conversation shifted to China, none of the CEOs urged restraint; many began offering their own gripes.

Years later, Trump's advisers would point to this moment, crediting Thiel for convincing Silicon Valley that it could work with a president who'd spent the campaign treating them as a bunch of America-hating globalists. "They were supposed to be the biggest enemies we got, and they're basically making a nationalistic case," says Steve Bannon, who attended the meeting and served as chief adviser to the White House. "It was like they finally got invited to lunch with the quarter-back of the football team."

The Trump administration, of course, ended badly for many of the participants in the meeting. Bannon was fired the following year, indicted in 2020, and pardoned just hours before Trump himself left the White House, having become the 11th president in U.S. history to lose reelection. He would depart for Mar-a-Lago in disgrace, his legacy tarnished by a pandemic that has killed hundreds of thousands, his political future linked to a violent insurrection at the U.S. Capitol.

But Trump's presidency would not end badly for Thiel, who didn't comment for this article, adapted from my forthcoming book, *The Contrarian*. Thiel's companies would win government contracts, and his net worth would soar—and it would, crucially, remain in the legal tax shelter that he's spent half his career trying to protect. As a venture capitalist, Thiel had made it his business to find up-and-comers, invest in their success, and then sell his stock when it was financially advantageous to do so. Now he was doing the same with a U.S. president.

THIEL IS SOMETIMES PORTRAYED AS THE TECH industry's token conservative, a view that wildly understates his power. More than any other living Silicon Valley investor or



entrepreneur—more so even than Bezos, or Page, or Facebook co-founder and Thiel protégé Mark Zuckerberg—he has been responsible for creating the ideology that has come to define Silicon Valley today: that technological progress should be pursued relentlessly, with little if any regard for potential costs or dangers to society. Thiel isn't the richest tech mogul, but he has been, in many ways, the most influential.

His first company, PayPal, pioneered online payments and is now worth more than \$300 billion. The data-mining firm Palantir Technologies, his second company, paved the way for what its critics call surveillance capitalism. Later, Palantir became a key player in Trump's immigration and defense projects. The company is worth around \$50 billion; Thiel has been selling stock, but he is still its biggest shareholder.

As impressive as this entrepreneurial résumé might be, Thiel has been even more influential as an investor and backroom dealmaker. He leads the so-called PayPal Mafia, an informal network of interlocking financial and personal relationships that dates to the late 1990s. This group includes Elon Musk, plus the founders of YouTube, Yelp, and LinkedIn; the members would provide startup capital to Airbnb, Lyft, Stripe, and Facebook.

The ambitions of these men have often gone hand in hand with Thiel's extremist libertarian political project: a reorganization of civilization that would shift power from traditional institutions—e.g., mainstream media, democratically elected legislatures—toward startups and the billionaires who control them. Thiel secretly funded the lawsuit that destroyed Gawker Media in 2016. He has also made the case for his political vision in college lectures, in speeches, and in his book *Zero to One*, which recounts his own personal journey from corporate law washout to dot-com billionaire. The success manual argues that monopolies are good, monarchies efficient, and tech founders godlike. It has sold around 3 million copies worldwide.

For the young people who buy his books, watch and rewatch his talks, and write social media odes to his genius, Thiel is like Ayn Rand crossed with one of her fictional characters. He's a libertarian philosopher *and* a builder—Howard Roark with a YouTube following. His most avid acolytes become Thiel Fellows, accepting \$100,000 to drop out of school; others take jobs within his circle of advisers, whom he supports financially and who promote and defend him and his ideas.

On election night in 2016, a group of 20 or so of these

loyalists, including entrepreneurs and investors, joined Thiel at his enormous home in San Francisco to watch the returns come in. "You're never totally sure," Thiel declaimed to his courtiers, as Fox News showed returns from Wisconsin and Michigan. "But he had all these elements." Trump "was silly enough to get all this attention," Thiel continued. "He was just serious enough to actually do it."

Thiel's phone was already ringing, and his aides were discussing their prospects. Thiel was going to be named as a member of the transition's executive committee in a matter of days, they figured, and Trump would give him a substantial portfolio. "The conversation," says someone who attended the party, "was basically, 'Where do you want to work?"

A week later, Thiel reported to Trump Tower with a half-dozen aides. They were Thiel's type: young, smart, and attractive. "They looked like male models," Bannon recalls. The group, led by Blake Masters, a longtime aide who'd served as Thiel's *Zero to One* co-writer, was given the job of suggesting appointees who could drastically limit the scope of "the administrative state."

As a political animal, Thiel possessed instincts that could seem almost comically bad. His list of 150 names for senior-level jobs included numerous figures who were too extreme even for the most extreme members of Trump's inner circle. Many were ultra-libertarians or reactionaries; others were more difficult to categorize. "Peter's idea of disrupting government is *out there*," Bannon says. "People thought Trump was a disrupter. They had no earthly idea."

For Trump's science adviser, Thiel suggested two climate change deniers, Princeton physicist William Happer and Yale computer scientist David Gelernter. For the head of the Food and Drug Administration, Thiel offered, among other names, Balaji Srinivasan, an entrepreneur with no obvious experience in government, who seemed skeptical that the FDA should exist at all. "For every thalidomide," Srinivasan had tweeted (and later deleted), "many dead from slowed approvals."

Bannon brought them all to meet with Trump but didn't endorse the picks. "Balaji is a genius," he says. "But it was too much." Bannon knew it was unrealistic to nominate a provocateur who'd implied he wanted to get rid of the FDA to run said agency. Doing so would have gotten Trump branded a radical—and not the good kind. Bannon continues, "That's not a confirmation hearing you're going to win in the first 100 days. Remember, we're a coalition, and the Republican establishment was aghast at what we were doing."

Srinivasan and Gelernter did not respond to requests for comment. Happer praises Thiel for his "refusal to be cowed by political correctness" but adds, "I never thought of Peter as very strong in technology, unless you narrow down the definition of technology to ways to profit from the internet." In 2018, Trump appointed Happer to a lesser position as senior director for emerging technologies at the National Security Council. He left the administration in 2019, complaining that he'd been undermined by White House officials who'd been "brainwashed" into believing in the dangers of climate change.

◀ In the end Thiel managed to install a dozen or so allies in the White House, and he lost his most important connection to Trump with Bannon's departure the following August. According to a person who worked on the transition who asked to remain anonymous to avoid angering Thiel or Trump, Thiel and Masters "basically allied themselves with the alt-right. They chose disruption over normalcy, and it backfired." That, of course, assumed that Thiel's goals were only political. But many who have worked closely with him say that assessment is wrong; Thiel wasn't playing for influence. He was playing for money.

THIEL AT THE 2016 REPUBLICAN NATIONAL CONVENTION



INVITES TO THAT TRUMP TOWER MEETING HAD BEEN

given out to the tech companies with the largest market capitalizations, but Thiel made two exceptions. Musk, who runs SpaceX, where Thiel is a major shareholder, got to come even though both SpaceX and his other company, Tesla, were much smaller than the next largest company at the time. So did Alex Karp, CEO of an even smaller company, Palantir, which Thiel had co-founded in 2004.

Palantir had originally been an attempt to sell the U.S. government on data-mining technology developed at PayPal. The company, which was seeded by Thiel and received funding from the CIA, cultivated a cloak-and-dagger reputation, encouraging reporters to write stories that presented its technology as an all-seeing orb, like the fictional Palantir in *The Lord of the Rings*, for which Thiel had named it. "I'd rather be seen as evil than incompetent," Thiel explained to a friend when asked about the company's marketing strategy.

But inside Palantir there were questions about to what extent—or even whether—the technology worked. The company had struggled during President Barack Obama's second term as enthusiasm for its offerings dimmed among intelligence agencies and big corporate customers. Palantir had hoped to compete for a contract with the U.S. Army, which was developing a new database system, but the Army seemed inclined to work with traditional defense contractors instead, effectively freezing Thiel out of hundreds of millions of dollars a year in revenue. "It was very shaky ground," says

Alfredas Chmieliauskas, who was hired by Palantir in 2013 to do business development in Europe. "We had nothing." Another senior executive called Metropolis, Palantir's main product, a "disaster."

It had been this sense of desperation that led Chmieliauskas to begin cultivating Cambridge Analytica, a British political consulting firm, backed by Bannon and hedge fund manager Robert Mercer, that aimed to create psychographic profiles of voters using social media data. In 2014, Chmieliauskas, who saw the company as a potential client, suggested that it create an app to scrape Facebook data. Cambridge Analytica never became a Palantir customer, but it took Chmieliauskas's suggestion and ran with it, eventually accessing the Facebook data of 87 million people without their knowledge.

Palantir would claim that Chmieliauskas had been a rogue employee acting on his own when he suggested the idea. Chmieliauskas says that's misleading; he says his bosses knew what he was up to and in fact encouraged him to pursue business that was ethically dubious. "They threw me under the bus," he says. "I'd worked on much shadier deals before Cambridge Analytica." A Palantir spokeswoman declined to comment. Cambridge Analytica, which denied wrongdoing, went out of business in 2018.

In any case, the new administration presented an opportunity for Palantir—and for Thiel, who had much of his net worth tied up in the company. Just before Election Day in 2016, a federal judge had ruled in a lawsuit brought by Palantir that the Army would have to rebid its database contract and consider Thiel's company. The court order didn't mean the Army would buy Palantir's software, only that it would give it a "hard look," as Hamish Hume, the company's lawyer on the case, put it.

Now Karp (and Thiel) had a chance to make a personal appeal to the commander in chief. During the meeting at Trump Tower, Karp promised Trump that Palantir could "help bolster national security and reduce waste." Karp would later say he had no idea why he'd been invited; all he knew was that his friend had organized it. Of course, Thiel didn't invite any other defense contractors, such as Raytheon Technologies, Palantir's main competitor in the bidding on the Army deal, to the meeting.

Thiel would seem to push the government toward Palantir in other ways. He urged Trump to fire Francis Collins, the longtime director of the National Institutes of Health and an accomplished geneticist who'd headed up the Human Genome Project under Bill Clinton and George W. Bush. This had implications for Palantir, which would have considered the NIH, a massive user of data, a ripe target for its salespeople. Thiel argued that the NIH needed shaking up and suggested that Collins be replaced with Andy Harris, a Republican congressman from Maryland's rural Eastern Shore and a member of the far-right House Freedom Caucus.

Bannon resisted the effort but agreed to have Collins come to New York in early January to interview for his current job. The agenda included a lunch with Thiel and Masters. In a follow-up email afterward, according to documents that were

"PETER'S IDEA OF DISRUPTING GOVERNMENT IS OUT THERE. PEOPLE THOUGHT TRUMP WAS A DISRUPTER. THEY HAD NO EARTHLY IDEA"

later made public through a Freedom of Information Act request by independent journalist Andrew Granato, Collins mentioned an eagerness to learn more about Palantir. He said he was meeting with Palantir's top business development executive. It appears, in retrospect, to have been the beginning of a very successful sales pitch. Collins would be reappointed, and, the following year, the NIH would give Palantir a \$7 million contract to help the agency keep track of the research data it was collecting. There would be many more contracts.

