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THE WALL STREET JOURNAL.

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What's News

Business & Finance

The U.K. government is starting a national-security review of Nvidia's $40 billion deal to buy Arm from SoftBank, raising a new hurdle for the proposal. **A1**

◆ **A cryptocurrency** that was created as a joke exploded into plain view on Wall Street, with a surge in dogecoin sending its 2021 return above 8,100%. **A1**

◆ **Credit Suisse said** two executives in charge of its prime brokerage unit will leave in the wake of the bank's $4.7 billion loss from the collapse of Archegos. **B1**

◆ **Musk's internet satellite** venture has spawned an unlikely alliance of rivals, regulators and experts who cite risks from the project. **B1**

◆ **U.S. safety officials** are investigating a fatal crash involving a Tesla vehicle. **B4**

◆ **Apple said** in a letter to lawmakers that it plans to make Parler available through its App Store again. **A6**

◆ **U.S. stocks fell,** with the Nasdaq, S&P 500 and Dow retreating 1%, 0.5% and 0.4%, respectively. **B11**

◆ **IBM posted** higher revenue for the first quarter, ahead of a landmark split of the business this year. **B4**

◆ **The union that** unsuccessfully sought to organize an Amazon location in Alabama has filed challenges over the vote. **A3**

◆ **GameStop said** CEO George Sherman will step down by July 31. **B3**

◆ **Coca-Cola said** its sales volume in March returned to pre-pandemic levels. **B3**

World-Wide

◆ **Efforts to vaccinate** the poorest countries against Covid-19 have slowed to a trickle, leaving many with weakened defenses just as the weight of the pandemic shifts from developed to developing nations. **A1**

◆ **India imposed** a lockdown on its capital and said it would expand its vaccination program to all adults, amid the world's fastest-growing surge of Covid-19 infections. **A7**

◆ **Capitol Police Officer** Brian Sicknick suffered a stroke and died of natural causes, the Washington, D.C., medical examiner's office said. He died a day after the Jan. 6 riot. **A1**

◆ **The Biden administration** is considering requiring tobacco firms to lower the nicotine in all cigarettes sold in the U.S. to levels at which they are no longer addictive. **A2**

◆ **Walter Mondale died** at the age of 93. Vice president under Jimmy Carter, he was a civil-rights champion who ran as the Democratic candidate for the White House in 1984, losing to Ronald Reagan. **A4**

◆ **Biden and** a bipartisan group of lawmakers discussed alternative ways to pay for infrastructure spending, including a smaller increase in the corporate tax rate. **A4**

◆ **Navalny was hospitalized** weeks after starting a hunger strike, as Russia brushed off U.S. warnings of repercussions should the jailed opposition leader die in prison. **A8**

◆ **NASA's Mars Ingenuity** helicopter made history as the small drone became the first powered craft to fly on another world. **A5**

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Chauvin Case Goes to Jury After Day of Closing Arguments

COURT TV/PRESS POOL (2)

DELIBERATION: The murder trial of Derek Chauvin went to the jury Monday in Minneapolis after Steve Schleicher, left, a special assistant attorney general for the prosecution, and defense attorney Eric Nelson made their closing arguments. A3

Poorest Nations Fall Behind As Vaccine Efforts Stagnate

By Gabriele Steinhauser in Johannesburg, Nicholas Bariyo in Kampala, Uganda, and Jon Emont in Singapore

Efforts to vaccinate the poorest countries against Covid-19 have slowed to a trickle, leaving many with weakened defenses against the coronavirus just as the weight of the pandemic shifts from developed to developing nations.

An initiative backed by the World Health Organization and rich countries to supply free vaccines to 92 low- and middle-income countries recently slashed the number of shots it plans to ship by the end of May. That initiative, called Covax, will deliver 145 million doses instead of about 240 million because India, its main supplier, has largely stopped exporting shots as it fights a surge in cases at home.

That is widening a huge vaccination gap between rich and poor countries. While more than 200 million doses have been administered in the U.S., Covax has supplied fewer than 41 million of the two billion doses planned by year-end.

Slow uptake of Covid-19 vaccines in developing countries could create problems for the rest of the world. Epidemiologists believe that failure to vaccinate much of the developing world could leave a large reservoir of the coronavirus circulating, giving it the chance to mutate and possibly spill over to developed countries.

Most of the Covax shots planned for the first half of the year were to be manufactured by the world's biggest vaccine maker, the Serum Institute of India, which has partnered with AstraZeneca PLC to make the vaccine the company developed with the University of Oxford. The SII said its output has also been constrained by limits imposed by the U.S. on

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◆ Virus cases trend higher amid vaccination push.................... A3

◆ India locks down capital, boosts shots............................. A7

Nvidia's Arm Deal Gets U.K. Security Review

Officials begin probing $40 billion takeover, showing the strategic role of semiconductors

By Stu Woo And Eric Sylvers

LONDON—The U.K. government is starting a national security review of Nvidia Corp.'s $40 billion deal to buy British chip designer Arm from SoftBank Group Corp., raising a new hurdle for an industry-reshaping proposal facing significant regulatory scrutiny around the world.

U.K. Digital Secretary Oliver Dowden invoked on Monday a little-used power to order the country's antitrust agency to investigate the merger's national security implications and deliver a report by July 30. The secretary can eventually clear the Santa Clara, Calif., company's deal, with or without conditions, or nix it.

The national security review comes on top of the agency's previously announced plans to investigate the deal on antitrust grounds.

The U.K. probe is the latest example of how governments around the world are increasingly tightening control over semiconductor technology, after the past year demonstrated how access to advanced microprocessors can make or break some of their biggest companies.

U.S. export controls on chip

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Chip Makers Fight To Beat Shortage

Efforts produce only small gains, hampering production of cars, home appliances, PCs

By Eun-Young Jeong in Seoul and Dan Strumpf in Hong Kong

The world's leading suppliers of semiconductors are pushing to overcome the prolonged chip shortage that has hampered production of everything from home appliances to PCs to autos.

Chip makers are trying to eke out more supply through changes to manufacturing processes and by opening up spare capacity to rivals, auditing customer orders to prevent hoarding and swapping over production lines. The bad news is, there are no quick fixes, and shortages will likely continue into next year, according to the industry's executives.

On top of a spike in demand, producers have been hamstrung by a series of freak events that have knocked out supply, while ongoing U.S.-China political frictions and concerns of a prolonged shortage have prompted some manufacturers to stockpile chips.

The current shortfall includes the less-advanced chips that the industry's biggest

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Walter Mondale Dies at 93

ASSOCIATED PRESS

The former vice president was a staunch supporter of civil-rights legislation while a senator. He lost a 1984 White House bid to Ronald Reagan in a landslide. A4

Dogecoin Trading Rides Online Frenzy

By Caitlin Ostroff And Caitlin McCabe

A cryptocurrency that was created as a joke exploded into plain view on Wall Street on Monday, with a surge in dogecoin sending its 2021 return above 8,100%—more than double the gains on the S&P 500, including dividends, since 1988.

Dogecoin's rise from a quirky meme into a widely traded asset worth about $50 billion—more than Marriott International Inc. or Ford Motor Co.—is the latest act of financial alchemy by rapidly moving individual investors who have used access to no-fee trading platforms and a wave of government stimulus money to transform markets

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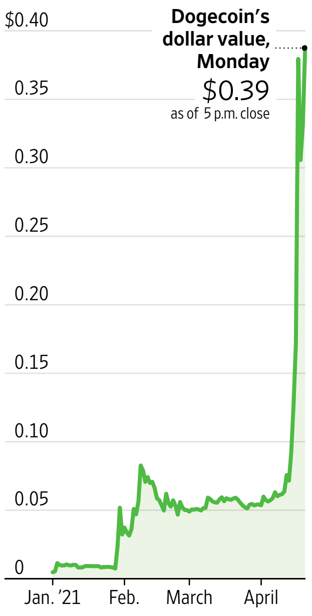

Source: CoinDesk

Super Fans Confront Super League

* * *

Protests in U.K. erupt over new soccer circuit

By Joshua Robinson

Tim Payton isn't sure when the pandemic will allow him to attend his next soccer match at Arsenal's stadium in London. He can tell you for sure that he won't be wearing the team's red-and-white jersey.

"I imagine going dressed in funeral clothes," said Mr. Payton, a season ticket-holder for more than 35 years and a board member of the club's supporters' trust. "I imagine going to lay a wreath outside."

To be clear, no one is dead. Yet fans of 12 of Europe's most

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◆ Super League moves to head off bans................................ A14

Capitol Officer's Death Ruled to Be Natural

By Aruna Viswanatha And Sadie Gurman

Capitol Police Officer Brian Sicknick suffered a stroke and died of natural causes, the medical examiner's office in Washington, D.C., said Monday, weighing in on a question that has lingered since the officer died a day after he was assaulted during the Jan. 6 riot at the U.S. Capitol.

The office concluded that Mr. Sicknick's manner of death was natural, adding in an explanation: "If death is hastened by an injury, the manner of death is not considered natural."

Two men were arrested last month on charges of assaulting Mr. Sicknick with a chemical spray, but prosecutors and the medical examiner didn't link the spray to the officer's subsequent death.

After being sprayed with the substance around 2 p.m. on Jan. 6, Mr. Sicknick collapsed at the Capitol around 10 p.m. and was taken to a hospital, where he died at about 9:30 p.m. the following night, according to the examiner's office. He was 42 years old.

The Capitol Police had said he was injured while protecting Congress from a mob of Trump supporters who stormed the building, saying that Mr. Sicknick had "succumbed to his injuries" after being taken to the hospital. But the force hadn't explained how he died, sparking persistent questions from lawmakers and others about what happened.

The Capitol Police said Monday that it accepted the medical examiner's new findings. "This does not change the fact Officer Sicknick died in the Line of Duty, courageously defending Congress and the Capitol," the agency said in a statement.

Mr. Sicknick's remains lay in honor on Feb. 2 in the Capi-

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U.S. NEWS

Rule Could Cut Nicotine in Cigarettes

By Jennifer Maloney

The Biden administration is considering requiring tobacco companies to lower the nicotine in all cigarettes sold in the U.S. to levels at which they are no longer addictive, according to people familiar with the matter.

Administration officials are considering the policy as they approach a deadline for declaring the administration's intentions on another tobacco question: whether or not to ban menthol cigarettes.

The Food and Drug Administration must respond in court by April 29 to a citizens' petition to ban menthols by disclosing whether the agency intends to pursue such a policy. The Biden administration is now weighing whether to move forward on a menthol ban or a nicotine reduction in all cigarettes—or both, the people familiar with the matter said.

The White House and the FDA didn't immediately comment Monday.

The nicotine-reduction policy under consideration would lower the chemical in cigarettes to nonaddictive or minimally addictive levels, aiming to push millions of smokers to either quit or switch to less harmful alternatives such as nicotine gums, lozenges or e-cigarettes.

A menthol ban, meanwhile, would aim to curb smoking initiation among young people, many of whom start with menthols. Both policies would take years to implement and would likely face legal challenges.

Scott Gottlieb, an FDA commissioner under the Trump administration, pursued both a menthol ban and a reduction of nicotine in cigarettes as part of a broader tobacco policy he proposed in 2017. But after he left the agency in 2019, both plans were shelved.

New Zealand last week proposed sharply reducing nicotine levels in cigarettes and raising the legal smoking age as part of a broader policy aimed at ending smoking.

Nicotine itself doesn't cause cancer, heart disease or lung disease, according to the FDA. But it hooks people on cigarettes, which are linked to 480,000 deaths in the U.S. each year.

Marlboro maker **Altria Group** Inc.'s shares fell more than 6% Monday on the news of the Biden administration's deliberations.

"Any action that the FDA takes must be based on science and evidence and must consider the real-world consequences of such actions, including the growth of an illicit market and the impact on hundreds of thousands of jobs from the farm to local stores across the country," an Altria spokesman said.

A spokeswoman for **Reynolds American** Inc., which makes Camel and Newport cigarettes, said that the scientific case for nicotine reduction is inconclusive and that "there are better tools for improving public health."

Research funded by the FDA and the National Institutes of Health has shown that when nicotine was nearly eliminated from cigarettes, smokers were more likely to quit or seek a nicotine fix from less harmful alternatives such as e-cigarettes or gum compared with smokers who continued using cigarettes with normal nicotine levels.

Lowering nicotine in cigarettes has been a subject of discussion inside the FDA since the 1990s. In 2009, the Tobacco Control Act authorized the FDA to mandate such a change, stipulating that the policy be based on scientific evidence.

A ban on menthols has similarly been in the FDA's sights for years.

The Tobacco Control Act banned candy, fruit and spice flavorings in cigarettes because of their potential appeal to children, but it left unsettled the issue of menthol. The 2009 law said the FDA could prohibit menthols only if it could demonstrate that a ban was a net benefit to public health, taking into account potential unintended consequences such as an illicit market. The agency has been working on overcoming that hurdle since then.

The FDA concluded in 2013 that menthols are harder to quit and likely pose a greater health risk than regular cigarettes.

—Stephanie Armour and Andrew Restuccia contributed to this article.

Plaintiffs, Drug Firms Spar in Opioid Trial

By Sara Randazzo

A lawyer for several large California communities accused four drugmakers of causing a deadly wave of opioid addiction with their aggressive marketing of pain pills, while defense attorneys said the firms followed the law on the opening day of a trial closely watched by the pharmaceutical industry.

"Without an avalanche of prescription opioids, there wouldn't be an opioid epidemic," said Fidelma Fitzpatrick, a plaintiffs' lawyer hired to represent the counties of Los Angeles, Orange and Santa Clara, and the city of Oakland.

The monthslong trial, being held fully by videoconference and decided solely by a judge, began Monday with opening remarks from Ms. Fitzpatrick and attorneys for the drugmakers being accused of misconduct—**Johnson & Johnson**, **Teva Pharmaceutical** Ltd., **Endo International** PLC and **AbbVie** Inc.'s Allergan.

The drugmakers argued Monday that they properly marketed their drugs under regulatory oversight and that the plaintiffs won't be able to show examples of local deaths that stemmed from their prescriptions. "The evidence will not support this grand conspiracy theory," Collie James, an attorney for Teva, said in his opening statement.

The California trial, along with others expected to start in West Virginia federal court in May and New York state court in June, could spur drugmakers and distributors to finalize settlements to end opioid lawsuits nationwide. Three large distributors and J&J have proposed paying a collective $26 billion to settle the cases, and others are in talks. Consulting giant McKinsey & Co. recently agreed to pay $641 million to resolve claims by states over advice it gave to OxyContin maker **Purdue Pharma** LP.

Ms. Fitzpatrick said the companies should be held responsible under California's public nuisance and misleading marketing laws for their role in causing opioid addiction in the state. Between 1997 and 2017, California received more than 20 billion doses of prescription opioids, Ms. Fitzpatrick said, in the form of pills, patches or lozenges.

The communities say the drugmakers pushed their prescription opioids on doctors despite knowing there was a mounting public-health crisis. Ms. Fitzpatrick showed Orange County Superior Court Judge Peter Wilson internal company documents acknowledging what Endo, for instance, called a "public-health conundrum" during a strategy meeting in 2011. An attorney for Endo, John Hueston, later said they were providing context "so Endo could find the solutions."

This trial and others coming up could spur settlements of lawsuits nationwide

"This was about money," Ms. Fitzpatrick said, showing images of drug advertisements depicting lives improved by opioids and documents from the companies using the word "aggressive" to describe their own marketing. One Teva internal email urged employees: "Keep on cranking out the coupons and driving Rx growth!"

The proceeding, arising from claims first filed in 2014, is only the second trial from more than 3,000 lawsuits filed nationwide by state and local governments seeking to hold drugmakers, distributors and pharmacies accountable for the opioid epidemic. Nearly 500,000 people have died in the U.S. from legal and illicit opioids since 1999, according to federal data.

Mr. James said Teva's medicines continue to be prescribed as legal and necessary pain-management options. For those with cancer, Mr. James said, opioids such as theirs are often the only way to prevent a miserable life in pain. "Pain is a serious problem in this country," J&J lawyer Michael Yoder echoed in his opening remarks.

Union Official Is Tapped for SEC Policy Role

By Dave Michaels

SENATE COMMITTEE ON BANKING, HOUSING, AND URBAN AFFAIRS

Heather Slavkin Corzo, seen at a hearing in 2019, will be new SEC Chief Gary Gensler's policy director.

WASHINGTON—Gary Gensler, the new chief of the Securities and Exchange Commission, on Monday tapped a labor-union investment official as his policy director, raising expectations that the agency will embrace progressive policy goals.

Mr. Gensler, who was sworn in on Saturday, picked Heather Slavkin Corzo for the top policy role in his office. The hire suggests Mr. Gensler will tackle issues such as stricter corporate disclosures related to climate-change risks and companies' spending to influence politics.

Ms. Corzo has worked as director of capital markets policy at the AFL-CIO and as head of U.S. policy at the Principles for Responsible Investment, a group of asset owners that incorporates environmental, social and governance considerations into their holdings.

"She has very significant relationships with investors, union leaders and public interest advocates—many of which were very supportive of Gensler's appointment," said Tyler Gellasch, a former regulator and now executive director of investor group Healthy Markets. "She knows very well what those groups are hoping to see out of the SEC, and the yardsticks against which Gensler's tenure will be measured."

While working at the AFL-CIO, Ms. Corzo also wrote or testified to Congress in favor of tighter regulation of private equity and stock buybacks, as well as requiring companies to put worker representatives on their boards of directors.

Some progressive policy goals, such as requiring companies to disclose their political spending, are controversial even within the SEC. During the Obama administration, the SEC thought the issue wasn't material to shareholders. Securities laws require public companies and others selling investments to disclose facts and risks that are material—or information that may influence an investor's decision to buy, sell or hold an asset.

Ms. Corzo's role at the SEC, policy director, hasn't existed under prior chairmen. Advisers to the SEC's chairman typically play roles in organizing and negotiating new regulations, but policy is mostly crafted by division directors hired by the chairman and those directors' staffs.

Mr. Gensler hasn't announced any division directors yet. The most prominent director is usually the agency's enforcement chief.

Mr. Gensler on Monday also announced a chief of staff, a head of legislative affairs and a top communications official. Prashant Yerramalli, who has worked as an SEC enforcement attorney among other roles, will serve as Mr. Gensler's chief of staff, the SEC said.

Nvidia's Deal Faces U.K. Probe

Continued from Page One

technology have jeopardized the ability of China's Huawei Technologies Co., which was briefly the world's top smartphone maker, to buy supplies it needs to keep making devices. A global semiconductor shortage, meanwhile, has idled assembly lines at General Motors Co. and other auto makers because today's vehicles require so many chips.

"This has become the new colonialism," said Hermann Hauser, co-founder of Arm's predecessor company and vice chairman of a European Union advisory council on technology. "If you have sovereignty, you can independently run your economy without running to another country for semiconductors."

Nvidia's proposed acquisition of Arm also is expected to face regulatory scrutiny in China, the EU and the U.S., in part because of its potential to reshape the chip industry. Nvidia is one of the world's biggest designers of graphics chips, while Arm designs the basic blueprints for the chips in more than 95% of the world's smartphones.

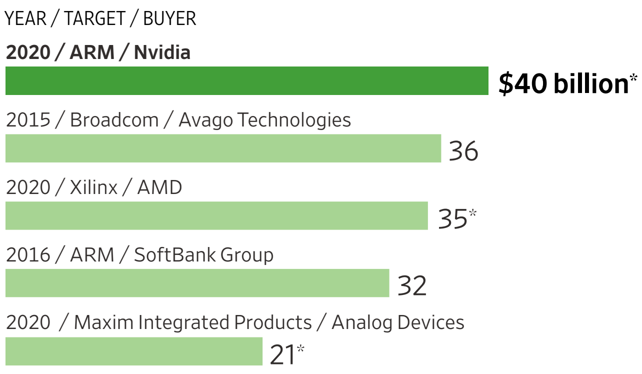
At the heart of antitrust concerns is the future of Arm's business model, which has long been based on forging partnerships with as many companies as possible to sell high volumes of chip designs at low prices. Nvidia Chief Executive Jensen Huang has said he supports keeping this open business model, but competitors have been skeptical.

In ordering a review of the national security implications of Nvidia's proposed acquisition of Arm, the U.K. invoked a seldom-used power that gives it wide latitude to determine whether the merger would be in the "public interest" of the country, based on national security grounds.

A spokesman for Nvidia said it didn't "believe that this transaction poses any material national security issues." He said the company would work with British authorities on the probe. Nvidia executives expected a possible U.K. national security review when the company agreed to buy Arm and factored that risk into what it has said is an 18-month timeline for completing the deal, a person close to Nvidia said.

Nvidia shares fell 3.5% in Monday trading.

Top global semiconductor M&A deals on record



*Deal is pending

Sources: Dealogic; the companies

The government didn't order a national security review when Japan's SoftBank bought Arm for $32 billion in 2016. What changed in the five years since has been concerns about geopolitical risk, said Christine Phillips, a lawyer at London firm Fieldfisher who specializes in cross-border mergers.

"There's just a general sensitivity of trying to protect core technology and assets that could be critical in the U.K.," Ms. Phillips said. She said that in previous "public interest" probes, the British government has sought assurances about headquarters and jobs remaining in the U.K.

Ms. Phillips said worries over foreign takeovers of tech companies have prompted the U.K. and European countries to prepare new legislation to create their own versions of Washington's Committee on Foreign Investment in the U.S. In 2018, Cfius scuttled Broadcom Inc.'s attempted $117 billion takeover of another chip giant, Qualcomm Inc.

Similar concerns about digital sovereignty prompted President Biden to propose spending $50 billion on the U.S. chip industry. China is turbocharging efforts to boost its semiconductor sector, and the EU is spending part of a $150 billion package with the goal of doubling its share of the global chip market by 2030.

In Italy last month, Prime Minister Mario Draghi used an obscure power known as a golden share to block China's Shenzhen Invenland from buying 70% of a little-known company near Milan called LPE, a semiconductor business that supplies bigger European chip companies.

"It seems to me to be common sense to use the golden share in a situation like this," Mr. Draghi said earlier this month. "The scarcity of semiconductors forced many car producers to slow down production last year. It has become a strategic sector."

Invenland and LPE didn't respond to requests to comment.

Today's cars use a dozen or more sophisticated computer chips. These chips are largely produced in the U.S. or Asia, giving European governments little control over supply chains their auto makers rely on. Volkswagen AG said last month that the semiconductor scarcity caused it to produce 100,000 fewer cars.

"That's made people, in Brussels in particular, realize that we have an issue here," said Neil Campling, a London-based analyst at Mirabaud Securities. "We realized there are plenty of areas in the supply chain where we end up with risk, and we end up not in control."

CORRECTIONS & AMPLIFICATIONS

Jasvinder Kaur, 50 years old, was among the victims killed Thursday in a mass shooting at an Indianapolis FedEx Corp. facility. In some editions Saturday in a U.S. News article about the shooting, Ms. Kaur's first name was incorrectly given as Jaswinder, and her age was incorrectly given as 64, based on inaccurate information provided by authorities.

Serbia has distributed Covid-19 vaccines from Chinese company **Sinopharm**. A World News article on Monday about Chile's vaccination efforts incorrectly said Serbia is among the nations using the vaccine made by **Sinovac Biotech** Ltd.

Penske Media Corp. last year formed a joint venture called P-MRC Holdings LLC with entertainment company MRC. P-MRC, which is majority-owned and operated by Penske Media, has agreed to acquire a 50% stake in the tech, music and movie festival South by Southwest. A Business & Finance article and its headline in some editions Monday incorrectly said that Penske Media agreed to acquire a 50% stake in South by Southwest. The article also incorrectly said that Penske Media last year merged with MRC.

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Chauvin Case Goes to Jury in Minneapolis

Prosecution, defense emphasize different video footage in their closing arguments

By Joe Barrett And Jacob Gershman

BRANDON BELL/GETTY IMAGES

Students in Minneapolis participated in a walkout Monday to protest racial injustice and honor the lives of Black men killed by police.

The murder trial of Derek Chauvin went to the jury Monday after a final day in which both sides leaned heavily on video footage of the former Minneapolis police officer's fatal confrontation with George Floyd last year.

Prosecutors implored jurors to believe their eyes, building their case around video of Mr. Floyd pressed under Mr. Chauvin's knee for more than nine minutes. Mr. Chauvin's defense attorney repeatedly showed clips of Mr. Floyd struggling with officers to build his case that the use of force was reasonable.

Including closing arguments, attorneys at the trial showed about 166 clips of video taken from bystanders, police body cameras, street cameras and convenience-store surveillance footage over the course of the trial, according to a Wall Street Journal analysis.

"This case is exactly what you thought when you saw it first, when you saw that video. You can believe your eyes," said Steve Schleicher, a special assistant attorney general for the prosecution, focusing its case on the nine minutes and 29 seconds Mr. Floyd was held on the ground. "It's what you felt in your gut. What you now know in your heart. This wasn't policing. It was murder."

Defense attorney Eric Nelson, who has argued that Mr. Floyd died of a heart condition and the fentanyl and methamphetamine found in his system, asked jurors to consider what a reasonable officer would have done to deal with a subject who wasn't complying with orders, had thwarted their efforts to get him into a squad car and appeared to be under the influence of drugs or alcohol.

Mr. Nelson showed videos from different officer body cameras trying to put a resisting Mr. Floyd into the car. He also showed street camera footage that showed the squad car rocking as officers struggled with Mr. Floyd inside.

"A reasonable police officer would rely on his training and experience," Mr. Nelson said. "I submit to you that the state has failed in its burden to prove Mr. Chauvin's guilt beyond a reasonable doubt."

He also played video around certain still shots used by the prosecution—including Mr. Floyd's knuckles pressing against a tire and Mr. Chauvin's foot coming off the ground as he kneels on Mr. Floyd's neck—to argue that they had been taken out of context.

"The prosecution made a compelling argument, that this is common sense and that the defense's argument was nonsense," said Jack Rice, a Minnesota criminal defense attorney. "The defense's argument was that regardless of what the government was trying to argue, they were never able to establish causation and that's a fundamental element in all three counts."

For the first time during the trial, Mr. Chauvin removed his mask so the jury could see his face as Mr. Nelson began his remarks. Mr. Chauvin has pleaded not guilty to charges of second- and third-degree murder and manslaughter. The jurors will remain sequestered until they reach a verdict or become deadlocked and can't.

In closing arguments, prosecutors used five clips of video showing Mr. Floyd begging with officers not to put him in the police car, of Mr. Chauvin ignoring requests from the crowd to provide aid to Mr. Floyd and a fellow officer who asked whether they should turn him over. They also presented autopsy photos previously presented only to the jury showing scrapes and bruises to Mr. Floyd's face, shoulder and knuckles as he was pressed against the street.