Thiel may not have been entirely successful in his push to install loyalists inside the Trump White House, but he didn't entirely fail either. Michael Kratsios, his former chief of staff, joined the administration as the U.S. chief technology officer and would later become an acting undersecretary of defense, in charge of the Pentagon's research and development budget. Kevin Harrington, a longtime Thiel adviser, accepted a senior position on the National Security Council. Several others with connections to Thiel would also take senior defense jobs, including Michael Anton, a friend and conservative firebrandhe'd written an essay, "The Flight 93 Election," that made an intellectual case for Trump-and Justin Mikolay, a former Palantir marketer, who joined the Department of Defense as a speechwriter for Secretary of Defense James Mattis. Mattis's deputy chief of staff, Anthony DeMartino, and senior adviser, Sally Donnelly, had also done work for Palantir as consultants.

It's possible, of course, that the appointment of military officials sympathetic to Palantir's brand of disruption had nothing to do with Thiel—these ideas were gaining currency in government circles even during the Obama administration, and in interviews, Palantir executives emphatically said they had not benefited from preferential treatment. "It's completely and utterly ludicrous," Karp said, when I asked him about Palantir's Trump-era success during a 2019 interview. "It takes 10 years to build this kind of business."

Ultimately the Army held a bake-off between Palantir and Raytheon for the disputed contract, in which each company was asked to build a prototype system and present it to a panel of soldiers. It was exactly the kind of contest Palantir had called for in a lawsuit a few years prior. Some Palantir insiders wondered if the Pentagon's leadership had been convinced on the merits—Palantir's software had indeed improved a lot over the previous few years—or if political pressure had been brought to bear by Thiel and his allies. Either way, in early 2019, the Army announced that Palantir had won outright: The company would get its largest contract ever, worth \$800 million or more. The win created momentum, with

the company suddenly in the hunt for more Pentagon business.

In 2019, Palantir took over \$40 million a year in contracts for Project Maven, a Defense Department effort to use artificial intelligence software to analyze drone footage. That happened despite Palantir's limited experience in the kind of image-recognition software that Maven used to identify targets—and despite

concerns from a government official expressed in an anonymous memo sent to military brass, and first reported by the *New York Times*, that the company had received preferential treatment in landing the contract. There would be another huge Army contract, announced in December, worth as much as \$440 million over four years, plus \$10 million from Trump's brand-new military branch, the Space Force, and \$80 million from the Navy. And Palantir ignored the objections of its own employees and immigration activists, renewing its contract with Trump's Immigration and Customs Enforcement agency for another \$50 million or so.

As the ICE contract showed, Thiel wasn't above directly linking his business interests with Trump's most extreme policies. In 2017, Charles Johnson, a longtime Thiel confidant who'd maintained close ties to members of the alt-right, pitched Thiel to invest in a new venture called Clearview AI. The idea, as Johnson explained, was simple: He and an engineer had written software to scrape as many photos as possible from Facebook and other social networks. The software stored the massive trove, along with user names. They would offer this database to police departments and other law enforcement groups, along with a facial recognition algorithm. These tools would allow police to take a picture of an unidentified suspect, upload it into the software, and get a name back.

At the time, Johnson boasted that this technology would be ideal for Trump's immigration crackdown. "Building algorithms to ID all the illegal immigrants for the deportation squads" was how he put it in a Facebook post. "It was a joke," says Johnson, who has since cut ties with the alt-right and become a Joe Biden supporter. "But it became real." Indeed, Clearview would eventually sign a contract to give ICE access to its technology. It would also get Thiel's help. After hearing Johnson's pitch, he provided \$200,000 in seed capital to the effort. Clearview would land contracts with ICE, the FBI, and numerous federal agencies. Another Thiel-backed contractor, Anduril Industries, capitalized on Trump's "build the wall" fervor to win a series of contracts with U.S. Customs and Border Protection to contribute digital surveillance technologies, which the company described as a "virtual wall." Anduril, named after Aragorn's sword in The Lord of the Rings, is now valued at more than \$4 billion.

By the fall of 2020, published estimates were putting Thiel's personal net worth at around \$5 billion, roughly double what it had been before Trump was elected. This was a reflection of his stake in Palantir, which had gone public in August at a valuation of around \$20 billion. Thiel then owned about ▶

THIEL WASN'T PLAYING FOR INFLUENCE. HE WAS PLAYING FOR MONEY

■ 20% of the company and also held stakes in a number of others whose fortunes had soared. Besides Anduril, there was SpaceX, which was now worth as much as \$100 billion thanks in part to a booming business with the federal government, and Airbnb, which had recently gone public. By any financial measure, it had been a good four years.

But those who know Thiel say that even these estimates were probably way too conservative and that his true net worth was closer to \$10 billion, possibly much more. That was partly because he had quietly accumulated stakes in a handful of private companies with exceedingly high valuations, including the online payments startup Stripe; a person close to Thiel figures his share is worth at least \$1.5 billion. But it was also because Thiel was shielding a large percentage of his investment assets from taxes of any kind.

The strategy was legal, even if it was, from the standpoint of any normal sense of fairness, outrageous. Thiel had parked much of his wealth inside an investment vehicle known as a Roth IRA. Roths are tax-free retirement accounts that were designed for middle-class and lower-middle-class workers, not billionaires—contributions are capped at just \$6,000 per year. (You can also convert a traditional IRA into a Roth if you pay taxes on the old account.) It's illegal to use a Roth account to buy stock in a company you control. And yet, starting in 1999, Thiel used a Roth to buy stock in companies with which he was closely associated—including PayPal and Palantir—for prices that were as low as a thousandth of a penny per share. All the capital gains since then have been tax-free.

The maneuver hinged on an extremely narrow interpretation of what it means to control a company. Thiel didn't own more than 50% of PayPal at the time of the Roth investment and thus, legally speaking, didn't control PayPal. But in practice, Thiel had the final say on everything the company did during much of its early history. At one point, in 2001, he threatened to resign as CEO unless the nominally independent board of directors issued him millions of shares. The board agreed because, according to three people familiar with the negotiations, it had no choice; Thiel's resignation would have killed the company. "It was pay me or I'm going to shoot myself," recalls one of the people. The board issued almost 4.5 million shares for Thiel to purchase, lending him the money for the transaction. Roughly a third of those shares were bought by Thiel's Roth IRA. Within a year the new block of shares would be worth \$21 million. Thiel would also use the Roth to buy shares in Palantir, whose board was packed with close friends and allies. By the end of 2019, Thiel's Roth alone was worth \$5 billion according to ProPublica, which received leaked copies of Thiel's tax returns. Four people familiar with Thiel's finances confirmed the report. Given the performance of the market since then, it's likely the portfolio is much larger today.

The size of the nest egg, and the aggressive tax strategy Thiel had employed to protect it, put him in a precarious position. According to IRS rules, if a Roth IRA account holder engages in a prohibited transaction—like using the money to invest in a company you legally control—then that person loses the tax break for the entirety of the portfolio's value. In Thiel's case that would mean he could be on the hook for a tax bill in the billions. Moreover, in 2014, the Government Accountability Office announced that it had identified 314 tax-payers with IRA balances of more than \$25 million, specifically mentioning "founders of companies who use IRAs to invest in nonpublicly traded shares of their newly formed companies"—that is, people who'd done exactly what Thiel did at PayPal and Palantir. The report noted that the IRS planned to investigate these holdings and recommended that Congress pass laws to crack down on the practice. Separately, U.S. tax authorities began an audit of Thiel's retirement savings.

Thiel was never sanctioned—the audit never turned up anything illegal, according to a person who discussed it with Thiel—but it seemed to make him paranoid. All it would take would be a change in the way the IRS interpreted the rules to force him to pay taxes on the entire Roth account. Or a disgruntled former partner or employee might draw attention to the extent to which Thiel exercised influence over his companies in a way that made it sound like control. "If he violates a single rule, puts a toe in the wrong direction, the government can tax the whole thing," says another person familiar with the arrangement.

This was scary to Thiel, according to several longtime employees. They say his vulnerability to a change in tax policy or a shift in IRS enforcement seemed to dominate how he related to people around him. Anxiety about a potential crackdown seemed to be part of his motivation to acquire New Zealand citizenship in 2011 and to support Trump in 2016, according to these sources. Now, in 2020, Trump's reelection prospects were dimming. That left Thiel walking a fine line, staying far enough away from Trump so as not to be blamed if he lost but still close enough to influence Trump's followers. He never endorsed Trump in 2020, but he was also careful not to criticize the candidate publicly.

Privately he'd taken to referring to Trump's White House as "the *S.S. Minnow*"—the hapless fishing charter that runs aground in the show *Gilligan's Island*. Of course, in this analogy, Trump was the skipper. There were, as Thiel told a friend in a text, "lots of Gilligans." In an unrelated nautical metaphor, Thiel said that changes to Trump's campaign were the equivalent of "rearranging deck chairs on the *Titanic*." Similar comments leaked to the press, which reported that he was souring on Trump because of the administration's failure to adequately respond to the coronavirus pandemic. But this wasn't true. Thiel supported Trump on Covid-19, telling friends he thought the lockdowns in states led by Democratic governors were "crazy" and overly broad.

Nor was Thiel or his inner circle moderating. After Trump's Supreme Court pick, Neil Gorsuch, sided with liberals and moderates in ruling that gay and transgender workers were deserving of civil rights protections, Masters, the Thiel adviser who'd served on the transition, complained that the party had

betrayed conservatives. He wrote on Twitter, sardonically, that the point of the Republican Party seemed to be, among other things, "to protect private equity, low taxes, free pornography."

AFTER TRUMP'S LOSS IN NOVEMBER, Thiel's employees and allies were abuzz

in Milwaukee and Detroit.

with rumors about secret uncounted votes in key swing states and how the election's outcome was somehow in doubt. Eric Weinstein, a podcast host and longtime Thiel adviser, tweeted videos of a purported Postal Service whistleblower. (The claims, which turned out to have been fabricated,

were distributed by conservative journalist and provocateur James O'Keefe, another Thiel ally who has received funds from him in the past.) Masters, meanwhile, tweeted darkly about Dominion Voting Systems, amplifying a conspiracy theory alleging that the manufacturer of electronic voting machines had somehow tampered with the results. He also claimed, offering no evidence, that dead people had voted

In March a newly created political action committee announced that Thiel had pledged a \$10 million donation to support the potential Senate candidacy of J.D. Vance, author of the memoir *Hillbilly Elegy*. Vance worked for Mithril Capital Management, another of Thiel's venture capital firms, this one named after the magically light metal in *The Lord of the Rings*. Not long after *Hillbilly Elegy* came out, Vance moved to Ohio and began plotting a political career. He also started a new Thiel-backed fund focused on investing in Midwestern startups called Narya Capital Management—"Narya" being Elvish for "ring of fire" in *The Lord of the Rings*.

Vance had once been a critic of Trump. "Fellow Christians, everyone is watching us when we apologize for this man," he'd tweeted after the infamous *Access Hollywood* tape leaked. "Lord help us." But a week before the announcement that Thiel was backing his Senate candidacy, Vance appeared on *America First*, the podcast run by former Trump adviser Sebastian Gorka, and proclaimed himself a convert to Trump's Make America Great Again movement. He said that he'd come to agree with Trump's assessment of what he called "the American Elite." Vance proclaimed, "They don't care about the country that has made them who they are." Then he met with Thiel and Trump at Mar-a-Lago. He deleted his old #nevertrump posts.