Viral video of Mr. Floyd's death triggered a summer of unrest last year across the country. State and city leaders have been working for months on a plan to prevent another wave of unrest, calling on National Guard troops and thousands of officers from across Minnesota. Concerns over violence grew last week after a police officer in the Minneapolis suburb of Brooklyn Center killed 20-year-old Daunte Wright when she appeared to mistake her gun for a Taser, setting off some looting of stores and several nights of protests.

Many businesses throughout the city have boarded up their windows. Minneapolis schools are closed for in-person learning Wednesday through Friday in anticipation of the verdict.

After the jury had left to begin their deliberations, Mr. Nelson brought up the issue of whether the jury can make an independent decision, given media coverage of the trial, as well as comments from U.S. Rep. Maxine Waters (D., Calif.) over the weekend, calling for people to take to the streets if Mr. Chauvin isn't convicted.

Judge Peter Cahill said he wished politicians would stop talking about the case and said that Mr. Nelson may have grounds for an appeal.

Judge Cahill explained to the jurors all of the elements of each charge that need to be proven to sustain a conviction. In no case does the state have to prove that Mr. Chauvin had an intent to kill Mr. Floyd, but all the charges require proof that he caused his death.

Judge Cahill also included special instructions that apply to the conduct of a police officer defendant. "No crime is committed," he told jurors, "if a police officer's actions were justified by the police officer's use of reasonable force in the line of duty in effecting a lawful arrest or preventing an escape from custody."

—Deena Winter and Deanna Paul contributed to this article.

MyPillow Files Suit Against Dominion

By Alexa Corse

MyPillow Inc. sued voting-machine maker **Dominion Voting Systems** on Monday, a counter move after Dominion sued the bedding company and its Donald Trump-supporting chief executive for defamation over his unproven claims that its voting machines had rigged the presidential election for Joe Biden.

In a suit seeking more than $1.6 billion in damages, the privately held company said it is suing to protect freedom of speech and to rectify the injury the company said it suffered from Dominion's own legal campaign, which the complaint said included losing business and harassment and death threats against employees.

"Dominion is using the legal process as a weapon to suppress free speech," the suit in federal district court in Minnesota stated. "This lawsuit is brought in support of the marketplace of ideas and to remedy the grave harm that has been suffered by MyPillow as a result of Dominion's suppression of speech and attacks on the Company."

The company also noted that it was its founder and CEO, Mike Lindell, rather than the company, who spoke against Dominion.

In February, Denver-based Dominion sued MyPillow and Mr. Lindell in federal court in the District of Columbia. The suit alleged that Mr. Lindell had defamed the company with accusations that it had rigged the 2020 election for President Biden, and asked for more than $1.3 billion in damages.

Dominion said the allegations by Mr. Lindell and others had irreparably damaged its reputation, jeopardized its contracts with state and local governments and prompted death threats and harassment against employees. The company said it supplies election equipment used by more than 40% of U.S. voters. "This is a meritless retaliatory lawsuit, filed by MyPillow to try to distract from the harm it caused to Dominion," said Stephen Shackelford, a lawyer for Dominion.

No court or election authority has found evidence of widespread fraud in the 2020 presidential election.

Union Seeks Probe After Losing Amazon Vote

By Sebastian Herrera


LYNSEY WEATHERSPOON FOR THE WALL STREET JOURNAL

Employees at Amazon's warehouse in Bessemer, Ala., rejected forming a union by a wide margin.

The union that unsuccessfully sought to organize an **Amazon.com** Inc. location in Alabama filed challenges over the vote, saying the company violated legal restrictions throughout the election.

In objections filed with the National Labor Relations Board, attorneys representing Retail, Wholesale and Department Store Union allege that Amazon intimidated and threatened employees into voting against unionizing. The union cited meetings that the company held with workers and a mailbox installed outside the warehouse. More than 70% of workers who cast ballots in the election voted against joining the RWDSU.

The union alleges that Amazon, through company representatives, threatened employees with the loss of jobs or closing of the warehouse as well as possible loss of compensation and benefits, if the union were approved. The union also accused the company of targeting workers who asked questions at meetings by removing them from the gatherings, potentially scaring other employees.

The union's complaint also focused on a mailbox, installed by the U.S. Postal Service at Amazon's request outside the Bessemer, Ala., warehouse where the election was taking place. The union alleged that the mailbox could have coerced workers into incorrectly believing Amazon was conducting the election and thereby feeling compelled to vote against unionizing. The filing also accuses Amazon of electioneering by displaying a company campaign message near the mailbox.

"Amazon knew full well that unless they did everything they possibly could, even illegal activity, their workers would have continued supporting the union," RWDSU President Stuart Appelbaum has said. "We demand a comprehensive investigation over Amazon's behavior in corrupting the election."

An Amazon spokeswoman said the union is misrepresenting the facts rather than accepting the choice of the employees. "We look forward to the next steps in the legal process," she said.

Amazon has said it followed the law in its communication with employees during the mail-in election, which concluded April 9, and didn't intimidate workers. "It's easy to predict the union will say that Amazon won this election because we intimidated employees, but that's not true. Our employees heard far more anti-Amazon messages from the union, policy makers, and media outlets than they heard from us," Amazon said following the election.

Chief Executive Jeff Bezos said Thursday in a shareholder letter that the company needs a "better vision" for dealing with its employees. Mr. Bezos, who is leaving the CEO role later this year to become executive chairman, said that while Amazon works hard to serve its workforce, it needs to invent solutions to reduce the amount of injuries at warehouses.

The union's charges seek to set aside election results and have it be held again. The National Labor Relations Board, which conducted the election, is expected to review the complaint before it decides whether to certify the results. The labor board could hold a hearing to go over the objections and hear testimony. The process could take weeks or months.

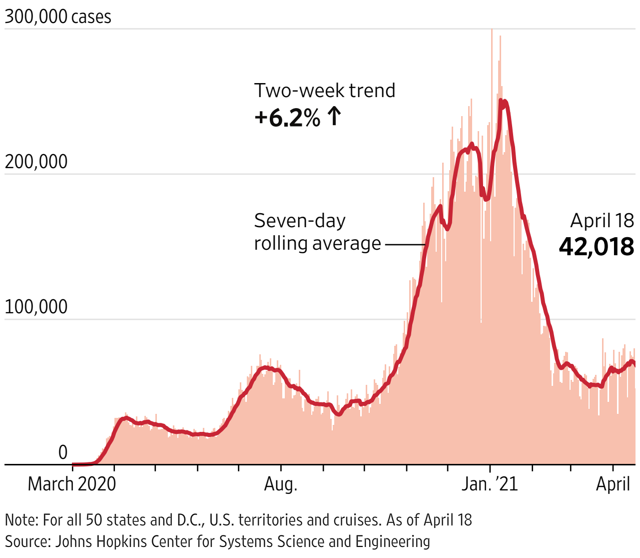
Amazon's triumph in Bessemer is a major setback for labor unions in the U.S. and came after a year in which the company has experienced tremendous growth and success. Union supporters had hoped a victory in Bessemer could electrify union pushes at Amazon throughout the country and force the company to alter some workplace policies around matters such as pay and breaks.

Many workers said they rejected the union over broad concerns about job security and because they didn't believe their salary and benefits would substantially improve with union representation.

Infections Trend Higher Amid Vaccination Push

By Melanie Grayce West

Daily reported Covid-19 cases in the U.S.



Note: For all 50 states and D.C., U.S. territories and cruises. As of April 18
Source: Johns Hopkins Center for Systems Science and Engineering

Though half of all U.S. adults have had at least one Covid-19 vaccine dose, an array of factors are complicating the fight against the virus.

States are scrambling to reorganize vaccination efforts after pausing use of the **Johnson & Johnson** vaccine while health officials investigate rare but severe cases of blood clots.

The seven-day average number of new Covid-19 infections eclipses the 14-day average in about half the country, with 40 states hitting that benchmark last Wednesday.

And the age distribution of Covid-19 cases showing up in hospitals has shifted to a younger population, as younger people, who haven't been vaccinated, are helping drive a rise in cases, according to health officials.

The Centers for Disease Control and Prevention reported Monday that the seven-day average of new Covid-19 cases is at more than 67,443, up 1% from the prior seven-day average of 66,702. Four weeks ago, the seven-day average was 53,000 cases a day, said Rochelle Walensky, director of the CDC, during a press briefing Monday.

The U.S. is in a "complicated stage" of the pandemic, Dr. Walensky said.

"The more people get vaccinated, the fewer infections there will be, which means fewer variants will emerge and fewer breakthrough infections will occur and the quicker we can get back to doing the things we love," said Dr. Walensky.

More than a quarter of the U.S. population has now been fully vaccinated against Covid-19, according to CDC data. The country administered an average of 3.2 million doses a day over the past week, according to a Wall Street Journal analysis of CDC data.

As of Monday, all American adults are eligible to receive a Covid-19 vaccine, with every state meeting the April 19 deadline set by President Biden.

Hospitalizations, which had been rising in recent weeks, declined 2.8% from a week earlier, according to the latest CDC data. Hospitalizations are down nearly 68% from a post-holidays peak.

Public-health officials and epidemiologists say the increases in Covid-19 cases in many parts of the country can be attributed to several factors.

They say relaxed prevention efforts and loosened restrictions on indoor dining and masking measures have helped drive cases higher, as has pandemic fatigue. Older populations, who may not have been mixing widely, were prioritized to receive a Covid-19 shot, and nearly 64% of Americans aged 65 and older are now fully vaccinated, according to CDC data. But fewer younger people, who may be more social or have public-facing jobs, are vaccinated.

The spread of highly transmissible variants is also playing a role.

Cases should be going down as vaccines are being rolled out, and yet cases are going up at a worrisome level, said Barry Bloom, a professor of public health and an immunologist at the Harvard T.H. Chan School of Public Health.

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Why Business Leaders Take Political Stands

CAPITAL JOURNAL
By Gerald F. Seib

Once upon a time, it was pretty simple to compose a political strategy for a big American corporation: Give some contributions to mainstream Republican politicians who could be counted on to push agreeable tax and regulatory policies, find a few dollars for some moderate Democrats to provide a bit of bipartisan insurance, and then keep your mouth shut when political debates flared up.

Well, those were the good old days. Today, the strategy of writing the check and then crouching on the sidelines increasingly is being overtaken by corporate activism in the political arena.

The question is: Why now?

The signs of this new climate are pretty obvious, and widely noted. Some business leaders and their companies openly objected to Republican attempts to stop certification of the 2020 presidential election and cut off contributions to lawmakers who supported the effort. Coca-Cola Co. and Delta Air Lines Inc. publicly objected to a new law on voting procedures in their home state of Georgia.

Hundreds of business leaders and companies, including JPMorgan Chase & Co. and Netflix Inc., last week signed onto a two-page ad in The Wall Street Journal and other publications declaring that they “defend the right to vote and oppose any discriminatory legislation,” an implicit rebuke of voting bills Republicans are pushing in dozens of states.

Meantime, the U.S. Chamber of Commerce spoke out against a federal voting-rights bill Democrats have proposed in Congress, objecting to provisions it said would put unreasonable restrictions on corporate advocacy and arguing that any effort to change voting laws should be bipartisan.

But if what business leaders are doing in the political arena is pretty obvious, why they're stepping into that arena is less clear.

In part, this business activism is simply a sign of the times, and of the national environment. In a hyper-politicized climate, citizens increasingly expect or even demand political positions from everybody—celebrities, sports figures and, yes, business leaders. The cacophony from social media makes it harder to duck the tough political questions.

That expectation of corporate stand-taking is particularly high among younger Americans, so businesses are feeling the pressure from both younger customers and their own employees to take stands. Companies hoping to recruit young, tech-savvy talent know that corporate culture and reputation now are part of the equation potential employees consider when deciding where to land.

And because younger Americans tend to be on the left side of the political equation on political and racial-justice issues, they are pushing U.S. corporations in that direction. The Harvard Business Review last year published the results of a survey of 168 managers and M.B.A. students, 80% of whom were under age 40, and found that 42% of them identified as liberal and just 27% as conservative—and that their views of a hypothetical company dropped significantly when they were told it held conservative values.

Yet there's another factor that is less obvious: The very failures of the political system itself are forcing corporate leaders off the sidelines.

“In some ways, the breakdown in the political system and the polarization has created this vacuum,” says Neil Bradley, executive vice president of the U.S. Chamber of Commerce and a former top GOP aide in the House. “Issues arise that are passionate, that can inflame both sides, and the political system used to have a way of dealing with those. You had senior statesmen who could bridge the divide and cool temperatures. You don't have that today.”

So Americans have begun to seek out other players in society to step into that vacuum. When political leaders can't resolve political debates, the arguments seep out into other corners of American life.

When a corporate leader does an earnings call with analysts, or appears in a TV interview to discuss economic conditions, or holds an all-hands employee meeting, that leader now can be expected to be asked about the Black Lives Matter movement or voting rights, not just about business conditions. Dodging such questions may be an option, but also not a good look.

Some of this isn't entirely new. Several decades back, companies were expected to take positions on environmental concerns and apartheid in South Africa, while more recently Chick-fil-A Inc. has prospered while boasting conservative values, and Walmart Inc. has decided to tighten its standards for gun and ammunition sales in response to gun violence.