In July, Vance, a graduate of Yale Law School, made his run official, railing against universities, anti-American business leaders, "woke" hedge funds, and "Fauci's cabal" (a reference to Covid restrictions). He proposed cracking down on immigration, curbing China's rise, and breaking up big tech companies for censoring conservative speech—all positions Thiel had been pushing. Days later, Vance appeared on Fox News and launched an attack on Google, a competitor to Palantir for government contracts. "Google, right now, is actively conspiring with and working with the Chinese government,"



Vance said. This charge was spurious and almost identical to one Thiel had made two years earlier at the National Conservatism Conference, where Vance also spoke. At that event, Thiel accused Google, without evidence, of being "treasonous" for failing to work more closely with the Defense

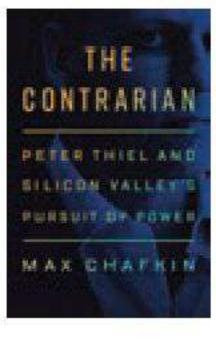
Department and for doing business in China.

Masters, meanwhile, announced his own run for Senate in Arizona, proving himself a capable advocate for Thiel, who made another \$10 million commitment to his candidacy. Like Vance's, the Masters platform reads like an extension of Thiel's worldview, combining Trump-style immigration politics ("Obviously this works," he said in a video shot at a section of the border wall), complaints about diversity efforts, and plans to rein in tech companies, especially ones in which Thiel doesn't have an interest. His Thiel-backed PAC recently aired an advertisement attacking a fellow candidate, Arizona Attorney General Mark Brnovich, for refusing to overturn the state's 2020 election results.

If they win their primaries, and if Republicans win control of the Senate in 2022, Masters and Vance—along with the other two populist nationalists who have received substantial support from Thiel, Josh Hawley of Missouri and Ted Cruz of Texas—would arguably offer Thiel a level of influence greater than what he enjoyed under Trump. A Republican-controlled Senate, especially one where Thiel's politics are ascendant, would also be ideal for Thiel's government contractors and for protecting the tax-advantaged status of his Roth IRA.

But Masters and Vance offer more than Trump because, unlike the former president, they're highly disciplined ideologues who seem committed to popularizing their patron's political agenda. They are, in other words, as out there as Thiel is. Even better, Masters and Vance both work for Thiel, and not just in the sense that his PAC is paying for TV advertising on their behalf. Masters remains chief operating officer of Thiel Capital and president of the Thiel Foundation; Thiel is a key investor in Narya, Vance's investment firm. Vance and Thiel recently invested in Rumble, a YouTube competitor that caters to Trumpist talking heads, such as the talk show host Dan Bongino, New York Representative Elise Stefanik, and the former president himself.

Thiel is said to be in the market for other candidates ahead of the midterms and the 2024 election. "He has not reverted back to Republicanism," Bannon says. "He's full MAGA." It's not clear that Trump's old slogan has much political salience anymore, but if Silicon Valley's most influential venture capitalist succeeds in appropriating Trumpism, that would, at the very least, keep America great for Peter Thiel. **3**



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Permissive laws have created a booming market for fossils. Paleontologists aren't thrilled, but for Clayton Phipps and his peers, it's a living

By Andrew Zaleski Photographs by Ian Allen



n a sunny, 99-degree day in northern Montana, Clayton Phipps grabs a backpack and heads for a small trench, maybe a foot deep. He drops to his

knees, his auburn hair flared out beneath his black Stetson, then opens his pack, removes a knife that looks best suited to cutting steak, and gets to work.

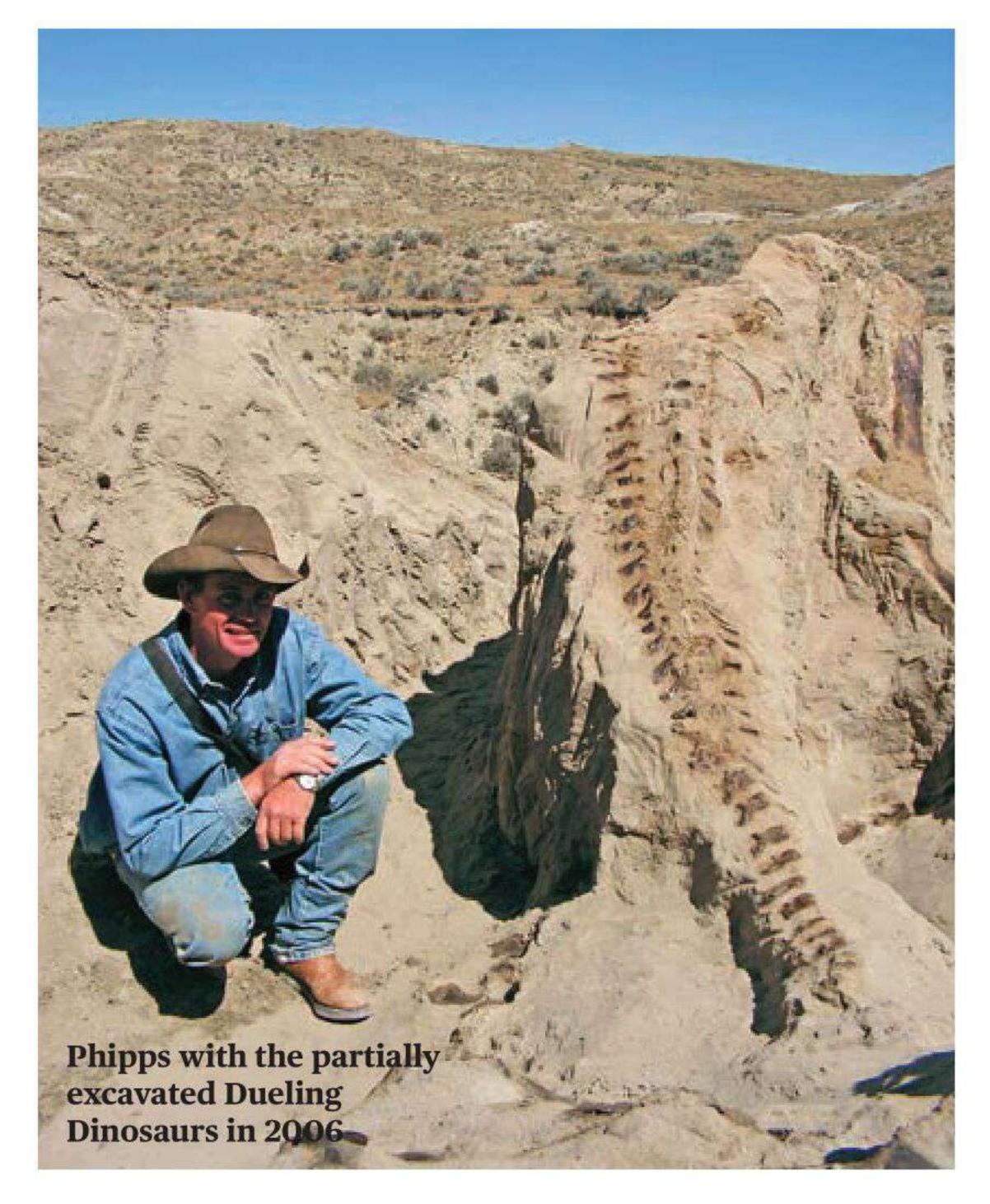
He picks through gray sand, then red sand, then dark, damp sand that smells like wet socks doused in talcum powder. When he looks up, a tiny, chocolate-colored block is between his fingers. "A little triceratops tooth," he says. "I'll get probably 50 of these on an average day. They're only worth maybe five bucks, but 50 of them adds up."

We're standing on a flattened sandstone hill that's Phipps's to dig, on pastureland he owns. Surrounding us is a panorama of dirt and dust and stone and

shale. In the distance are Angus cattle, black like fresh charcoal, grazing lazily. Phipps has valiantly hobbled along on crutches to bring me here. He's been a cattle rancher for going on 30 of his 48 years. Branding season finished up just days ago, and the horse he was riding over the weekend got rambunctious, bucking and slamming him down hard on the saddle. He hasn't seen the doctor, but he's sure his pelvis is cracked.

The hill where we're standing lies atop the Hell Creek Formation, a 300-foot-thick rock bed snaking from the Dakotas to Montana and down into Wyoming. It dates back some 67 million years, to the Cretaceous Period, when Tyrannosaurus rex had the run of the place, and it's by far the best record we have of what Earth was like just before the mass-extinction event that ended the age of dinosaurs. This particular corner of Hell Creek is so rich in fossilized reptilian material that Phipps has dubbed it Old Faithful.

Despite having no formal training and no academic background, Phipps is one of America's leading commercial fossil hunters. His nickname is the Dinosaur Cowboy. If you've heard of him, it's probably because he's one of the stars of *Dino Hunters*, a show that started its second season on the Discovery Channel



this summer. Phipps is also famous for finding the Dueling Dinosaurs, a specimen containing the complete fossils of a 22-foot-long T. rex and a 28-foot-long triceratops that may have been locked in combat. It's only the second set of fossils that has been found depicting a carnivore and a herbivore together. Phipps unearthed it in 2006, just 10 miles from Old Faithful. Tyler Lyson, a paleontologist with the Denver Museum of Nature & Science who's seen the bones up close, calls it "one of the most remarkable finds in the last 50 years."

Last fall, Phipps sold the Dueling Dinosaurs for \$6 million to a non-profit affiliated with the North Carolina Museum of Natural Sciences in Raleigh, which then donated the find to the museum. Lindsay Zanno, the museum's head of paleontology, who will lead research on the fossils, still recalls the moment she saw them in person, during a meeting with Phipps in 2016. "They look as if they could climb right out of the rock," she says. "You're almost transported back to that day they died." Scientists hope the specimens

will answer questions about dinosaur behavior, including whether or not the pair was actually fighting.

Yet the sale reopened a controversy that divides some fossil researchers from fossil hunters like Phipps. Many paleontologists, leery of amateurs' methods and commitment to science, contend that fossils should be part of the public trust, not a profit vehicle for individual diggers. And right now, the market for dinosaurs is red-hot. Not long before the Dueling Dinosaurs were purchased, the bones of Stan-a 40-foot-long T. rex dug up by Peter and Neal Larson in South Dakota-were auctioned by Christie's to an anonymous buyer for \$31.8 million, the most ever paid for a single fossil.

Phipps occupies a unique position in this world. He tries to sell his finds to museums but admits that sales to private collectors have bailed out his ranch several times. The two approaches, he maintains, can complement each other, especially since fossil hunters are out there seeking bones that might otherwise be lost forever. "More fossils are being destroyed by Mother Nature than are collected," Phipps says. "There's no reason we can't all work together."

or a dinosaur, dying was the easy part of becoming a fossil. To be preserved, the creature's body needed to lie in a spot where it could be buried quickly by soft sedimentary rock. Then its bones had to remain more or less undisturbed across tens of millions of years, through countless rainstorms, shifting glaciers, and collapsing cliffsides. That's why there aren't that many fossils of dinosaurs even though they roamed the Earth for almost 165 million years. The few relative hotbeds for finding them include the Dinosaur Park Formation in Alberta, Mongolia's Flaming Cliffs, areas in China and Patagonia, and the Isle of Wight in England.