On a broader scale, though, the political landscape is different. Neither party today provides a comfortable home for corporate America. The Republican Party, once the safe place for business leaders to land, has turned more populist on trade and immigration, and skeptical of big business. The Democratic Party has turned leftward.

Business leaders increasingly find themselves on their own, in a political system that is failing, and at a time when silence is not an option.

Vice President Transformed Role

By John McCormick

OBITUARY
WALTER MONDALE
1928-2021

Former Vice President Walter Mondale, a civil-rights champion who lost a 1984 White House bid in one of the largest Electoral College landslides in U.S. history, died Monday evening at his home in Minneapolis. He was 93.

Mr. Mondale died peacefully of natural causes, said Kathy Tunheim, a family spokeswoman.

Mr. Mondale, the 42nd vice president, was credited with boosting the status of the office with his deep involvement in shaping policy, influencing administration appointments and conducting foreign-policy negotiations.

“I was the first vice president to be in the White House working daily with the president,” he said in a 2008 documentary about his life.

Before agreeing to be Jimmy Carter's 1976 Democratic running mate, Mr. Mondale—known as “Fritz” to family, friends and many voters—wrote a memo outlining his expectations should they win. Among Mr. Mondale's demands was that he be invited to all cabinet meetings and that the two men would confer at least weekly.

Mr. Carter, a little-known former governor of Georgia, needed a Washington veteran to boost public confidence in his ability to run the nation.

“Today I mourn the passing of my dear friend Walter Mondale, who I consider the best vice president in our country's history,” Mr. Carter said in a statement Monday evening. “During our administration, Fritz used his political skill and personal integrity to transform the vice presidency into a dynamic, policy-driving force that had never been seen before and still exists today.”

Before serving in Washington, Mr. Mondale was Minnesota's attorney general in the early 1960s after being selected for the post at the age of 32. In 1964, he was appointed to the Senate after Hubert H. Humphrey was elected vice president and vacated one of Minnesota's seats in the chamber.

Mr. Mondale first met Mr. Humphrey—who would go on to become one of his political mentors—while he was a college student. After graduation, Mr. Mondale didn't have enough money to attend law school, so he joined the Army for two years before attending the University of Minnesota's law school.

During his 12 years as a senator, he served on the Finance Committee, the Labor and Public Welfare Committee, the Budget Committee, and the Banking, Housing and Urban Affairs Committee. Mr. Mondale also served as the chairman of the Select Committee on Equal Education Opportunity and as the chairman of the Intelligence Committee's Domestic Task Force.

He was one of the authors of the Fair Housing Act of 1968, which sought to end segregation and discrimination in mortgage and housing policy and to level the economic playing field. Mr. Mondale later said the law failed to reduce discriminatory practices as much as he had hoped.

As vice president, Mr. Mondale played a major role in the negotiations between Egyptian President Anwar Sadat and Israeli Prime Minister Menachem Begin that resulted in the 1978 Camp David Accords.

In 1980, Ronald Reagan easily defeated Mr. Carter in the wake of the Iran hostage crisis, gasoline shortages, inflation and a general sense the nation was on the wrong track. Mr. Mondale returned to private practice in 1981, setting up shop in Winston & Strawn's Washington office.

Just two years later, he was formally announcing his presidential bid from his home state's capitol in St. Paul.

The month after clinching the nomination, Mr. Mondale made history by picking U.S. Rep. Geraldine Ferraro (D., N.Y.), as his running mate. She became the first woman nominated for vice president by a major U.S. political party.

At the Democratic National Convention, Mr. Mondale did something most politicians don't do while running for office: He promised to raise taxes, arguing that he was just being more honest than Mr. Reagan. “He won't tell you,” he proclaimed during his acceptance speech. “I just did.”

Mr. Reagan won in a landslide, carrying every state except Mr. Mondale's native Minnesota.

Assessing the results, Mr. Mondale said, “Reagan was promising them ‘Morning in America,’ and I was promising them a root canal.”

The 1984 loss wouldn't be Mr. Mondale's last high-profile defeat. In 2002, Sen. Paul Wellstone of Minnesota died in an airplane crash a little more than a week before the election. Mr. Mondale was recruited as the Democratic Party's best chance of holding on to Mr. Wellstone's seat in a competitive election against Norm Coleman, the Republican mayor of St. Paul.

After Mr. Wellstone's sons asked the former vice president to fill their father's spot in the race, Mr. Mondale traveled by bus instead of airplane and covered less territory than he might have otherwise. Mr. Coleman won by just more than 2 percentage points.

Mr. Mondale had returned to Minnesota in 1987, where he practiced law with the firm of Dorsey & Whitney until former President Bill Clinton nominated him to be the U.S. ambassador to Japan.

Mr. Mondale served as ambassador from August 1993 to December 1996. During that period, he helped to negotiate several U.S.-Japan security agreements, including a resolution to the controversy over the U.S. military presence in Okinawa. He also helped to forge numerous trade agreements between the U.S. and Japan and promoted the expansion of educational exchanges between the two nations.

The former vice president is survived by two sons, William and Theodore. His wife, Joan, died in 2014, and his daughter, Eleanor, died in 2011.

ASSOCIATED PRESS (2)

Walter Mondale with Jimmy Carter at the 1976 Democratic National Convention, top. The presidential ticket would go on to victory. Then-Sen. Mondale, above left, viewed damage from the 1970 Jackson State shooting in Mississippi. Police opened fire on a group of students, killing two Black young men. Mr. Mondale championed civil-rights legislation during his 12 years in the Senate.

Smaller Increase In Corporate Tax Rate Is Discussed

By Andrew Duehren

WASHINGTON—President Biden and a bipartisan group of lawmakers discussed alternative ways to pay for infrastructure spending, including a smaller increase in the corporate tax rate, as Republicans and Democrats aired possible changes to the size and scope of the package.

The White House has proposed raising the corporate tax rate to 28% from 21%, along with increasing taxes on U.S. companies' foreign earnings, to cover the cost of Mr. Biden's $2.3 trillion infrastructure proposal.

At the meeting Monday, lawmakers and Mr. Biden discussed a more modest tax increase, according to multiple attendees.

Rep. Charlie Crist (D., Fla.) said lawmakers discussed the potential for some “compromise wiggle room” on raising the corporate rate to help pay for the plan. “You could see a 2 or 3% increase—maybe not all the way to 28 but 25,” he said of the percentage rate.

Mr. Biden has held a series of meetings with lawmakers of both parties about his proposal, which offers funding for improving transportation, expanding access to broadband, rebuilding schools and funding elder care, among other priorities.

The White House has indicated Mr. Biden is open to breaking his proposal into smaller parts and is considering different ways to pay for it, amid a swirl of proposals from lawmakers of both parties.

“I am prepared to compromise, prepared to see what we can do and what we can get together on,” Mr. Biden said as the meeting with 10 lawmakers and Transportation Secretary Pete Buttigieg got under way.

Some Senate Republicans, critical of the corporate tax increases and the broad scope of Mr. Biden's infrastructure plan, have started discussing making a counteroffer in the realm of $600 billion to $800 billion.

A group of Republicans met Monday to discuss that possibility, with lawmakers aiming to release their own plan soon.

Republicans have indicated that they would want to focus on spending money on building roads and bridges, along with expanding access to broadband, while excluding other parts of Mr. Biden's plan, such as providing $400 billion for caring for elderly and disabled Americans.

Cuomo's Pandemic Book Sparks Inquiry

By Jimmy Vielkind

ALBANY, N.Y.—New York State Attorney General Letitia James will examine the possible use of state resources in the production of Gov. Andrew Cuomo's memoir about how he managed the early days of the pandemic, officials said.

Delaney Kempner, a spokeswoman for Ms. James, confirmed her office was looking into the matter after receiving an April 13 referral from Comptroller Tom DiNapoli. Mr. Cuomo's book, “American Crisis,” was published in October.

The referral letter, reviewed by The Wall Street Journal, gives Ms. James jurisdiction to look at “any indictable offense” arising from an investigation into whether state resources were used “in the drafting, editing, sale and promotion of the governor's book.”

The governor's advisers reviewed and edited drafts of the book during weekend sessions at the Executive Mansion, and a secretary printed the manuscript on a state printer, people familiar with the matter said. Rich Azzopardi, a senior adviser to the governor, said the use of state resources was incidental and people who worked on the book volunteered their time.

He accused Mr. DiNapoli and Ms. James of pondering their own gubernatorial campaigns. Spokespeople for both the comptroller and attorney general declined to comment.

“We have officially jumped the shark—the idea there was criminality involved here is patently absurd on its face and is just the furthering of a political pile-on,” he said.

Speaking to reporters on Monday, Mr. Cuomo repeated that some of his aides voluntarily reviewed his memoir to make sure their actions were accurately described. The governor said information about how he was compensated for the book would be released

The governor's advisers reviewed and edited drafts of the book at weekend sessions.

this year as part of his tax return and required financial-disclosure form.

The new review is in addition to an investigation overseen by Ms. James's office of sexual-harassment accusations against the governor. Mr. Cuomo has said he never touched anybody inappropriately and apologized if his behavior made anyone uncomfortable.

Democrats who dominate the state Assembly previously said they would examine the production of the book as part of an impeachment inquiry.

NASA Copter Makes Historic Flight on Mars

The autonomous Ingenuity becomes the first powered craft to fly on another world

By Robert Lee Hotz

NASA's Mars Ingenuity helicopter made history early Monday when the small but intrepid drone became the first powered craft to fly on another world, space agency officials announced.

Overcoming extreme cold, dangerously thin air and flawed flight software, the $85 million autonomous copter spun its twin carbon-fiber rotor blades to rise about 10 feet into the thin Martian air. It hovered briefly in the breeze before safely landing at about 3:34 a.m. ET Monday back on the ground, NASA officials said. They plan up to four more flights during the next two weeks.

As flight data streamed from Ingenuity to Earth on Monday, mission engineers at NASA's Jet Propulsion Laboratory in Southern California cheered and clapped.

"It's real. It's real," said Ingenuity project manager MiMi Aung, slapping the table in front of her with glee and showing a thumbs-up. "We can now say human beings have flown a drone on another planet."

Ingenuity arrived at Mars's Jezero Crater in February along with NASA's Perseverance rover, which was on hand to capture the historic flight on camera.

The drone—stiff-legged and smaller than a picnic basket—was designed as an engineering experiment to prove that powered flight is possible on the Red Planet and to help NASA plan for a future in which drones play a key role in planetary exploration. Such drones could one day provide access to terrain that is too remote or rugged for rovers to reach—like Mars's Valles Marineris, the largest canyon in the solar system, or its Olympus Mons shield volcano, which is about 2.5 times the height of Mount Everest.

Ingenuity was on autopilot for its entire flight, out of sight, direct control or contact with the men and women on Earth who had ordered it aloft. Radio signals take too long to travel between the planets for any human operator to intervene.

On Sunday, Ingenuity's chief pilot, Håvard Grip, and his colleagues at the Jet Propulsion Laboratory had transmitted commands across 173 million miles of space to set Ingenuity's flight in motion. Given the time lag in radio transmissions resulting from the relative positions of Earth and Mars and the satellites sending back the data, the controllers had no way of knowing that the flight was a success until almost 16 hours later when the flight data trickled back to Earth.

Preflight weather forecasts for Mars had NASA worried. Sensors aboard Perseverance showed winds within Ingenuity's flight zone of 13 to 45 miles an hour—almost twice the maximum wind speed used in flight tests of Ingenuity on Earth. Computer simulations, though, suggested Ingenuity's autonomous flight-control systems could handle even stronger winds safely, the engineers said.

They timed the flight for around midday Mars time when the winds in Jezero Crater were expected to be at their lightest.

"We upload the commands we want to run, and then we die inside for hours waiting to learn what happened," said Ingenuity lead operations manager Tim Canham. "Then, when all the data comes back, we frantically get online and look at it to make sure that everything went the way we wanted it to go."

On Monday, Dr. Grip and his colleagues analyzed the altitude and position measurements from the helicopter's laser altimeter and sensors to confirm that Ingenuity had actually flown as intended.

The history-making flight was the latest milestone in Mars exploration this year. In February, the United Arab Emirates successfully put its $200 million Hope spacecraft in orbit around Mars to begin a two-year weather mission. Days later, a Chinese probe named Tianwen-1 entered Mars orbit. China plans to land its first rover on the surface there sometime in May or June.

The Hope and Tianwen-1 missions are the first forays to the Red Planet for both countries. They joined spacecraft already in orbit there from the European Space Agency, the U.S. and India. NASA also has two other active missions under way on the surface, in addition to Perseverance.

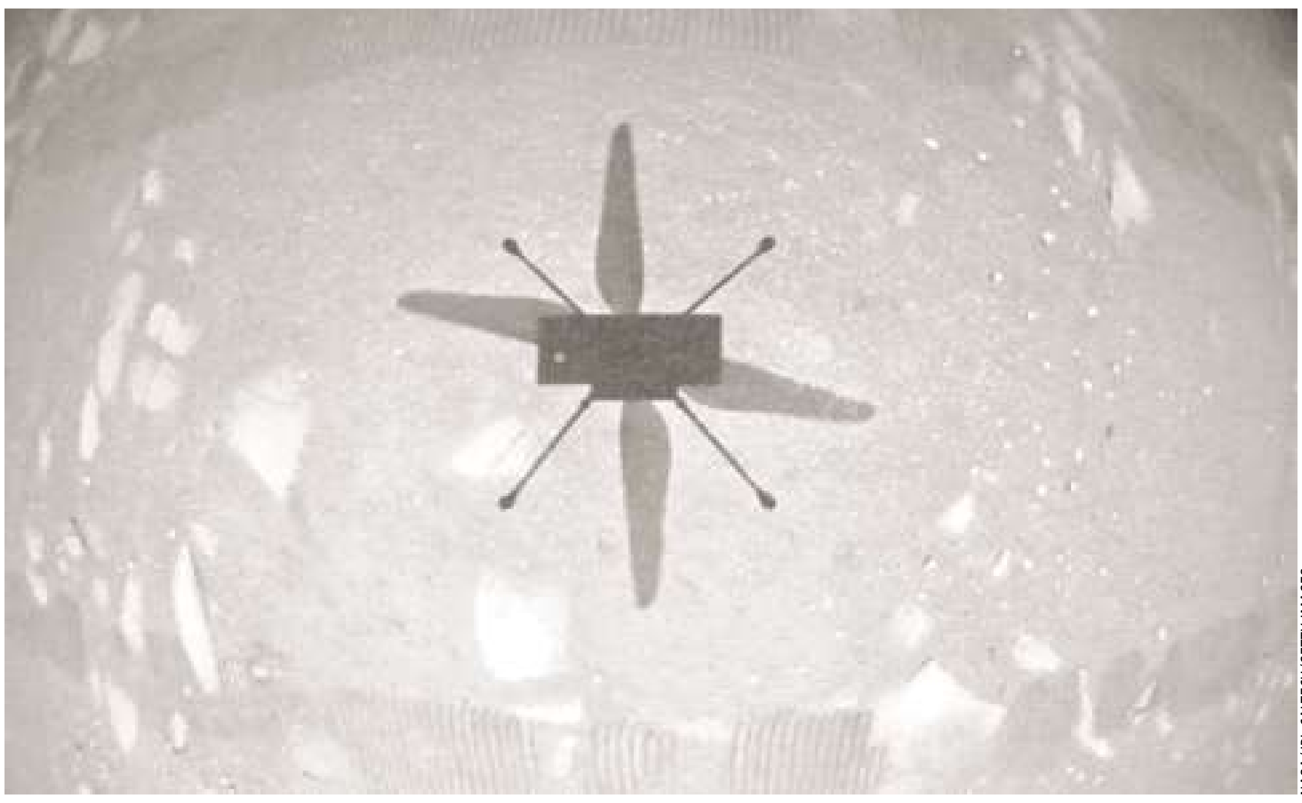
Ingenuity combines high-speed rotors and featherweight carbon-fiber materials with inexpensive electronics hardware used in smartphones—off the shelf but 150 times as powerful as the computer microprocessors NASA has used previously in space.

The thin carbon-dioxide atmosphere of Mars posed a special challenge, Ingenuity engineers said. The air at the Martian surface has the same density as air at an altitude above Earth of about 22 miles—far beyond the operating range of any conventional helicopter. The thin Martian air made it hard for Ingenuity to generate sufficient lift and to control its rotor blades—and hard to dissipate the heat generated by the tiny motors that power the rotors, the engineers said.

"What we didn't fully appreciate initially is how much that density changed the way the vehicle handled," Dr. Grip said. "It would be like riding a bicycle with grocery bags hanging from the handle bars, swinging back and forth. In other words, when you try to control it, you don't get a crisp clean response. You get a sluggish, oscillatory response, what we call flapping."

Ingenuity's designers damped the effect by making Ingenuity's rotor blades unusually rigid.

Once Ingenuity completes its scheduled flights, Perseverance is expected to begin a two-year search for signs of past life on Mars. The rover will cache soil samples for eventual return to Earth by a series of retrieval missions carried out jointly by NASA and the European Space Agency.



NASA/JPL-CALTECH/GETTY IMAGES

NASA's Mars Ingenuity helicopter took this image while hovering over the Martian surface on Monday.

Achieving Liftoff

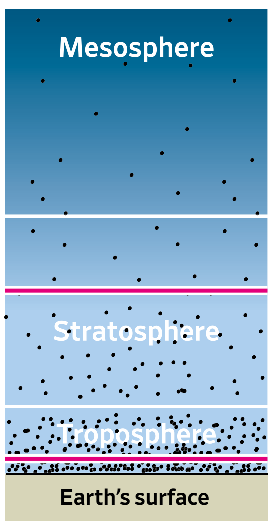
For Ingenuity to fly on Mars, NASA engineers gave it ultra-light, compact parts and rotors capable of generating enough lift to carry it aloft. Ingenuity's rotor blades spin five times faster than those of a conventional helicopter.

Mars's air density

The air on Mars is less than 1% as dense as air on Earth, with the density at the surface roughly equivalent to the density at an altitude of about **22 miles above the Earth's surface**.

INGENUITY SIZE COMPARISON

Helicopters on Earth generally don't fly above 10,000 ft. No conventional aircraft could fly on Mars because the Martian atmosphere is too thin.



Sources: NASA Jet Propulsion Laboratory/Caltech; The Center for Planetary Science

Justices Weigh Migrant Statuses

By Jess Bravin
And Brent Kendall

WASHINGTON—The Supreme Court appeared unreceptive Monday to arguments that federal law allows noncitizens to seek lawful permanent residency when they entered the U.S. illegally but were later authorized to remain because of disasters in their homelands.

Some 400,000 people from about a dozen countries have temporary protected status permitting them to remain in the U.S. Despite the program's name, all arrived at least five years ago. And the majority have been in the U.S. for decades, as successive administrations extended the reprieves originally granted because of natural or humanitarian disasters, such as the 2010 earthquake in Haiti.

In general, federal law requires that noncitizens be "inspected and admitted or paroled" to the U.S. and maintain lawful status as nonimmigrants to later seek permanent residency. While temporary protected status means noncitizens can legally stay in the U.S., the issue was whether it also confers lawful admission to the country.

Justice Samuel Alito expressed his doubts. Why, he asked, would Congress "leave it to the courts to infer that 'lawful status as a nonimmigrant' necessarily means inspection and admission?"

"Some of those forms of lawful status, such as asylum, do not require admission," said Amy Saharia, the lawyer representing the plaintiffs. "But Congress chose a form of lawful status, nonimmigrant status, in which admission is inherent," she said.

Ms. Saharia's clients, Jose Sanchez and Sonia Gonzalez, a married couple from El Salvador, entered the U.S. illegally in the 1990s but obtained temporary protected status after earthquakes struck their homeland in 2001. They applied for permanent residency in 2014 but were turned down by U.S. Citizenship and Immigration Services because they hadn't formally been admitted.

The couple sued, arguing that by conferring temporary status the government effectively had granted them lawful admission. A federal appeals court in Philadelphia disagreed, holding that while the couple currently had legal status, they never had been lawfully admitted.

At issue is protective status for those from nations where disasters struck.

"Congress created an exception to the admission requirement for some aliens but did not do so for TPS recipients," Judge Thomas Hardiman wrote for that court.

Justice Brett Kavanaugh acknowledged that the precarious nature of temporary protected status "puts the people in a very awkward position year after year," depending on the administration's decision to extend the designation.

But, he told Ms. Saharia, "the questions my colleagues have pointed out and Judge Hardiman's opinion in the Third Circuit point out that you have an uphill climb, textually speaking."

The House, Justice Kavanaugh noted, recently passed an immigration bill. "We need to be careful about tinkering with the immigration statutes as written, particularly when Congress has such a primary role here," he said.

The Trump administration sought to terminate protected status designations for some countries, including El Salvador, Haiti and Honduras, after concluding conditions there had stabilized. Those actions were tied up in court and remained unresolved when President Biden, promising a more generous immigration policy, took office. Last month, Homeland Security Secretary Alejandro Mayorkas designated Myanmar for 18 months of temporary protected status because of the government's violence against civilians following a military coup.

At the Supreme Court, the administration argued that the justices should defer to the government's reading of the relevant law in determining that the couple was ineligible for green cards.

Chief Justice John Roberts picked up on that distinction, which signaled that the administration wants flexibility to loosen the standards for permanent residency.

"I was struck by the extent to which your brief undersold your position," he told Justice Department attorney Michael Huston. "Throughout it, you said things like, 'The text doesn't foreclose your position' and 'Congress did not unambiguously mandate the opponent's position,'" he said.

Mr. Huston said that Homeland Security could take a different position after further review.

ROD LAMKEY/CNP/ZUMA PRESS

A memorial in Washington for Capitol Police Officer Brian Sicknick, who died Jan. 7 at age 42. He had been attacked a day earlier during the Capitol riot.

Officer's Death Cited As Natural

Continued from Page One

tol Rotunda, where President Biden and first lady Jill Biden were among those who paid their respects. House Speaker Nancy Pelosi (D., Calif.) and Senate Majority Leader Chuck Schumer (D., N.Y.) held a ceremonial arrival for Mr. Sicknick's remains before a viewing period for Capitol Police officers.

The investigation into the storming of the U.S. Capitol has already led to federal criminal charges against more than 400 people, many of whom were identified by video and social-media posts from the attack.

But as investigators scoured hundreds of thousands of pieces of digital media in the early weeks of the investigation, they didn't immediately locate clear footage indicating what happened to Mr. Sicknick, leaving them unsure of what might have contributed to his death, officials have said.

After reviewing body-worn camera footage from a Washington police officer who was standing next to Mr. Sicknick, investigators accused two men of working together on Jan. 6 to spray officers directly in their faces and eyes to coincide with other rioters' efforts to forcibly remove bike-rack barriers to get closer to the Capitol, according to the affidavit for their arrest.

The two men, 32-year-old Julian Khater of Pennsylvania and 39-year-old George Tanios of West Virginia, face charges for the alleged assault that include conspiring to injure an officer; assaulting a federal officer with a dangerous weapon; civil disorder; obstructing an official proceeding; and engaging in physical violence on restricted grounds while carrying a dangerous weapon that resulted in significant bodily injury, among other counts. Some of those carry the potential for lengthy prison sentences, with maximum terms of 20 years. The examiner's report appears to rule out the possibility of prosecutors charging the men with an assault leading to the officer's death.

Both have pleaded not guilty to the charges and remain detained pending their trial. A federal magistrate judge in West Virginia ordered Mr. Tanios held, saying he "poses a danger to others and the community" based on his advance purchase of the sprays and his questioning a firearms-store employee "as to whether he could take a firearm or a pepper ball gun into Washington, D.C.," among other factors.

Footage from after 2 p.m. on the day of the riot shows the two men walking together toward the lower west terrace of the Capitol building. Video showed Mr. Khater telling Mr. Tanios, "Give me that bear shit," and reaching into a backpack, the document said. Mr. Tanios responded, "Hold on, hold on, not yet, not yet...it's still early," the affidavit said.

Soon afterward, footage from the body camera showed Mr. Khater with his right arm held high in the air, aiming a canister at several officers including Mr. Sicknick. The officers "all react, one by one, to something striking them in the face," the document said, adding that the officers were temporarily blinded and sought medical attention. One of the officers "reported lasting injuries underneath her eyes, including scabbing that remained on her face for weeks," the document said.

On April 7, the medical examiner's office said it had determined that four others had also died as a result of the attack, including Ashli Babbitt, who was fatally shot by a Capitol Police officer as she attempted to jump through shattered glass at the door to the Speaker's Lobby. Two other rioters died of heart conditions during the events of Jan. 6, and another died of an amphetamine intoxication, the medical examiner's office said.

Investigators have determined that the police officer who shot Ms. Babbitt shouldn't be charged with any crimes.

—Tawnell D. Hobbs contributed to this article.

U.S. WATCH

WASHINGTON

Proud Boys Leaders Ordered Detained

A judge ordered two leaders of the far-right Proud Boys detained pending trial for their alleged involvement in the Jan. 6 Capitol riot.

Ethan Nordean of Washington state and Joseph Randall Biggs of Florida face federal charges tied to their alleged involvement in the pro-Trump Jan. 6 riot at the U.S. Capitol, including conspiring to obstruct the certification of President Biden's victory in the 2020 election. Messrs. Nordean and Biggs, who have pleaded not guilty, were charged earlier this year and have been confined to home detention.

Timothy J. Kelly, a federal judge in Washington, D.C., said the severity of the charges facing the two men swayed his decision to detain them. For close to an hour, Judge Kelly read from the men's social-media posts and other evidence filed by prosecutors, which recounted how both men had allegedly organized members of the Proud Boys to come to Washington on Jan. 6 and eventually to riot inside the Capitol.

An earlier Wall Street Journal investigation found that the Proud Boys, who describe themselves as a men's organization for "Western chauvinists," were key instigators of the riot.

Mr. Biggs's attorney declined to comment on any appeal of the ruling, and Mr. Nordean's attorneys had no immediate comment.

—Rachael Levy

TEXAS, WISCONSIN

Suspects Arrested In 2 Fatal Shootings

Police in Texas and Wisconsin said they arrested suspects in two shootings over the weekend that left a total of six people dead in incidents where the shooters appeared to know the victims.

In Kenosha County, Wis., the sheriff's department said an individual would be charged with first-degree intentional homicide, with other charges to follow as the investigation continues.

At about 12:42 a.m. Sunday, three men died after being shot at a tavern in the village of Somers, Wis., according to the department. Three other men were hospitalized with gunshot wounds.

"We don't believe this was a random act," Kenosha County Sheriff David Beth said.

In Austin, Texas, police arrested Stephen Broderick, 41 years old, following another Sunday morning shooting in which two women and one man were killed, according to the Travis County Sheriff's Department.