Much of the land in the Dakotas, Montana, New Mexico, Utah, and Wyoming also meets the environmental conditions for discovery. Rock layers that formed there around the end

of the Cretaceous Period have been eroding ever since, bringing dinosaur bones—which are much harder than the shale, clay, and sand in which they're buried—to the surface. Once a fossil begins weathering out of the ground, it's only a matter of time before freeze, thaw, wind, rain, or animals destroy it forever. Phipps calls much of what he discovers "chunkosaurus," broken fragments of bone worth no more than a plug nickel. Sometimes, though, rare treasures lie in wait.

In many countries, including Canada and Mongolia, dinosaur fossils belong to the state. But in the U.S., private property reigns supreme, and bones excavated on private lands are beholden only to the law of finders, keepers. So long as they're digging with the landowner's permission, commercial hunters can do whatever they want with fossils. Federal lands are handled differently: Scientists secure permits to excavate but must ensure any fossils they recover make their way to an approved repository, such as an accredited museum, for the purposes of education and research. Native American lands are handled differently still, requiring permission from the tribes to dig.

Phipps's interest in fossil-hunting traces to 1998. He was working as a hand on a neighbor's ranch, and a man came along asking the landowners if he could scour the property for fossils. A couple of days later, he showed Phipps a bit of triceratops frill—the shieldlike plate that adorned the creatures' heads—and told him it was worth about \$500. An obsession took hold.

Commercial hunting of dinosaur bones dates to at least the 1800s, but for a long time it wasn't necessarily a fortune-making enterprise, even as private collectors often contributed to the fossil-gathering efforts of museums. But in 1997, a virtually complete T. rex skeleton—named Sue, after its discoverer, Sue Hendrickson—was auctioned off by Sotheby's to the Field Museum in Chicago for \$8.36 million, a record for a dinosaur fossil. Sue's excavation had been handled by the Larson brothers' company, which later exhumed Stan.

They'd dug her up in 1990, at the Cheyenne River Indian Reservation in South Dakota, on the land of a Sioux rancher whose deed was held in trust by the Bureau of Indian Affairs. Multiple parties, including the U.S. Department of the Interior, staked a claim, but the fossil ultimately became the property of the rancher, whose land had reverted to private ownership shortly after Sue was unearthed. The rancher then sold the fossil off.

The purchase was almost \$7.5 million more than anyone had spent on a dinosaur fossil, and it upended paleontology's assumed order. "Scientists used to be able to go out and look for fossils on landowners' private property basically for free. You'd go out, you'd form a relationship, and that's the way it worked," says the Denver Museum's Lyson. "That really changed when Sue was sold. That's when the landowners started wanting pieces."

hipps's spread in Montana is a Bob Ross painting. Blue sky blends into mud-colored steppes, every band of rock pooling outward onto a seemingly never-ending bed of grass. Miles of pasture are roped in with barbed wire and dotted with patches of sagebrush. And there's no cell service.

By the garage of Phipps's simple ranch house is a pile of chunkosaurus he's kept as souvenirs of his fossil treks. The real spectacle is his basement workshop, where he stores resin copies of previous finds. Inside a display case are various tooth and claw replicas.

When he started fossil-hunting, Phipps thought it could mean financial stability for his wife and three kids.

"The dinosaurs made it feasible to live here and do the cattle. Between the two, I've managed to survive this country"

He recalls having just \$72 in the bank when he married in 1994. "The dinosaurs made it feasible to live here and do the cattle," he says. "Between the two, I've managed to survive this country." He lives on land he inherited from his father, the grandson of homesteading pioneers, and manages a herd of about 80 cattle. (Phipps takes slight offense when I ask for the acreage. "To a cowboy, it's rude to ask how much land they own," he says.)

What Phipps learned about dinosaur fossils was picked up over years of trial and error. In the beginning, he searched for fossils on his home ranch, a portion of which lies right on top of the Hell Creek Formation. He eventually branched out to the properties of neighbors and acquaintances, who would get a cut of any proceeds. "There's no map saying X marks the spot, here's a dinosaur," he says. "If I had a dollar for every step I've taken looking for a dinosaur, I'd be doing a lot better than I am right now."

In 2003, he made his first big discovery: the intact skull of a stygimoloch, a bipedal dinosaur whose head resembled that of a dragon. He sold it for almost \$100,000 to a private collector, who subsequently put the specimen in a museum on Long Island. The sale proceeds were split, after brokerage fees, among the landowners, the fossil preparer, and Phipps, whose end of the deal equaled a year's salary as a ranch hand.

A few years later, in summer 2006, came the Dueling Dinosaurs. Phipps was prospecting on ranchland in the Hell Creek Formation with his cousin, Chad O'Connor, and a friend, Mark Eatman, who spotted a hulking bone sticking out from a sandstone embankment. It took about two weeks for Phipps and a crew to uncover the triceratops, which was fully articulated from beak to tail—its bones arranged as they would have been when the dinosaur was alive. "That never happens," he says. "I mean, if you get half a dinosaur bone, you're in good shape."

Then, while using a borrowed backhoe to remove layers of sandstone around the triceratops, Phipps went to dump the bucket and saw bits of bone protruding from the sand. He ▶

■ dismounted from the backhoe and began brushing away the grains until he found a claw. After some more digging, to everyone's shock, the fully articulated bones of a carnivore emerged, barely inches from the triceratops.

Peter Larson, who helped unearth Sue and Stan, says such a find takes skill, not just luck. "He's one of the best," Larson says of Phipps. "Not only the best finders of fossils, but he's also one of the most talented excavators."

With the bones exposed, Phipps and his team made some deductions. That the dinosaurs were found in Hell Creek determined their age. And because they were buried side by side, Phipps concluded that they'd been entombed by the same event. Teeth discovered in the herbivore's neck and hip matched up

"The problem is that this private auction stuff jacks the price up to where museums can't afford them"

to missing teeth in the carnivore, which inspired him to come up with the name Dueling Dinosaurs.

The crew finished the dig in three months, much faster than professional paleontologists might have worked. They placed railroad ties underneath the fossils to hold them intact, then wrapped them in plaster as paleontologists typically do. Because the bones weighed almost 20 tons, all told, they moved them in parts, with four large sections containing most of the fossils. "I put every little bit of money I had into getting them out of the ground," Phipps says.

From the excavation site, the two skeletons were brought to a converted pole barn in northeastern Montana, home to a fossil preparation company run by Chris Morrow and Katie Busch. There they reconstructed the exact position of the fossils—which were so heavy they left a crack in the barn's concrete floor—then dried and cleaned them for shipping and sale. Phipps helped document

many of their features in photos and videos.

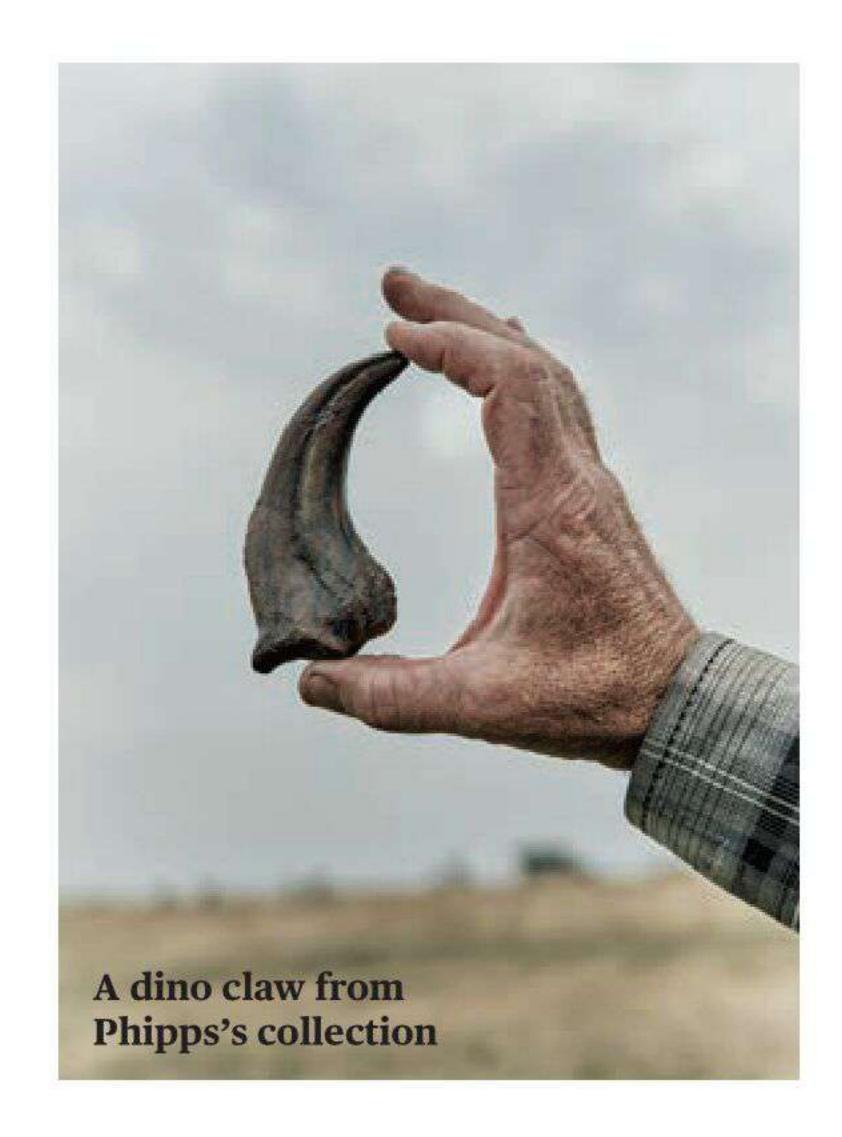
Zanno, the head of paleontology at the North Carolina Museum of Natural Sciences, says the fossils are "absolutely incredible." It's extremely rare for any find to have every bone accounted for and in its natural position, and rarer still that two fossils are preserved that way.

And it isn't just that the skeletons are intact. There's evidence of preserved layers of fossilized skin on both specimens, and the T. rex is the first complete example of the species ever found. "It has bones that we didn't know T. rex had," Zanno says. And, of course, there's the possibility that the two died fighting.

Perhaps the biggest question to resolve is whether the T. rex is truly a T. rex. Some paleontologists contend, based on the skeleton's relatively small size, that it's a teenage rex, but Phipps has argued since its discovery that it's a nanotyrannus, a possible dwarf species whose existence is debated among paleontologists. He points to the unserrated premaxillary teeth, situated at the tip of the dinosaur's upper jaw, as evidence; in a T. rex they would have distinct serrations.

"The reason we're calling it a T. rex is that the bulk of the evidence published by the scientific community suggests that's the most likely explanation," Zanno says. "I, for one, don't know that it is a T. rex or a nanotyrannus. It's one of the exciting questions that we need to tackle."

have made a number of similarly impressive discoveries in recent years. In 2013, a husband-wife duo digging in the Hell Creek Formation discovered Trix, still the world's third-most-complete T. rex. The following year, a fossil company digging in the nearby Judith River



Formation excavated a specimen it dubbed Zuul, which turned out to be a previously unidentified species of ankylosaurid (the tank-looking dinosaur with the clubtail). The Naturalis **Biodiversity Center** in the Netherlands acquired Trix for almost \$6 million, and the Royal Ontario Museum in Toronto purchased Zuul for an

undisclosed sum.