Mr. Broderick, who is a former deputy in the department, was taken into custody at about 7 a.m. Monday, following a manhunt overnight, after a resident called 911 and said they had seen him.

An attorney who previously represented Mr. Broderick couldn't be reached to comment.

—Kris Maher

INDIANAPOLIS

Prosecutor Couldn't Use Red Flag Law

The Marion County prosecutor said Monday he had lacked sufficient evidence to use Indiana's red flag law to pursue a court order that would have prevented Brandon Hole from obtaining the firearms he used to kill eight people.

Mr. Hole, a 19-year-old former employee of FedEx Corp., went on a shooting spree before taking his own life at the company's ground facility Thursday night.

The Bureau of Alcohol, Tobacco, Firearms and Explosives conducted a trace on the two weapons used in the attack and found Mr. Hole purchased the rifles legally in July and September 2020, the Indianapolis Metropolitan Police Department said.

Indiana has a red flag law that allows police to seize a firearm from a suspect who is considered to be a danger to himself or others.

Any seizure requires a court hearing within 14 days to determine the suspect's threat level. A finding of dangerousness might lead not only to the seizure of the firearm, but to a ban on obtaining others.

While Mr. Hole was on the radar of law enforcement as someone with mental-health issues and potentially violent tendencies, he never had such a hearing, said Marion County Prosecutor Ryan Mears.

—Laura Kusisto

Apple to Reinstate App It Pulled After Riot

By Matt Grossman

Apple Inc. plans to make the social-media app Parler available through its App Store again, the computer and smartphone company said in a letter to lawmakers on Monday.

After the attack on the Capitol on Jan. 6 by a pro-Trump mob, as lawmakers were gathered to certify President Biden's victory, Apple and other big tech companies moved quickly to sever ties with Parler, which had given some people involved in the attack a forum for discussing their plans. **Amazon.com** Inc. suspended Parler from its web-hosting services. Google parent **Alphabet** Inc., like Apple, also removed Parler from its app store.

In a letter to Sen. Mike Lee of Utah and Rep. Ken Buck of Colorado, both Republicans, Apple said Monday that a revised version of the Parler app with improved content moderation would be approved for release to Apple users.

The letter from Apple was posted on Twitter by Mr. Buck, and it was confirmed by Mr. Lee's office. Apple declined to comment. Parler didn't respond to requests for comment.

In the letter, Apple stood by its initial decision to remove Parler from the app store, citing posts that denigrated races and religions, promoted Nazi ideology and called for violence. Since January, Apple has had "substantial conversations" with Parler, and the app maker proposed updates to its platform and its content-moderation policies, Apple said.

"The App Review Team has informed Parler as of April 14, 2021 that its proposed updated app will be approved for reinstatement to the App Store," the letter said.

The letter, which didn't explain what changes Parler undertook, came in response to an inquiry that Messrs. Lee and Buck sent to Apple last month.

Mr. Buck said on Twitter that the decision was a "huge win for free speech."

Parler LLC, which launched in 2018, landed in the middle of a debate about internet companies and free speech as it grew in popularity among supporters of then-President Donald Trump.

Parler is similar in format to Twitter Inc.'s platform. Its rise coincided with more aggressive efforts on Twitter's part to flag or remove content Twitter deemed objectionable or misleading.

As of February, Parler said it had more than 20 million users, according to Mark Meckler, its interim chief executive.

Parler held itself out as a Twitter competitor that would take a hands-off approach moderating content.

That policy made the platform an attractive online meeting place for supporters of the president', who grew aggrieved at Twitter's approach to content moderation as Mr. Trump worked to overturn the results of the 2020 presidential election and as Twitter eventually suspended his account.

In response to criticism that it served as a staging ground for the Capitol attack, Parler has said that it referred dozens of examples of violent content to the FBI in the weeks before the mob attack.

Apple had previously denied an earlier attempt by Parler to seek reinstatement.

OLIVIER DOULIERY/AFP/GETTY IMAGES

The app Parler held itself out as a rival to Twitter.

India Locks Down Capital, Boosts Shots

Surge in Covid-19 cases spurs New Delhi curbs, opening of vaccinations to all adults in nation

By Vibhuti Agarwal
And Shan Li

NEW DELHI—India imposed a lockdown on its capital city and said it would expand its vaccination program to all adults, as the country struggled to keep the world's fastest-growing surge of Covid-19 infections from overwhelming its healthcare system.

India has sought to avoid the strict lockdowns that punished its economy last spring, but the New Delhi Chief Minister Arvind Kejriwal on Monday said the step was necessary to avoid an even bigger disaster: a complete breakdown of its hospitals. Already, some were turning away patients and running low on oxygen and other supplies.

"I don't say that the system has collapsed, but it has reached its limits," he said.

The latest wave of cases has risen much faster than the country's monthslong surge last year, moving the country to the center of a pandemic that has killed at least three million people world-wide. India has reported more than 200,000 new daily infections for five days straight, with the number surpassing 270,000 on Monday.

On Monday, Delhi reported 25,463 infections in the past 24 hours, nearly three times its biggest daily tally of 8,500 cases during a November peak.

People crowded a bus station in New Delhi on Monday to get home before a weeklong government-ordered lockdown took effect.

JALEES ANDRABI/AGENCE FRANCE-PRESSE/GETTY IMAGES

As of 10 p.m. local time, shops and businesses were forced to shut and people's movements were restricted to accessing and providing essential services. Some states, including Maharashtra, home to the financial capital of Mumbai, have already imposed curfews and limited gatherings to no more than four people. Malls, restaurants, bars and places of worship have been shut in some places, but New Delhi is the first to reimpose sweeping measures like the ones employed last spring.

The rapidly rising numbers have also added urgency to one of the world's largest vaccination campaigns. India has administered 120 million doses to its population of nearly 1.4 billion.

On Monday, the government said it would expand vaccinations to everyone 18 and older starting May 1. The doses had previously been restricted to those 45 and older.

Public-health experts pointed to a combination of factors fueling the surge, including the circulation of new variants that appear to be more infectious than the original virus and the relaxation of precautions like wearing masks and social distancing as the number of cases dropped in recent months.

"We just let our guard down," said Amir Ullah Khan, research director at the Centre for Development Policy and Practice, a think tank based in Hyderabad.

Dr. Khan pointed to potential superspreader events such as the recent political rallies held ahead of state elections in West Bengal, which have drawn tens of thousands of mostly unmasked people. Hundreds of thousands of devout Hindus crowded along the Ganges this month for the Kumbh Mela festival, during which people bathe in the river to wash away their sins.

"No political leader was ever seen wearing a mask, or even talking about it," Dr. Khan said. "The signal that went out was that, 'Everything is over. We have recovered.' "

A number of highly contagious variants of the original coronavirus have also been circulating across the country. In March, India's Health Ministry said the U.K., South Africa and Brazil variants had all been found in collected samples, along with a new "double-mutant variant" that may have originated in India.

By mid-April, the U.K variant had become the dominant variant in the northern state of Punjab, public-health experts said. The double-mutant variant had taken over as the most common one in the state of Maharashtra.

Little is known so far about the double-mutant variant, which gets its name because it has two mutations seen separately in other variants but not in the same variant.

The variant has been detected in 21 countries, according to researchers at four universities who track viral lineages. Genetic sequencing has turned up cases in the U.S., Germany, Turkey and Nigeria, among others.

Doctors in India say they are seeing differences both in the pace at which the infections are spreading throughout the population and the ages of people turning up at hospitals, with more young people being affected this time around.

"This wave is enormous," said Parv Mittal, a doctor at a private hospital in Delhi. "Earlier, the elderly were getting infected. This time, it is the younger population at risk."

Inoculation Stagnates For Poorest

Continued from Page One

the export of key raw materials for vaccines, an attempt by Washington to spur manufacturing at home.

The lack of clarity has made planning difficult.

Officials at the Africa Centers for Disease Control and Prevention and the WHO suggested recently that governments might consider giving priority to a first shot for as many people as possible, even if it means delaying second doses and despite a lack of clear data on how efficacy could drop without a booster.

"We are in a bind as a continent," John Nkengasong, the head of the Africa CDC, said last week. "We cannot predict when the second doses will come and that is not good for our vaccination program." Dr. Nkengasong added that even without a booster, one dose of the AstraZeneca vaccine should protect against serious Covid-19.

Other countries, meanwhile, are struggling to administer the few vaccines they have received.

One reason for low demand for vaccines in some countries, health officials said, is the decision by some European countries to restrict the use of the AstraZeneca vaccine for younger people amid reports of a rare but severe blood-clotting disorder. Health authorities in the U.S. last week also paused the rollout of a vaccine made by Johnson & Johnson as they investigate similar reports. Covax and the African Union have lodged big orders for the J&J shot for the second half of the year.

"There is a lot of misinformation out there and this negative messaging especially in Europe and America is the main reason our vaccinations took off to a slow start," said Diana Atwine, the permanent secretary at Uganda's health ministry. "Enthusiasm has been low because people are being told bad things about the vaccine." Uganda, a country of 45 million, has administered just over 200,000 of the 964,000 doses it received in March.

A lack of investment in vaccination logistics, including messaging to the public, is also slowing the rollout. U.S.-based health charity CARE estimates that for every $1 spent on vaccine doses, governments need to invest an extra $5 in getting them into people's arms.

But the Covax division meant to help countries prepare for vaccine rollouts has received only around $600 million in contributions, leaving a gap of $7.3 billion for this year, and the World Bank has committed just $2 billion of a $12 billion financing package meant to help countries buy and distribute vaccines and strengthen their health systems.

Cuts in vaccine exports are widening a gap between rich and poor nations.

Some $9 billion has been donated to Covax to buy vaccines, even though large purchases by rich countries mean that most doses won't become available until later in the year.

In Uganda, authorities are running advertisements urging vaccinations, but the posters and billboards that were mainstays of earlier vaccination campaigns, including for measles and polio, are absent. Outside the capital, Kampala, the elderly often lack the transport needed to reach vaccination sites. A high illiteracy rate also means some people struggle to read the consent form they need to sign, health officials said.

"If we got access to more money, we could be able to speed up the process," said Vera Daves, the finance minister of Angola, which has used less than half of its Covax doses.

The WHO and other agencies are adapting their guidance in light of the supply shortages. In a notice posted on a network for international immunization professionals in March, the WHO suggested that countries dependent on Covax could focus on getting as many people as possible a first dose, even at the risk of delaying a second by more than the recommended 12 weeks.

That "would substantially increase the number of deaths prevented," the notice says. But the WHO also says the levels of antibodies triggered by the vaccine drop by around a third 90 days after the first dose. There is only limited data on what happens to vaccine efficacy thereafter, it says.

Tulio de Oliveira, a geneticist at the Nelson Mandela School of Medicine in South Africa, said the risk that the shot becomes less efficacious without a timely booster was especially high for countries battling variants.

But, he added, "If it's the choice between no vaccine and one vaccine...then one doesn't have a lot to lose on an individual level. What one can lose is vaccine trust."

China Stresses Family Values as Marriages Decline

By Chao Deng
And Liyan Qi

Under Xi Jinping, the Communist Party has brought back talk of family values and women's importance as caretakers, messages that many women say are out of step with their thinking on when—or even whether—to marry.

The party has long prided itself on promoting gender equality, but demands that households follow its priorities of the moment. The emphasis on women's role in educating children and caring for the elderly comes as birth and marriage rates drop, trends that may have dire economic consequences.

In the early years of Communist rule, Mao Zedong urged women to join the workforce to help build the nation and to hold off on marrying and having children. Later came edicts that couples could have only one child to avoid runaway population growth.

During Mr. Xi's time in power, new party slogans emphasizing "family, family education and family virtues" or "pass on the red gene" have been coupled with efforts to censor voices on women's rights.

In recent days, more than a dozen accounts used by women's-rights groups were deleted from the Weibo social-media platform and cultural-discussion site Douban.com.

The deletions came as China awaits the results of a once-a-decade census, which had been expected by early April but have yet to be released. Demographers expect the data to show a sharp drop in births in 2020, the fourth straight decline following a brief rise in 2016, the first year after the one-child policy was lifted.

"What are they afraid of?" asks one user in reference to the deleted accounts. "Are they afraid of more women waking up? Are they panicking when seeing the fertility rates and marriage rates?"

Neither Douban nor Weibo responded to requests to comment. Weibo said in a post on its verified official account that some accounts were taken down because they were "related to illegal or hurtful information." It didn't elaborate. A spokeswoman for China's National Statistics Bureau said in a Friday briefing that the agency needed additional time on the census because there was more data to process than in previous ones.

Many women, especially in cities, say they are in no hurry to get married and have a family.

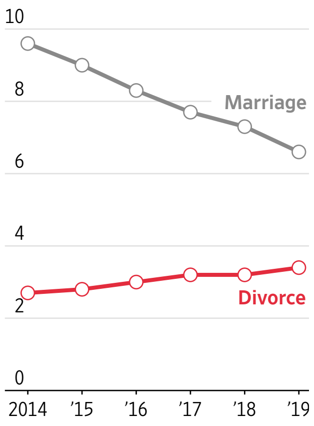
Liang Wei, 28 years old, says she has gone on at most one date a year since her last serious relationship ended four years ago. With a job at a Shanghai education consulting firm, she is financially independent. She has told her anxious parents in Jiangxi province not to pressure her. "Maybe I'll never marry," she says.