Prices have only gone up since, according to Jared Hudson, a full-time fossil broker who helped Phipps arrange the sale of another nanotyrannus candidate he unearthed in the first season of *Dino Hunters*. Hudson also connected Neal Larson, the owner of Stan, with a representative at Christie's. (Even though both Larsons dug up Stan, a custody battle took place following a dispute over the brothers' stakes in their company. Peter got the business and its 100,000-plus fossils; Neal got Stan.)

Hudson uses T. rex teeth to illustrate how the market has changed. A good specimen has crisp enamel coloring, prominent serrations, and a length of around 4 inches. A decade or more ago, he says, one might have gone for about \$1,000 per inch. Today it could fetch almost \$4,000 per inch.

Fossils can be bought at international trade shows and online, but the best finds are featured at auction. Hudson says all the auction houses he works with require proof of legal ownership. Independent experts usually verify a fossil's authenticity, while some houses will even X-ray bones to make sure they're legitimate.

Despite their rarity, the Dueling Dinosaurs proved difficult for Phipps to sell. Over time, the fossils got famous, thanks to news reports and testimony from paleontologists who viewed them in person. But for seven years, Phipps tried and failed to get a museum to buy them. In 2013 he went a different route

and took them to Bonhams to be put up for auction in New York. "I needed to feed my kids," he says. He'd also piled up debt in excavating the bones. Bonhams appraised the fossils at \$7 million to \$9 million, but the auction ended up being unsuccessful when the sole bid of \$5.5 million failed to meet the \$6 million reserve price. Lacking the money needed to ship the Dueling Dinosaurs back west, Phipps put them into storage.

Soon yet another challenge appeared, this time putting his ownership of the fossils in jeopardy. For a century, fossilgathering deals have been based on an Interior Department ruling that dinosaur remains found on private property belong to whoever holds the surface rights. Phipps had discovered the Dueling Dinosaurs on land owned by Lige and Mary Ann Murray, ranchers he knew well. But in 2014, two of the Murrays' previous business partners claimed they owned the fossils, because they possessed a two-thirds share of the mineral rights for the land. The legal

saga went on for years, persisting even after the Montana legislature unanimously passed a law in 2019 defining fossils separately from minerals. Finally, the following year, the state Supreme Court ruled that fossil ownership is governed by surface rights, a decision that was upheld upon appeal.

Ownership claims settled, Phipps was once again free to sell the Dueling Dinosaurs. That the fossils would end up at the North Carolina Museum of Natural Sciences was by then almost a foregone conclusion: Years before, Zanno had contacted Peter Larson to ask about the specimen. She and Phipps met up at the storage facility in New York in 2016, then waited for the legal battle to conclude and for the museum's nonprofit wing to raise the necessary funds.

Phipps split the profits from the sale with the Murrays and a few other partners who'd helped excavate and prepare the fossil. By formal agreement, he's not allowed to disclose how much he made. He says that after the sale, he and his

wife bought groceries. She also got a new pair of gloves.

serious paleontologist discount would the contributions made by commercial fossil hunters. The experts' concern is that potentially scientifically important fossils, once sold on the private market, will be unavailable for academics to study and the public to enjoy. "Museums often don't have the resources to have staff doing excavations in a lot of places, and they will purchase material. So we need commercial collectors to be around," says Jessica Theodor, president of the Society of Vertebrate Paleontology. "The problem is that this private auction stuff jacks the price up to where museums can't afford them."

The tension between concern for profit and concern for preservation plays out at times on *Dino Hunters*, whose first season aired in the summer of 2020, drawing 8 million viewers over its six episodes. Phipps and other ▶





◄ ranchers clearly see fossils as a way to make money. But Phipps also talks about recovering them, often at great expense, before erosion takes its toll. "You have a short window of time before winter hits," he says. "So you've got to save it."

Joseph Boyle, senior vice president for production and development at Discovery Channel, argues that the show is more focused on learning about dinosaurs and the technical processes by which fossils are recovered. "I don't think anybody would get behind the idea that random people should just go start digging around," he says.

Still, in Theodor's view, *Dino Hunters* encourages the profit motive. Just before the show premiered last year, her organization published a letter arguing that the show "glamourizes" the sale of fossils.

"In a perfect world, the scientists would have access to all the land, like in other countries where the fossils belong to the state," says Lyson, the Denver paleontologist. "We are trained to collect this stuff in a very specific sort of way. When you have other people out there finding fossils, some of the data may not be recorded."

And yet, Lyson acknowledges that the Dueling Dinosaurs might not have been found at all were it not for Phipps–a position Peter Larson takes even further. "The Dueling Dinosaurs would have never, ever, ever been found or dug in the proper way had Clayton not been the one who did it," he says. Phipps and his crew worked quickly to get the bones out of the ground before the winter months, documenting them in photographs throughout. Maybe most important, he and the landowners opened up the dig site to Zanno and several others from her team. "That is significant," says Jack Horner, the renowned paleontologist who inspired the character Alan Grant in the *Jurassic Park* books and films. "Oftentimes the commercial collectors do not give access to original sites, and that greatly diminishes a specimen's scientific worth."

To academics, the environment in which a dinosaur fossil was found is just as precious as the bones themselves.

Mary Schweitzer, Zanno's colleague and a curator from the museum, says the discovery might have played out differently had it been made by trained paleontologists. After being covered by plaster jackets, the fossils would have remained in the ground for at least a year, maybe longer, to provide time to gather as much geological context as possible. The sediment that entombed the Dueling Dinosaurs would have been carefully sieved in a search for the remnants of tiny mammals that might have been alive at the time of the dinosaurs' deaths, or for fossilized pollen grains that might have yielded clues about the triceratops's diet. The geography would have been meticulously studied to determine whether the dinosaurs were buried where they died or carried along by a river channel before reaching their resting place.

Schweitzer, a fourth-generation Montanan herself, does have some sympathy for how it all went down. "If you have a dinosaur on your property and you could sell it, I would, so that my kids could have a better life," she says. But she adds that, as a scientist, she worries more about what's lost if fossils aren't preserved in museums. "That's the frustrating thing about competing with people who want to get them out quickly and sell them."

Phipps and his colleagues might point out that preservation is no less important to commercial collectors. Once a fossil emerges, they have to ensure a specimen is safely unearthed, prepared, and stored, long before any money changes hands. "We take great care to not only preserve the fossils, but also the information surrounding them, so they can add more to research and display," says Chris Morrow, who helped prepare the Dueling Dinosaurs. "It is in our best interest to do so, because they are more attractive and more valuable to museums that way."

Zanno acknowledges that what academics generally see as the value of fossils—a unique record of natural history, to be conserved and made available for other researchers to study—doesn't always align with the aims of commercial

paleontologists. But she says her own thinking has evolved over the years. "Standing on two sides of a chasm screaming at each other isn't going to get us anywhere," she says. "Maybe Clayton is a rare example. But in my mind, Clayton has a genuine love of fossils. He's just as passionate about them as any paleontologist I've met."

n the morning Phipps takes me out to Old Faithful, he assigns me to a little pocket of sandstone adjacent to his own and hands me a brush and a knife. Most of what I find is compacted sand and fossilized black wood. Phipps, on the other hand, finds several more tiny triceratops teeth to add to the one he's already showed me.

Then, just before noon, I spot it—a dark object no bigger than a penny. Phipps takes a look and confirms that it's a fossil, a triceratops spitter tooth identical to the ones he's picked out of the ground. Like sharks, triceratops were able to regrow worn or broken teeth; a spitter is a tiny tooth that was shed when it could no longer effectively grind flora.

The excitement of my first find fades quickly, as Phipps announces he's discovered what looks to be the tooth of a T. rex in his own trench. "I can see the serrations on it," he says. "It may be a heartbreaker, though."

With thousands of dollars potentially at stake, he starts picking carefully, working the sandstone away from the fossil. After about 20 minutes, the tooth pops out from the ground. One side is in near-perfect condition; the other side has a crack down the middle. I ask him what it's worth.

"This one? I'd hate to have to say," Phipps says. Maybe it'll be enough for a few tanks of gas, maybe it'll be worth more. Phipps would tell you this is the reality: Commercial hunters invest their own money, then wait years to see any kind of return. For now, he wraps the tooth in a piece of aluminum foil and returns to digging—pushing away sand, sifting through rock, searching for the next dinosaur bone, a priceless story preserved in time. **B**

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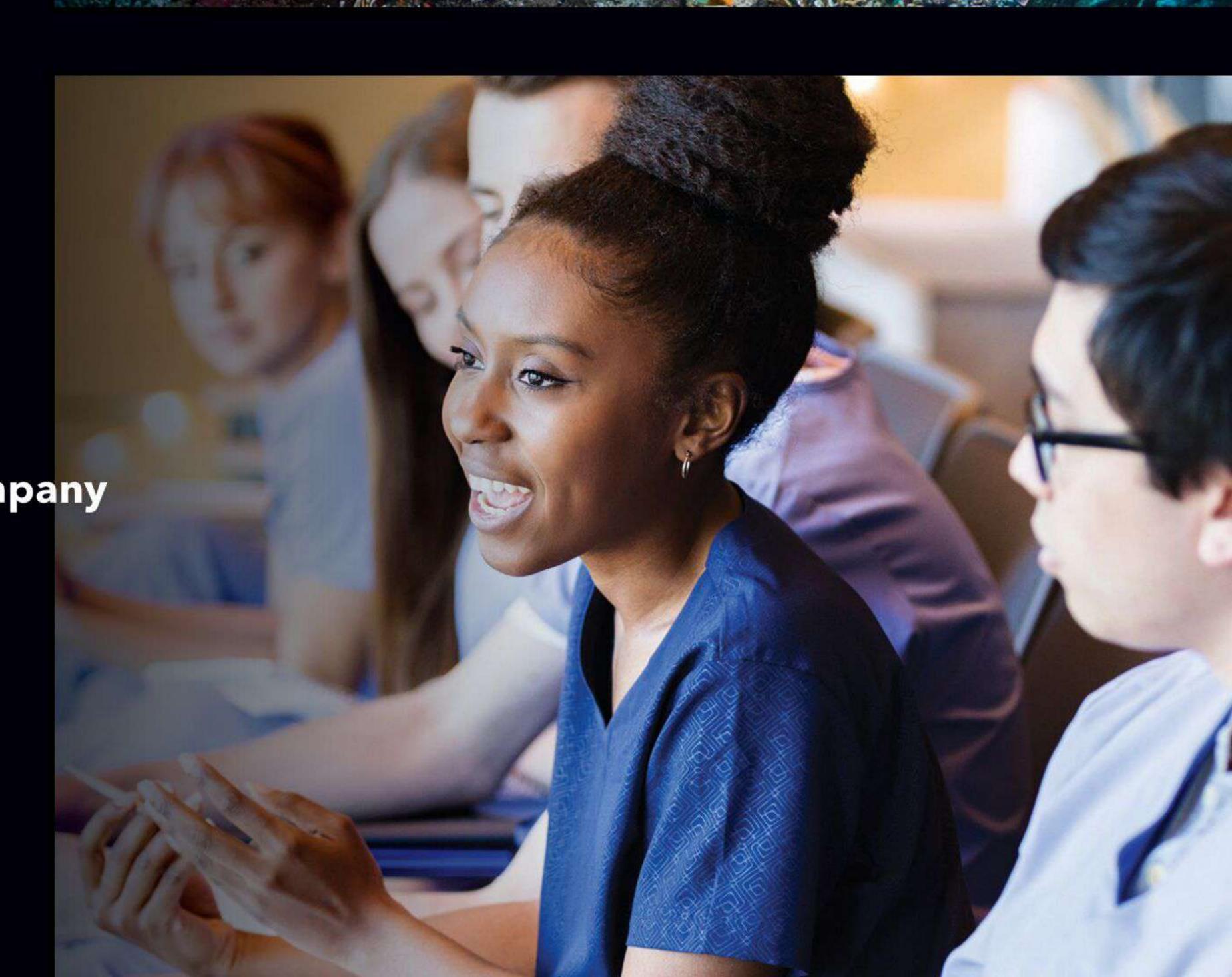
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Home on the Greens

Golf-driven real estate is finally getting out of the rough. By Michael Croley Illustration by Jovaney Hollingsworth

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Edited by Chris Rovzar

Businessweek.com

ayne Swadron wasn't looking to be near a golf course when he bought a plot of land at South Carolina's Palmetto Bluff in 2018.

Sure it had an 18-hole, par-72 course designed by the great Jack Nicklaus. But the 55-year-old architect in Toronto was more impressed by

the 55-year-old architect in Toronto was more impressed by the area's natural beauty and the breadth of other amenities. "We were principally looking for an escape from cold winters," he says.

He wasn't in a hurry to erect a home on the property either—that is, until March 2020. Once the reality of Covid-19 set in, however, he hurried to start and now considers it the family's principal winter residence.

As recently as 2016, developers of golf communities were doing so poorly that they were donating courses to national parks to take a tax break. Hundreds of them closed during the last decade after the building boom of the 1990s and early 2000s. But like so much of life since the pandemic, everything around the game has changed: A new spate of beginners has taken it up—the National Golf Foundation estimates that a record 3 million people in 2020 tried golf for the first time. Existing fans have been playing more rounds, too, while sheltering in place and working remotely.

That rebound has extended to real estate as interest in vacation homes of all kinds has skyrocketed. "Demand for private golf club community amenities and real estate is at all-time highs," says Jason Becker, co-founder and chief executive officer of Golf Life Navigators, which matches homebuyers with golf course communities.

Surveys conducted by GLN found that, since March 2020, 64% of those seeking both a club membership and a home were choosing to buy real estate inside a golf community—a stark contrast from 2019, when only 51% intended to live on such properties. "Before Covid hit," Becker says, "the demand was to buy outside the gates of a golf community. But you need people to live inside to support the amenities."

Dan O'Callaghan, director of sales for Discovery Land Co., estimates that the residential-community developer was doing \$60 million in sales annually before Covid-19, but that number jumped to \$130 million after. "In general, our numbers doubled during the pandemic," he says. Following a trend across the country and internationally, buyers in search of turnkey homes and cushy services discovered its development at Silo Ridge, 90 minutes from Manhattan in New York's Hudson Valley. "If they'd had more homes that were completed," O'Callaghan says, "we could have sold more."

Developer Ben Cowan-Dewar reports that the properties in his latest project, Cabot St. Lucia in the Caribbean, also sold well ahead of schedule. "The demand exceeded our wildest expectations" he says. "Product releases that we expected to take months sold in days."

Sales figures for the Kiawah Island Club community near Charleston, S.C., meanwhile, totaled \$152 million in the first quarter of 2021, with a 237% increase in the number of sales from the same period last year and a 337% increase from the

first quarter of 2019. August 2020 was the highest-grossing month in the club's history, with sales approaching \$100 million. (The following month was its second-highest.)

What's pushing this market segment isn't really the golf, however. GLN's survey found that the pandemic has increased the importance of safety and security for buyers, a perception that many of these communities invite with gates out front.

The evolution of remote work has also been critical. Both O'Callaghan and Chuck Cary, vice president for sales at Kohanaiki Realty LLC on the Big Island in Hawaii, say the biggest change they've seen on the property side is the home office build-out. "It's no longer a closet tucked off the kitchen," Cary says. Instead, the office is a prominent feature of the home, allowing for expansive views, such as the ocean and mountains, as is the case with Kohanaiki. Two Apple Inc. executives have even moved their families there, committing to running their divisions away from the mother ship.

Broker Kevin Sneddon of Compass real estate calls it "the great reshuffle," which is all determined by the lifestyle buyers desire. "People want to be in a tony market. It's a controlled environment, and it's safe and luxurious."

At Sand Valley Golf Resort in Wisconsin, where a private course, the Lido, is being built for homeowners, developers projected it would take seven years to sell its 17 lots, some as large as 22 acres. But they're already sold out after a year.

"I don't want to speak to the whole market," says owner Michael Keiser Jr., who runs the property with his brother,



Chris. "But in Wisconsin, I feel like Americans have had an existential reckoning over the last year and a half of their lives. For a lot of people, the answer is spending time with my family and spending time in nature and working on my terms and working where I want to work."

Location, as usual, remains a big catalyst for the growth at the properties run by Chris Randolph of South Street Partners, including Kiawah Island Club, Palmetto Bluff, and the Cliffs, a development that encompasses several properties along the North and South Carolina border. "They're all in irreplaceable, beautiful settings," he says.

But Randolph says the seeds of this uptick were planted before the pandemic. In the mid-2000s, "golf communities essentially just got overbuilt, and a lot of bad golf courses were constructed, which were used as a means to sell real estate without any focus on what that external experience or club

experience would be like," he says. "The segment took a major hit over the last 10 years, and candidly, I think it should have, because it wasn't a thoughtful plan."

Families, not retirees, are spurring sales now. Existing programs and facilities have seen a boost–Kiawah Island Club's summer camps and swim teams for children, for example, had many more attendees this summer than in past years.

At Silo Ridge, the hockey rink was the most popular spot last winter. Food trucks were brought in for those who were tired of cooking, and tutoring arrangements were set up to help with remote learning. The community is looking to expand on that program with the help of nearby elite secondary schools, as well as add sports camps using the coaching staffs of those same institutions.

At each of Randolph's properties, the buyers–parents or grandparents who wanted their extended families



KOHANAIKI

This 4-bedroom, 4.5-bathroom home on the island of Hawaii is sold turnkey and sits between the seventh and eighth holes of a Rees Jones-designed golf course. Sliding mahogany doors open the interior living space onto a private yard and pool. \$5.6 million



KIAWAH ISLAND CLUB

Situated along the first hole of the Ocean Course, home to the 2021 PGA Championship, the homes on Front Nine Lane have designs rooted in Scandinavian architecture. The top-floor master suites overlook both the course and the Atlantic Ocean in the distance, and the emphasis is on large communal spaces, both inside and out. From \$3.5 million



THE CLIFFS

Available lots at the Golf Ridge development in Marietta, S.C., are located at the southern edge of the Blue Ridge Mountains and set along Gary Player's acclaimed links course near the banks of the North Saluda River. From \$1 million



SILO RIDGE

A 2,998-square-foot, 4-bedroom, 4.5-bathroom dwelling is available in the community's centrally located Village Green neighborhood, 90 minutes from Manhattan in New York's Hudson Valley. The single-family domicile has a rustic exterior, generous terrace space, and expansive views of the front nine holes of a course designed by Tom Fazio. \$5.5 million

nearby—have been the ones pushing for both housing and new ways of living. Club use by legacy members at a Cliffs community in Asheville, N.C., is up more than 110% since 2019. At Palmetto Bluff, where the architect Swadron bought a plot in 2018, 45 families are now living there full time with school-age children.

Swadron's four sons are not school-age anymore, but the plot was a pandemic boon for them nonetheless. "Initially we expected to be there sporadically," he says. But as a result of the lockdowns and closures last year, each of them was there during the winter for anywhere between four weeks and four months. "This was an unexpected pleasure to spend large amounts of quality time together in our new home as a family," Swadron says. "The house was designed with this possibility in mind, but we never really expected it to happen." **3**

This Is a House Made of Bread

At the much-anticipated return of Art Basel, Urs Fischer's tactile wonder will attract plenty of attention. But if it were a simple painting, would it attract more dollars? *By James Tarmy*

In 2004 the artist Urs Fischer started to build prototypes of a 16.4-foot-high gingerbread-style house made from about 2,500 loaves of bread. It was a process, he says, filled with trial and error: Binding agents including marzipan and raw dough were attempted and discarded (too unstable) until he discovered polyurethane foam was the ideal mortar.

The house was constructed on an open outdoor lot in Vienna, where eventually the daily delivery of dumpsters filled with bread began to draw attention from passersby. Their reaction, to Fischer's surprise, was a combination of incredulity and outrage. "Austria's a very Catholic country," he says, "and everyone there thought the bread was somehow about the body of Christ."

But when he actually exhibited the work, called *Untitled* (*Bread House*), at the New York gallery Gavin Brown's Enterprise, "the discussion there was all about carbohydrates," Fischer says. "At which point I gave up with whatever it 'should' be about."

Now it will be shown in Switzerland in Art Basel's "Unlimited" section for large-scale works, which opens to (masked, vaccinated) VIPs on Sept. 20. Once again the reception to *Bread House* is up in the air. Fluctuating European travel restrictions are wreaking havoc on collectors' plans, and even if people do make it to the art fair, there's no guarantee that sculptures such as Fischer's will be a financial draw. The art market has spent the past two years falling in love (again, and again, and again) with paintings.

The market for dramatic pieces like *Bread House* "is not as strong as it was, because people have been so skewed by this hot painting market," says the dealer Jeffrey Deitch, who will present the house at Art Basel with an asking price "in the range of" \$3 million. "People's heads are just turned around by this phenomenon of paintings that can be bought for \$25,000 and then are worth \$5 million in a few years," he says. "It's affected the whole market, so part of my motivation for selling this is to inspire people to get behind phenomenal works."

Paintings have always sold well, for obvious reasons. Among them: It's easier to put one in your living room than a towering pile of sourdough that will become moldy very fast and need to be periodically rebuilt by a team of bread house experts.

But especially now, "there does tend to be a greater

emphasis on painting," says dealer James Cohan, who'll be exhibiting work in both the Gallery and Unlimited sections at Art Basel. "I don't know whether that's a result of commercial interest or just artistic trends," he says. "I suspect it's a bit of commercial interest."

At art fairs this fall, expect gallerists to try to use this interest to introduce buzzy artists to collectors who haven't been able to see fresh art in person for 18 months.

"This is a great opportunity for us to highlight work that European collectors and curators will not have been exposed to," says Cohan, who's bringing pieces by Firelei Báez, a multimedia artist best known for her large-scale, lush paintings; the late Monir Shahroudy Farmanfarmaian, who created abstract friezes and sculptures made from mirrors; and Eamon Ore-Giron, who makes vivid geometric paintings that draw on influences as diverse as Incan jewelry and Italian futurism. All three artists were added to his program in the past two years.