In 1990, almost all Chinese women married before the age of 30. Now many say they are in no hurry to wed and have a family.

KEVIN FRAYER/GETTY IMAGES

In China, fewer people marry while the divorce rate is up.

Marriage and divorce per 1,000 people



Source: China's Ministry of Civil Affairs

Caroline Chen, 32, a personal trainer in Beijing, says back in her hometown of Zhangjiakou, about an hour's high-speed train ride north of Beijing, women her age would have married long ago and had children. She is content being single and indulging interests such as shooting videos and going out with her friends. "If somebody brought up marriage, I'd run away," she says.

Most of the women who are resisting marriage and children wouldn't call themselves feminists, said Leta Hong Fincher, who has written two books about Chinese women.

"The biggest challenge for the government is ordinary women just pushing back against pressure to get married and have children," she says.

In 1990, almost all Chinese women married before the age of 30, according to Wang Feng, a sociology professor at the University of California, Irvine. By 2015, in cities like Shanghai, around one-fifth of women were still unmarried by their 30th birthday, Prof. Wang estimates.

Mr. Xi has built Confucian values, including conservative views of women's role in the family, into his China Dream of nationalist revival, says Derek Hird of Lancaster University.

"If you've got these highly educated women who don't want to get married, that then becomes part of the demographic worries and concerns that play into this larger discourse on family values."

The state-sponsored All-China Women's Federation, the main organ through which the Communist Party spreads its messaging for women, didn't respond to a request to comment.

While saying there should be equality between women and men, Mr. Xi stresses that society must "give full play to the unique role of women in promoting the family virtues of the Chinese nation."

Despite such rhetoric, fewer Chinese marry every year. In 2019, China's marriage registrations were 6.6 per 1,000 people, compared with 9.6 in 2014. Part of the problem is that the decades of the one-child policy mean there are now simply fewer people of marriage age.

Alarmed also by a rise in divorces, Chinese authorities this year instituted a 30-day cooling-off period for couples who seek to split up. The wait, during which either party can opt out, can be especially disadvantageous for women trying to get out of abusive marriages, says Feng Yuan, co-founder of Equality, a Beijing group focused on preventing violence against women.

Of divorce cases that go to court, more than 70% are initiated by women, China's highest-ranking judge has said. Lawyers and activists say judges routinely turn down divorce filings the first time around. Only 38% of cases adjudicated in court were granted a divorce in 2018, said the Civil Affairs Ministry, the lowest ever.

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Lengthy Hunger Strike Puts Navalny in Hospital

Kremlin dismisses U.S. warnings, as backers of opposition leader press calls for release

By Ann M. Simmons

MOSCOW—Jailed opposition politician Alexei Navalny was hospitalized on Monday, weeks after beginning a hunger strike, as the Kremlin brushed off warnings from the U.S. of repercussions if he were to die while in prison.

His hospitalization came a day after his supporters called for large-scale demonstrations to demand his release after doctors with ties to the opposition leader cited medical test results they said showed he was at risk of imminent renal failure and a possible heart attack.

Mr. Navalny, a prominent Putin critic who is serving a 2½-year prison sentence after being convicted of violating parole conditions, was transferred to a hospital for convicts within the prison system in Russia's Vladimir region, prison authorities said Monday.

His health condition had been "assessed as satisfactory" and a doctor has been examining him every day, they said. He had also consented to being prescribed "vitamin therapy," they added, without detailing the nature of such treatment.

Mr. Navalny has been on a hunger strike for about three weeks over what he has called poor treatment since he was incarcerated in February. He has accused authorities of lack of medical attention for what he described as debilitating back pain and numbness in his legs and one hand.

"I have a 100% hard-core prison hunger strike, without any tricks like sweet tea, salted water, juice, vitamins, etc. Only water," he said in comments posted on his Instagram page on April 7.

In other social-media comments, Mr. Navalny said prison officials were threatening to force feed him, including by putting him in a straitjacket. The opposition politician also said prison guards were trying to tempt him to eat by slipping candies into his pocket and frying chicken in the prison kitchen.

Prison authorities didn't respond to a request to comment on whether they had tried to force feed Mr. Navalny or intended to do so.

Doctors have indicated that the numbness he has complained of could be the result of the poison attack that Mr. Navalny suffered in August.

The U.S. warned Sunday that there would be consequences if Mr. Navalny died while incarcerated.

"We in no way acknowledge such statements, which are voiced by representatives of other states," Kremlin presidential spokesman Dmitry Peskov said. "The state of the health of convicts and prisoners on the territory of the Russian Federation cannot and should not be a topic for their interest."

Mr. Peskov said he was unaware of Mr. Navalny's health status and couldn't trust media reports regarding his condition.

On Monday, White House press secretary Jen Psaki told reporters that U.S. officials would "continue to reiterate our view that what happens to Mr. Navalny in the custody of the Russian government is the responsibility of the Russian government and that they will be held accountable by the international community."

In the meantime, the U.S would "continue to call for, push for, [Mr. Navalny's] release and reiterate our view that he must be treated humanely," she said.

Prison authorities have refused to let a doctor of Mr. Navalny's choice assess him and said he is receiving all necessary medical care and being treated like all other inmates in accordance with the law.

Allies of Mr. Navalny, including doctors who have been trying to gain access to examine him, expressed dissatisfaction over the facility where the politician was moved to. On its website, it describes itself as a tuberculosis hospital.

"This is not a hospital at all, where they can diagnose and prescribe treatment for his problems," the team of Anastasia Vasilieva, director of the Alliance of Doctors medical workers' union, said on Twitter. "We urgently demand to hold a consultation and admit us, his attending physicians, to [attend] it."

Prison hospital officials didn't respond to a request to comment on whether Mr. Navalny would be housed with tuberculosis patients.

Supporters of Mr. Navalny have called for nationwide protests on Wednesday to demand his release. The same day, President Vladimir Putin is expected to give his annual address to the national legislature.

Mr. Peskov said he didn't know of any organizations in Russia that had applied for permission to hold a rally, but was aware of calls for protests in Russia from abroad.

DIMITAR DILKOFF/AGENCE FRANCE-PRESSE/GETTY IMAGES

Alexei Navalny was transferred to a prison hospital at a penal colony in the town of Vladimir, Russia.

Cape Town Fires Under Control After Burning Historic Buildings

MIKE HUTCHINGS/REUTERS

Firefighters in Cape Town, South Africa, finally brought a wildfire under control Monday after it swept across the slopes of the city's famed Table Mountain, burning the university's historic library and forcing the evacuation of some neighborhoods.

The fire, which started early Sunday, was "largely contained" more than 24 hours later, city officials said. The smoldering blaze is being watched for flare-ups amid high winds and hot, dry conditions.

The fire badly damaged the library and other buildings on the campus of the University of Cape Town on Sunday, as well as other nearby historic buildings. Fueled by the high winds, the fire spread through the wild bush on the mountain slopes toward the city's center and the surrounding residential areas.

Devil's Peak, one of the iconic points of the mountain that overlooks downtown Cape Town, was lit up by flames as the fire raged through the night. Residents of suburbs on the mountain slopes were evacuated early Monday as the blaze came dangerously close to their homes.

Fire-fighting helicopters with water containers suspended on ropes had been scooping up water from swimming pools and the nearby ocean and dumping it on the fire. But they were grounded on Monday because of the strong winds.

Four firefighters were injured battling the blaze on the slopes, officials said.

A man in his 30s was arrested on suspicion of arson for setting additional fires, another city official said, but it isn't clear if he was responsible for starting the blaze. The man was arrested after witnesses reported seeing three people moving through flames setting more fires, said Cape Town safety and security official JP Smith.

The city commissioned a forensic fire investigator to look into the cause of the fires, he said.

One fire damaged four buildings at the University of Cape Town. The Jagger Library's main reading room, where rare and unique African books and manuscripts were kept, was gutted and some of the "priceless" works were lost, the university said. Others were saved after fire-proof doors activated and sealed off parts of the library.

—*Associated Press*

Biden's Hard Line on Russia Splits Europe

By James Marson And Drew Hinshaw

BRUSSELS—As the Kremlin threatens Ukraine and Russia's main opposition leader's health deteriorates, some European countries want to follow the Biden administration's lead and take a tougher line toward Moscow.

But the European Union's major powers, France and Germany, want to stake out their own, more diplomatic relationship with Russia, independent of the U.S.

The Czech Republic and Poland have expelled Russian diplomats in recent days, accusing the Kremlin of malign activities. Some EU members such as the three Baltic countries want to send a clearer message to Russia warning of sanctions if the Kremlin uses the tens of thousands of troops it has deployed near Ukraine's borders and in Crimea against its neighbor.

The U.K., which recently left the EU, and some rich but smaller EU members, including Denmark and the Netherlands, have for several years taken tougher lines against Moscow, but failed to sway the EU's biggest members.

The Czech and Polish expulsions of diplomats last week followed the Biden administration's new sanctions on Russia over election interference, a cyberattack and other malign activity. President Biden has set a clear tone on Russia, saying he considered Russian President Vladimir Putin a killer.

The previous administration also took retaliatory measures against Russia, but allies were left unnerved by then-President Donald Trump's praising of Mr. Putin.

Russia denies wrongdoing and says the U.S. is trying to set allies in Europe against Moscow. The Russian Foreign Ministry said it saw "an American fingerprint" on the Czech decision.

EU foreign ministers met via video Monday to discuss Russia's military moves, which the bloc's foreign policy chief, Josep Borrell, said was "very concerning." He said Russia had some 150,000 troops near Ukraine and in Crimea, and called on Russia "to de-escalate and defuse tensions." His office later said the correct figure was more than 100,000.

Mr. Borrell also expressed concern for the health of leading Kremlin critic Alexei Navalny, who has been on a hunger strike for almost three weeks. Mr. Borrell said the EU wasn't preparing new sanctions on Russia.

France and Germany have preferred to try to persuade Mr. Putin to change course. French President Emmanuel Macron has prioritized diplomacy, saying Europe needs to engage with Russia on arms control as well as global conflicts and other crises.

Germany would support a decision by the EU to intensify the existing restrictions against Russia if the Kremlin escalates in Ukraine, a senior German government official said.

But the government isn't likely to abandon its support for completing the Nord Stream 2 gas pipeline that is set to double direct Russian gas exports to Germany, several officials said. Mr. Biden opposes the pipeline, which would circumvent Ukraine and strengthen Russia's sway over the European energy market, and his administration is weighing whether to impose sanctions on it.

Dogecoin Soars in New Frenzy

Continued from Page One

over the past year.

The cryptocurrency's rise is reminiscent of GameStop Corp.'s stunning advance earlier this year, an episode in which traders congregating on Reddit and other social-media platforms made a past-prime mall retailer into a stock-market superpower.

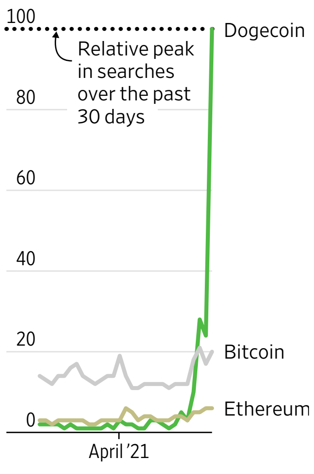
This time, dogecoin's buyers have gone a step further, turning what was meant as a parody into a real asset, providing some traders who piled in early with unimaginable gains. The latest stage of the frenzy centers on Tuesday having been deemed "Doge Day" in online forums, a loosely organized bid to push the price of the cryptocurrency to $1, from a 5 p.m. EDT closing price of nearly 39 cents on Monday and less than a penny in January.

Both episodes underscore the scale and potency of the current retail-trading environment in which organized efforts in online communities can make a surprisingly large impact on market prices. They also reflect expectations that prices will continue rising, and as such they embody risks that these sudden fortunes will be wiped out when the winds of the markets shift.

"A lot of people coming in haven't been around that long, and haven't seen bitcoin crash," said Robert Drach, an asset manager at Drach Advisors in Tallahassee, Fla.

For now, the rise and fall of favored assets in online forums has largely been contained. GameStop's surge peaked in January and fizzled without hitting major indexes. That said, many investors are keeping an eye on these market oddities, reasoning that a precipitous fall in the price of dogecoin or bitcoin could prompt hedge funds and other large investors to reduce risky holdings and contribute to a broader retreat from risk.

Online search traffic for cryptocurrencies



Notes: Reflect U.S. searches only; As of Friday
Source: Google Trends

Though there is no reason right now to worry that stocks are on the verge of a sharp pullback, dogecoin's rise "feels to me like a bubble," Mr. Drach said. "That's always concerning to me, not just for dogecoin investors, but regular equities investors."

For now, dogecoin's sharp rise is vindicating one of the strange but true facts of 2021: The most unconventional trades can sometimes yield outsize gains. Someone who invested $10,000 in dogecoin on Dec. 31 would have amassed more than $821,000 as of Monday, according to data from Kraken. The same money invested in shares of GameStop would have yielded just under $87,250, and in an index fund tracking the S&P 500 nearly $11,150, including dividends.

Should dogecoin go on to hit $1, its value would exceed blue-chip companies including Advanced Micro Devices Inc., CVS Health Corp. and General Motors Co.

"This is absurd," said Billy Markus, the co-creator of dogecoin. "I haven't seen anything like it. It's one of those things that once it starts going up, it might keep going up."

Dogecoin serves no purpose, and unlike bitcoin, faces no limit on the number of coins that can exist. Each day, computers solve mathematical puzzles to unlock new coins. About 129.2 billion dogecoin were in circulation Monday, according to CoinDesk.