Cohan isn't alone. "We wanted to talk about the programming we'd done in the past year that our clients in Europe had not been able to see," says Donald Johnson Montenegro, a partner at the New York gallery Luhring Augustine, which will show paintings at Basel by the white-hot artists Salman Toor, Sanya Kantarovsky, Tomm El-Saieh, and Allison Katz, along with Christopher Wool and other established artists. "We did take on some new, younger artists," he says, "so we have more material at a lower price point than we have had in the past."

Given that this is Basel, long understood as the apex of art fairs, a "lower price point" isn't the same as cheap. Paintings by Katz and El-Saieh go for \$40,000 to \$60,000.

At Cohan's booth, prices range from about \$100,000 for work by Ore-Giron to around \$400,000 for pieces by Farmanfarmaian. "We think it's a good price point," he says. "It presents real opportunities for museums to engage."

Deitch is making the same calculation, namely that collectors' interest will be fired up once they can get in front of, and inside of, Fischer's *Bread House*—which will decay even as it sits in the cool exhibition hall. "People of all ages engage with this," Deitch says. "Someone might say, 'What, this is art?' But you experience it, and it expands your sense of what art can be." **B**





Get in Bed With LVMH

With its new Cheval Blanc hotel—16 years in the making—the luxury behemoth reinvents a cultural landmark. *By Lindsey Tramuta*

Paris has no shortage of exquisite hotels—the \$1,565-a-night Four Seasons George V, the contemporary Hôtel de Crillon, and Princess Diana's favorite, the fairytale-like Ritz—but even in this rarefied air, few convey luxury quite like the new Cheval Blanc, which opened on Sept. 7.

A showstopping 100-foot infinity pool in the hotel's basement level is one of the largest of any hotel in France; its deck is lined with digital panels that display animated illustrations of the Seine. The top-floor apartment, among the largest penthouses in Paris at 11,000 square feet, has its own 41-foot pool, projection space, and panoramic terrace.

Until now the Cheval Blanc brand has been associated with spots where billionaires bring yachts and don Moncler snowsuits. It has had only four resorts: St. Barts, St-Tropez, the Maldives, and Courchevel, France. This first urban location, like the others, comes courtesy of an arbiter and exporter of French luxe: LVMH Moët Hennessy Louis Vuitton SE.

In some ways the hotel feels as if it's an extension of the gleaming, modern Fondation Louis Vuitton on the other side of town. Hundreds of contemporary works by both emerging and preeminent artists, including Sonia Delaunay, Ingrid

Donat, and Frank Gehry, are displayed in airy monochromatic common areas, corridors, and guest rooms. In others it feels as if you're sleeping in LVMH Chief Executive Officer Bernard Arnault's own version of Disney World. The company's brands are everywhere: An alum of Parfums Christian Dior designed the in-room beauty amenities, and Chaumet and Tiffany & Co. jewels glisten in lobby windows.

But the biggest selling point at the Cheval Blanc Paris, where rooms start at about \$1,500 per night, was inherited from the 1928 art deco building it occupies in the 1st arrondisement, near the Louvre: incredible views of the Seine from countless terraces and bay windows. The rival Peninsula hotel has balconies facing the Eiffel Tower, but they're only in a few suites; at Cheval Blanc the riverscape dominates from almost every corner, the water so close it's like floating magically above it.

The hotel's opening—just in time for Paris Fashion Week—marks the finale on a 16-year, \$900 million undertaking by LVMH to transform the historic Samaritaine department store complex. Now it's a new kind of flagship for the parent company, combining the hotel's 72 rooms and four restaurants with a high-end emporium that's accessible from the

street or a private hotel elevator.

Of the original cluster of Samaritaine buildings, LVMH focused on two: the current hotel, originally completed by legendary architect Henri Sauvage in 1928; and the adjacent art nouveau space, where the brand opened a retail com-

plex in June.

In the years since the project began, the neighborhood has shifted from high street shops and traffic jams to cultural cradle. In May the nearby Bourse de Commerce opened as a museum displaying the private contemporary art collection of François Pinault, lifelong rival to Arnault. Fondation Cartier has scooped up the old Louvre des Antiquaires building, three blocks from La Samaritaine, to rehouse its own art collection by the 2024 Summer Olympics.

Cheval Blanc, however, is the most immersive of these billionaire-driven projects. Throughout, staff sport elegant uniforms in matte wool, cotton pique, and poplin, all designed by Patou artistic director Guillaume Henry.

Among the restaurants is Plénitude, whose chef, Arnaud Donckele, hails from Cheval Blanc's St-Tropez outpost. The Douglas fir-lined cellar stocks exceptional vintages of Dom Pérignon (P3 from 1969) and rare bottles of Château d'Yquem and Madeira, the oldest of which dates to 1870.

Design work was led topto-bottom by iconoclastic American architect and designer Peter Marino, who has worked with LVMH for two decades, creating interiors for Louis Vuitton stores in Beverly Hills, London, and Seoul. He was tapped this year to renovate the Tiffany flagship in New York.

Beyond Sauvage's glass facade-carefully restored and updated with energy-saving windows-there was nothing to salvage inside the original building, leaving Marino with a blank canvas for his first full hotel project. "It was an unusual and exhilarating opportunity for me because I had so much time-years!-to design every piece of furniture, lamp, and coffee table," says Marino, who had a team of almost 600 artisans to bring it all to life.

The rooms bear Cheval Blanc's signature tone-on-tone aesthetic, with lots of expensive tweed and velvet, marble and stone. The rest is bolder. A pair of powder rooms by the

> Plénitude restaurant are treated as art installation spaces; the toilets are wrapped with colorful plywood work by multimedia artist Michael Watson. In the seventh floor brasserie, the retro red and yellow decor is theoretically Jasper Johnsinspired but smacks of an upscale McDonald's. Whether you like them or not, Marino's design choices add an element of surprise for people who think they've seen it all.

> The hotel will give LVMH another way to reach beyond brand loyalists and court customers for whom experiences are worth more than any one bracelet or handbag. The company acquired Belmond, which boasts 46 luxury hotel, restaurant, train, and river cruise properties, for \$3.2 billion in 2019.

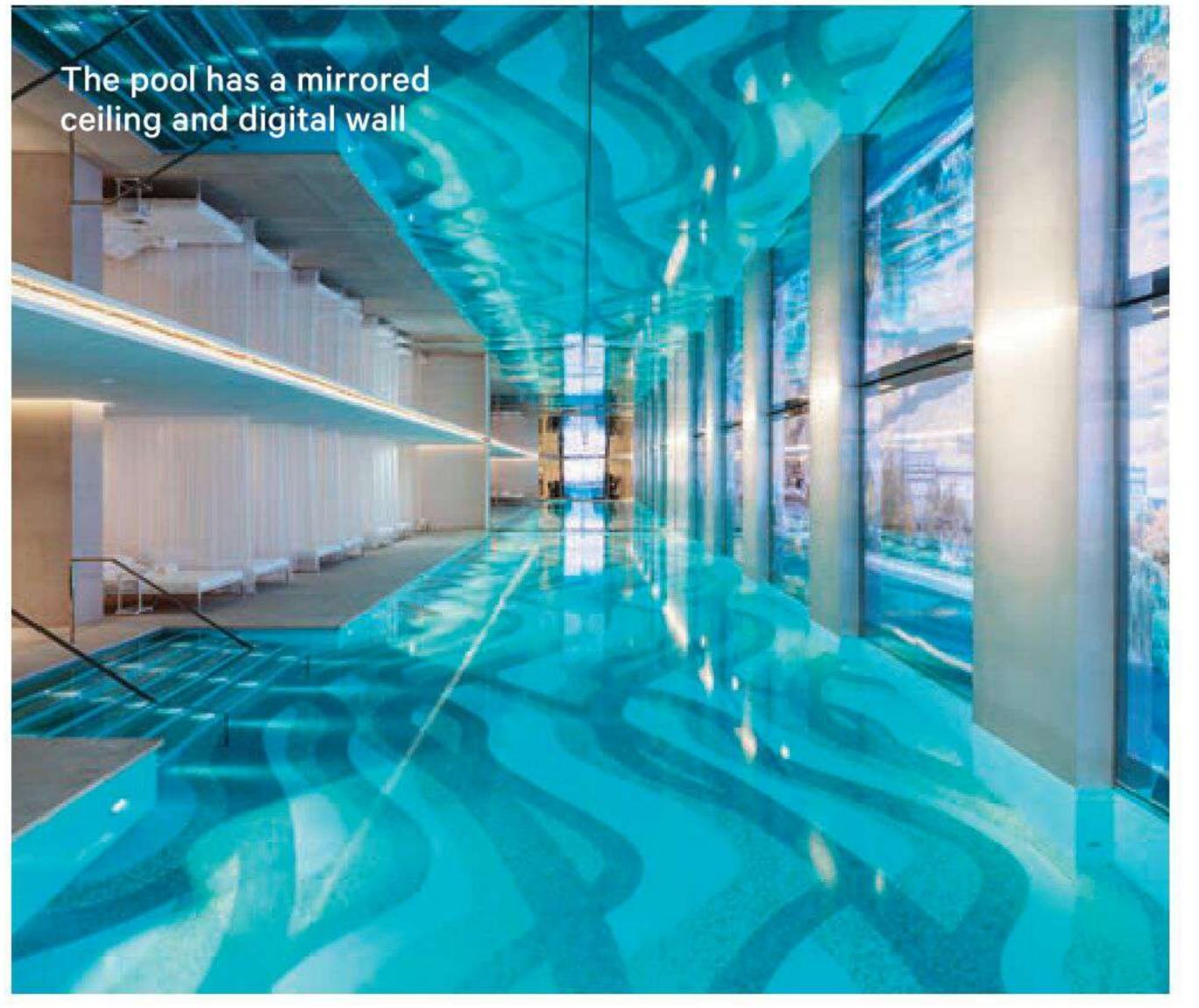
> Even if business starts slowly-international visitation in Paris is still half what it was 2019-the company will have succeeded in reviving one of the last remaining slices of historic real estate and strengthened its influence on the evolving city.

> The project has had its critics. After all, the French have a history of revolting against the ultrarich. Some locals feel left out of this version of Paris, once an imperfect and edgy hub for the everyman and now a luxury playground for foreign tourists.

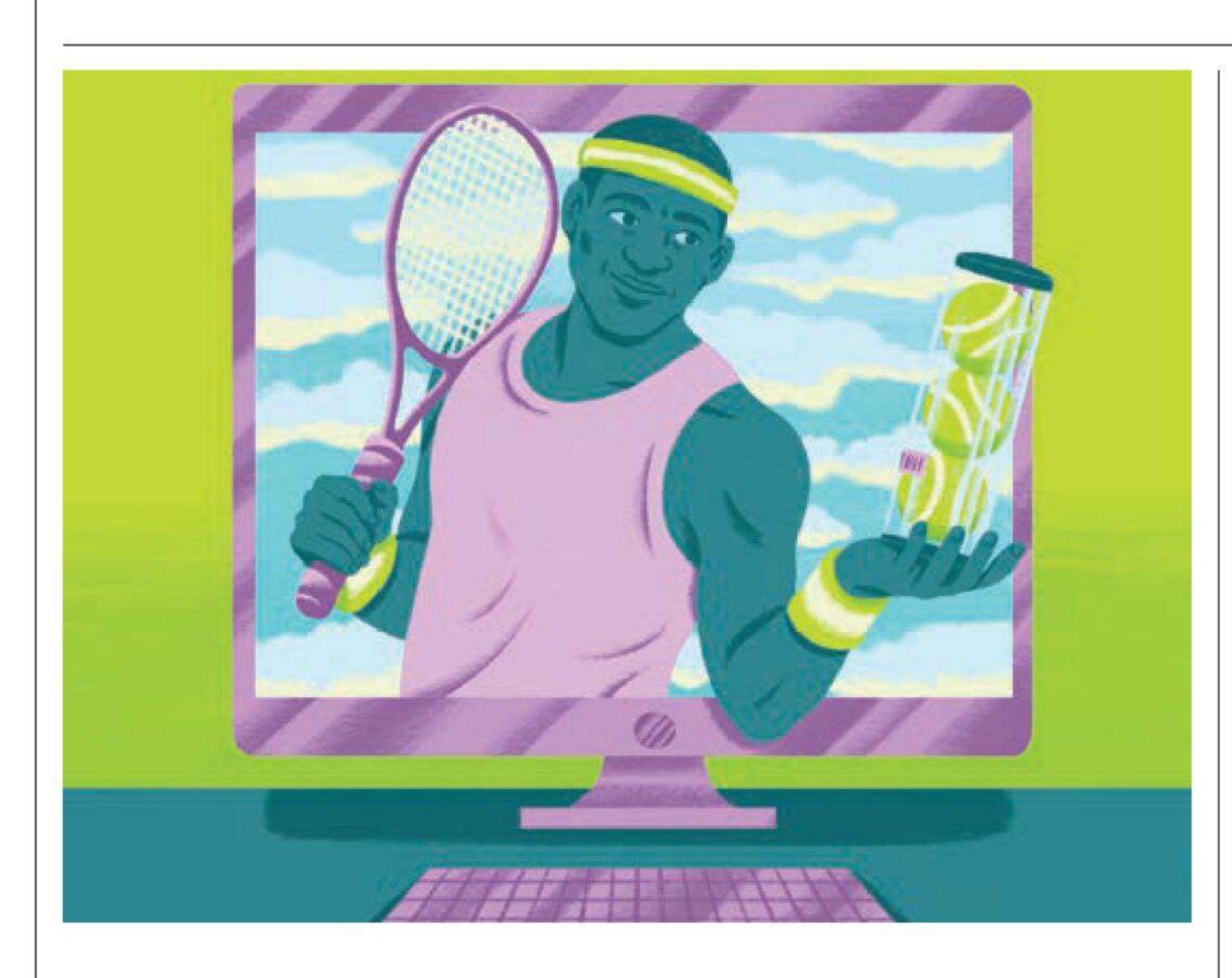
> But the reality, as Marino put it, is that few have the means to preserve the city's architectural marvels-and even fewer from

within French borders. "The other five-star hotels in Paris are owned by the Qataris, the Saudis, the Chinese, the Hong Kongers," he says, referring to Le Royal Monceau and other icons. "This will be the only one owned by the French," he says. "Long term, that matters." 13









Just Enough Human Touch

Shop online for the perfect sports gear with the help of athletes in the know. *By Gordy Megroz*

I know nothing about golf, so it's a good thing I have Blake. We first met on Curated.com, an online gear retailer I logged on to so I could find a potential first set of clubs.

"Hi Gordy!" he said. "I'm Blake, your designated golf expert (and a real human, I promise!)" OK, even though it sounds exactly like something an intelligent chatbot would say, this detail mattered to me: Blake's expertise (and his humanity) was what most interested me about Curated.

The inspiration for the business came from an experience that Eduardo Vivas, one of its co-founders, had while on a snowboarding trip to Vail, Colo. A relative novice, Vivas purchased the most expensive, most highly rated gear on the market because it seemed best. But it was all wrong for him. His instructor told him to trade it in for a cheaper board and boots that better matched his abilities—gear that allowed him to progress and eventually snowboard at a higher level.

Instead of depending on online reviews and magazine write-ups, shoppers for sports gear, he thought, should be consulting with experts—ski instructors, competitive cyclists, fishing guides, and the like. In 2017 he founded the website with three fellow former LinkedIn Corp. executives.

During its first few years, the company's growth was slow. Then the pandemic hit: Although people were spending more time at home, they were also picking up new sports. And they were shopping online. In 2020 e-commerce sales in the U.S. rose 44% over the prior year and Curated's revenue increased 300%. In 2021 the company raised \$39 million in a Series B funding round. To date, Curated has raised \$66.5 million from investors.

Online reviews for the company are so positive they almost seem fabricated. "From the minute Tyler [an expert] messaged me I knew I was in good hands," wrote one customer. "You gently caressed my needs and wants and made me feel vulnerable yet safe at the same time."

Blake and I chatted for about a half-hour. "I'd like something that I can learn with but also progress with," I told him. "I don't want my abilities to outgrow the set too quickly."

"That makes complete sense," he said, then went to work finding me woods, irons, and putters known for their big sweet spots, versatility, and forgiving nature. A few minutes later, Blake emailed me his curation: two sets of clubs, the \$529 Callaway Men's 2019 Strata Tour set and the \$579 Tour Edge Bazooka 470 Black set.

This was great. Although I decided not to buy yet because of the expense, I trusted Blake: Prospective Curated advisers are reviewed by a panel of current experts—which include more than 1,000 masters in the sports of skiing and snow-boarding, fishing, hiking, camping, cycling, golf, and tennis. If a product isn't found in one of the company's two warehouses, Curated will send customers to a partner retailer. If they can't find it there, Curated will buy the product from a third party. "We lose money on those deals," Vivas says. "But it ensures that the customer gets what's best for them."

I felt well-served by Blake, but to really test the experts' skills, I decided to walk through the process in a sport I know quite a bit about: skiing. As a former ski tester for magazines, I've tried thousands of pairs. On Curated.com, I chatted for about 30 minutes with my ski expert, Thomas, who prodded me with questions much the same way Blake had. "Would you say it's more important to you that a ski carves well or is quick to pivot? What percentage of your time would you say you spend on the groomers?" When I received his curation, I was convinced. One of his two recommendations (out of hundreds of possibilities) was a pair of Nordica Enforcer 100s, the very skis I use most of the time.

There are downsides to shopping on Curated. After my session with Blake, he kept bugging me about those damn clubs. He texted and emailed at least a dozen times asking if I was still interested in buying them. Curated experts, I discovered, get paid mostly on commissions and tips. They work as much or as little as they want but can earn as much as \$10,000 a month. Buying sporting goods from your local shop has its benefits: If your bike breaks, they'll service it right away. If you bought it online, it could take weeks to get the work done.

Still, I've had some bad experiences buying gear in shops. Many shop workers aren't experts, and they have access to only the gear they carry. I remember hating a tennis racket that a salesman insisted was perfect for me. So when I'm ready to commit to a set of clubs, I'm going with Blake. **3**

It's a pledge that countless purveyors of medicine, meditation apps, herbal supplements, and therapy have made: less stress and a good night's rest. Chances are you've tried a few of these, with middling success—we've all got fatiguefighting fatigue. But the \$490 Cove wearable has an inventive premise: Gentle vibrations to the skin behind your ear transfer signals to the insular cortex in the brain, which manages incoming sensations from your body. Like a loved one's comforting touch, the sensation has a calming effect. The Cove's creators at Feelmore Labs in New York say wearing the device for 20 minutes a day can, over time, teach your brain to better manage your body.

THE COMPETITION

• The closest thing to the Cove is the Apollo Neuro (\$349), worn on the wrist or ankle. It sends out vibrations to stimulate the branch of the nervous system that's activated during meditation, deep breathing, and sleep.
• Headspace, the guided meditation app, offers courses

on falling asleep and

managing anxiety.

With more than 30 million users, the \$70-a-year service promises long-term results with only a few minutes a day. The \$329 Biostrap **USA Active Set** wristband measures input during sleep and provides data on metrics such as arterial elasticity and heart rate variability, which give insight into your ability to handle stress.

Bloomberg Pursuits



Good Night, Stress

The Cove headset promises to ease anxiety and soothe you into better sleep *Photograph by Frank Frances*

THE CASE

Research performed by Cove indicates that 90% of wearers reported falling asleep faster and feeling less stressed generally. In our two months of regular wearing, the headset did seem to relieve

when used once a day in the evening. (Spikes of duress, such as those experienced before a big meeting, don't go away.) Sleep quality, as measured by the Sleep Cycle app, was also improved. The device fits comfortably around the back of the neck, and the slow vibrations (they're more like wobbles, really) can be adjusted for intensity—ideally, you're barely aware of them. The technology still needs some help—frequent app updates force time-consuming reinstalls—but for many, blips aside, the headset will offer a low-impact way to combat fatigue fatigue. \$490; feelcove.com

basic anxiety levels

There's an M&A Boom in Outdoor Activities

By Brooke Sutherland

Interest in outdoor pastimes soared during the pandemic as health concerns forced a rethink of many indoor activities. That didn't escape the attention of mergers-and-acquisitions bankers.

It's only September, but so far this year companies have announced \$11 billion in leisure-related takeovers in North America. That's the highest annual volume since 2006, when private equity firms gobbled up travel-services companies Travelport and Sabre Holdings in a pair of multibillion-dollar deals.

Golf has been a particular hotbed. All three of the largest U.S. golf acquisitions have happened since the World Health Organization officially declared the Covid-19 outbreak a pandemic in March 2020: Callaway Golf Co.'s \$2.5 billion purchase of driving-range chain Topgolf Entertainment Group; private equity firm Centroid Investment Partners' takeover of clubmaker TaylorMade Golf at a reported valuation of about \$2 billion; and Platinum Equity LLC's \$1.7 billion acquisition of Ingersoll Rand Inc.'s Club Car golf-cart business. Club Car has for years been the odd man out at Ingersoll Rand, which also makes air compressors, power tools, and industrial-strength lifting equipment. The company's decision to sell now is telling.

Overall play in the U.S. in 2020 was up about 14% from a year earlier, for a total of about 500 million rounds, according to Golf Datatech, via the National Golf Foundation. The enthusiasm for the outdoor sport has continued even as parts of the economy have reopened.



In June retail sales of golf equipment were up almost 50% from 2019 levels, the trade group says. Business hasn't been this good since 2008, the year Tiger Woods won the U.S. Open in a playoff at the peak of his popularity, which had helped broaden the sport's appeal. Sporting goods company Vista Outdoor Inc. jumped on the golf-deal bandwagon this month with a \$474 million agreement for golf-simulator company Foresight Sports.

Boating is another favorite for acquirers. U.S. boat sales surged to a 13-year high in 2020, according to the National Marine Manufacturers Association. To capitalize on renewed interest in the waterways, recreational-vehicle maker Winnebago Industries Inc. agreed in July to buy Barletta Pontoon Boats for as much as \$320 million. Barletta expects to more than double its earnings this year and boost sales by almost 80%. The Winnebago deal valued Barletta at a higher multiple of future profits than the buyer itself commands—even after an equally robust demand boom for RVs during the pandemic.

Continued restrictions have made it more difficult to suss out which habits will stick and which will fade as the world gets back to a more normal state. But leisure acquirers are betting that even once Americans feel comfortable attending sports events and visiting movie theaters again, they won't want to give up their time on the links or the lake. **B** —Sutherland is a columnist for Bloomberg Opinion







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