Cryptocurrencies tend to be especially volatile, prone to double-digit percentage swings in a single day. The listing of exchange operator Coinbase Global Inc. sent prices of bitcoin and ether to records last week. On Sunday, bitcoin fell more than 10% on speculation that the Treasury Department was weighing taking action against some institutions over money laundering using cryptocurrencies.

Traders said they started promoting "Doge Day" after seeing a new advertising campaign on Twitter from Conagra Brands Inc.'s Slim Jim account. The snack-food brand, which frequently uses memes to draw attention online, said it planned to launch something called DogeSlimJim on Tuesday and exhorted the "DogeArmy" to spread the word. Its account was plastered with memes of the Shiba Inu dog that inspired the creation of dogecoin.

Lanie Friedman, a spokeswoman for Conagra, said the brand planned to launch a doge-inspired digital product. She declined to provide further details and said Slim Jim's campaign was unrelated to the value of dogecoin.

Shaun Becker, who lives in Phoenix, began promoting "Doge Day" on his Twitter account after seeing tweets from Slim Jim. The 36-year-old risk-and-compliance analyst said he first bought dogecoin on Feb. 8, as celebrities including Tesla Chief Executive Elon Musk and rapper Snoop Dogg promoted it. Mr. Becker's $1,179.42 investment in dogecoin was worth $4,477 Monday, when dogecoin traded near 39 cents.

"I'm very confident that on Tuesday, it's probably going to hit at least $1," Mr. Becker said in an interview. "Even if you throw in $100, you can double your money. I don't want anyone to make a risky investment. I just want everyone to get a piece of the pie."

Denmark Strips Syrians Of Their Refugee Status

By Raja Abdulrahim

When Rawan Bertawi, a 22-year-old Syrian refugee living in Denmark, reported for her shift at a cosmetic company's warehouse one day in mid-December, she found her keycard didn't work. She sensed something was wrong.

Her flustered manager summoned her into his office and showed her an email he had just received from the Danish immigration service: Her refugee status—along with her right to work—had been revoked and she would have to leave the country.

Ms. Bertawi and her family are among dozens of Syrian refugees stripped of their residency visas by Denmark and told to return to their war-torn country because the Danish government deems Damascus—where they had been living—safe. Human-rights groups contest the claim that any part of Syria is safe for returnees.

> 'This is ruining human lives,' said one woman who relocated in 2015.

But since Denmark cut off formal diplomatic relations with Syria near the start of the civil war a decade ago, it is unable to deport Syrians. Instead it is placing those who no longer have legal status in removal camps, a policy that aid groups say is aimed at pressuring Syrians to voluntarily return to Syria.

"This is ruining human lives," said Ms. Bertawi, who went to Denmark in 2015, when she was 15. "Why would you wait until now that we have integrated and we now consider this our country and reached this stage and now you are telling us to go?"

The Danish decision reflects broader questions about the fate of millions of Syrians who fled the decadelong civil war that devastated their country.

More than 6.5 million people sought refuge outside Syria, largely in neighboring Lebanon, Turkey and Jordan. While the refugees were welcomed early on, their huge numbers have strained the host countries and led to growing pressure on the Syrians to return home.

More than one million migrants arrived in Europe in 2015, many of them Syrian refugees who initially were received warmly and expected to settle permanently. But the wave of refugees and migrants eventually led to a hardening of immigration policies across the region.

Denmark, which has pursued some of the toughest anti-immigration policies in the region in recent years, took a cautious view of the Syrian refugees from the start.

While Germany took hundreds of thousands of Syrians, Denmark took in about 13,000 refugees in 2015. As of early 2020, there were slightly more than 32,000 Syrian refugees in Denmark.

Danish authorities say they never intended for the Syrians to settle permanently.

"Denmark has been open and honest from day one," Immigration Minister Mattias Tesfaye said in response to questions. "We have made it clear to the Syrian refugees that their residence permit is temporary and that the permit can be revoked if the need for protection ceases to exist."

In principle, refugee protection lasts only as long as the threat or danger that drove the person to flee still exists, and host governments make their own assessment, said Eva Singer, the director of asylum at the Danish Refugee Council.

"In Danish law the criteria to withdraw refugee status is very low," Ms. Singer said. "Even small improvements in the general security situation even for a short period of time is sufficient for authorities to withdraw protection status."

BILAL HUSSEIN/ASSOCIATED PRESS

ARMS: A Lebanese soldier scuffles with a protester who had grabbed his weapon after being hit with it Monday in Beirut.

RWANDA

Report Says France Enabled '94 Genocide

The French government bears "significant" responsibility for "enabling a foreseeable genocide," a report commissioned by the Rwandan government concludes about France's role before and during the horror in which an estimated 800,000 people were slaughtered in 1994.

The report comes amid efforts by Rwanda to document the role of French authorities before, during, and after the genocide, part of the steps taken by France's President Emmanuel Macron to improve relations with the central African country.

The 600-page report says that France "did nothing to stop" the massacres, in April and May 1994, and in the years after the genocide tried to cover up its role and even offered protection to some perpetrators.

It concludes that in years leading up to the genocide, former French President François Mitterrand and his administration had knowledge of preparations for the massacres—yet kept supporting the government of then-Rwandan President Juvénal Habyarimana despite the "warning signs."

The Rwandan report comes less than a month after a French report, commissioned by Mr. Macron, concluded that French authorities had been "blind" to the preparations for genocide and then reacted too slowly to appreciate the extent of the killings and to respond to them. It concluded that France had "heavy and overwhelming responsibilities" by not responding to the drift that led to the slaughter that killed mainly ethnic Tutsis and the moderate Hutus who tried to protect them. Groups of extremist Hutus carried out the killings.

—Associated Press

GERMANY

Greens Party Makes Bid for Chancellery

Germany's environmentalist Greens announced Monday that co-leader Annalena Baerbock would make the party's first bid for the chancellery in the September election, while Chancellor Angela Merkel's center-right bloc was mired in a power struggle.

The nomination was unveiled by the party's other co-leader, Robert Habeck, at a smoothly staged event that contrasted with the standoff in Ms. Merkel's Christian Democratic Union.

The Sept. 26 parliamentary election is unpredictable, partly because the popular incumbent isn't seeking re-election. Ms. Merkel vowed in 2018 not to seek a fifth four-year term. Recent polls have shown the Greens running second behind the CDU and ahead of Germany's traditional big center-left party, the Social Democrats.

Ms. Baerbock, 40 years old, has been a lawmaker in the national parliament since 2013 but lacks government experience. She said she wants "a Germany at the heart of Europe, a country in which climate protection creates the future foundation for prosperity, freedom and security."

Ms. Baerbock and Mr. Habeck have led the Greens since early 2018. Recent polls show support for the Greens of 20% to 22%, more than twice the 8.9% it won in the 2017 election.

—Associated Press

MYANMAR

Ex-U.N. Leader Faults Response to Coup

Former U.N. Secretary-General Ban Ki-moon urged the world body and Southeast Asian countries Monday to take swift and strong action to stop the deadly crackdown that has followed the military coup in Myanmar, saying he had tried unsuccessfully to make a diplomatic visit himself.

Mr. Ban exhorted the U.N. Security Council to act immediately to halt the violence and protect civilians, "using a range of tools at the council's disposal." His remarks came weeks after the group toned down a statement on Myanmar by changing a draft that suggested sanctions might be considered. He said that international groups' commitments to avoiding interference in domestic affairs is no excuse for "inaction in the face of serious human-rights abuses."

Since the Feb. 1 coup, security forces have killed more than 700 protesters and bystanders, according to the Assistance Association for Political Prisoners, which monitors casualties and arrests.

—Associated Press

Shortage Of Chips Is A Challenge

Continued from Page One

players have been pulling away from to pursue higher-margin, cutting-edge chips. Building new production capacity usually takes years.

That could slow down the post-pandemic recovery for certain industries that use the chips that are looking to take advantage of rising consumer spending. It also feeds into inflation concerns as higher chip costs can stoke prices throughout the economy.

Racing to fill orders, GlobalFoundries Inc., based in Santa Clara, Calif., one of the world's largest contract chip manufacturers, is dispatching its engineers to find ways to squeeze out even the smallest amount of extra production from its factories in the U.S., Singapore and Germany. Among the solutions: delaying certain maintenance tasks and speeding up—by a fraction—the rate at which wafers move along the line.

"We're working immensely hard to figure out how to do more, build more," said chief executive Thomas Caulfield.

A worker at GlobalFoundries, one of the largest chip makers. It is trying to find ways to squeeze out more production.

GABBY JONES FOR THE WALL STREET JOURNAL

U.S. investment

Last Tuesday, President Biden called for a bipartisan push to strengthen the U.S. semiconductor industry during a meeting with automotive and tech executives. He has earmarked $50 billion to boost America's semiconductor production as part of a $2.3 trillion infrastructure plan. The spending isn't expected to push the needle far: making the U.S. self-sufficient for its chips would require more than $1.4 trillion in investments and government incentives over a decade, according to the Semiconductor Industry Association, an industry group.

Chip makers can add only incremental boosts to capacity from existing plants, executives say. Building a new fabrication plant can take years because of the scale and complexity of equipment and space needed to make semiconductors.

Major chip makers made big strategic bets on the more-profitable advanced chips needed for things such as 5G and servers. The approach hit a glitch when the coronavirus plunged the global economy into one of its worst recessions, rattling supply chains and consumer spending patterns. That left chip makers ill-equipped to deal with the high demand for older, less-sophisticated semiconductors used widely in products such as cars, computer monitors, speakers and appliances—products that have been hoovered up during the pandemic.

The supply crunch was exacerbated by U.S.-China trade tensions, especially during the past year, including Washington policies that gradually restricted the sale of American-designed or -made chips to some Chinese buyers. Fears of sanctions prompted tech companies in China to stockpile chips and prepare for the worst, Huawei Technologies Co. deputy chairman Eric Xu said last week. The Chinese company uses a range of chips in its telecommunication products and consumer gadgets, and aggressively stockpiled components to protect against U.S. export restrictions.

"Now [the Chinese companies] are stockpiling for one month, three months, or even six months, and they have disrupted the whole system," Mr. Xu said. China's chip imports soared 15% last year and hit a record $35.9 billion in March, Chinese customs figures show.

Chip production was disrupted by events including a plant fire in Japan and freezing weather in the southern U.S. that shuttered production lines. A drought in Taiwan, a major chip-making hub, threatens to further reduce the industry's output, since large amounts of water are used in the process.

Manufacturers of products that use chips are stepping up production in expectation of a post-pandemic economic recovery. The surge in chip demand is pushing up prices and extending already historically long wait times. Auto makers including Toyota Motor Corp. and General Motors Co. have been forced to idle or reduce production at some plants.

Chip makers have been hamstrung by a series of freak events that hurt output.

Some buyers say they face delays of half a year or longer. "You ask on Monday, it's a 12-week lead time. Then you ask on Wednesday and it's a 27-week lead time," said Liam Bates, chief executive officer of Kaiterra, a Swiss-based maker of air-quality tracking devices.

Kaiterra, which manufactures in southern China, is beefing up contingency plans to make its supply chain "future-proof." Engineers who focus on building new products now allocate a chunk of time to redesigning existing ones to operate on different chips, in case the ones needed don't arrive. Recently, the company decided to stock up a year's worth of inventory for some parts.

Semiconductors are the lifeblood of many industries—ranking as the world's fourth-most traded product counting imports and exports, after crude oil, refined oil and cars.

For years, the world's biggest chip makers plowed investment into capacity to feed demand for the next generation of semiconductors, and shifted their focus away from the production of more-basic chips.

But autos and home electronics are packed with lots of the more rudimentary components. These include power-management chips, a basic chip that regulates the flow of electricity in a device, and microcontrollers, the workhorses that run a host of functions.

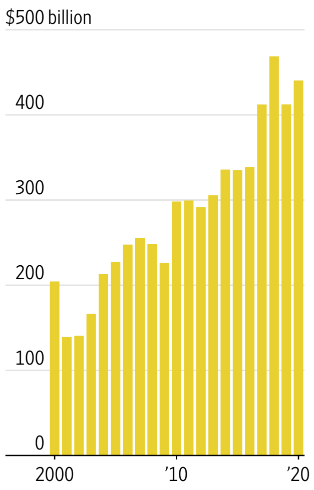
"There isn't an electronic device that doesn't have a microcontroller in it," GlobalFoundries' Mr. Caulfield said. "This is pervasively in short supply."

Even advanced electronic gadgets need some basic chips to operate, and in fact increasingly use more of them to run more sophisticated technology. A typical 5G smartphone can hold as many as eight power-management chips, compared with two to three in a 4G phone, according to Hui He, an analyst at research firm Omdia.

Last year, 27% of all spending on chip-making equipment went to tools for building the industry's most-advanced chips, according to research firm Gartner Inc., which are often used in smartphones, high-end PCs and data centers. Less than half that portion, about 11%, went to equipment for cranking out more commoditized chips.

The world's largest contract chip maker, Taiwan Semiconductor Manufacturing Co., told investors in January that it is working with customers to upgrade some of the chips they are using so that they can be built on its more-advanced manufacturing lines, where there is more capacity. On Thursday, executives told investors that customers have been stockpiling due to the pandemic and geopolitical tensions.

Global semiconductor sales by year



Source: World Semiconductor Trade Statistics

Switching existing production lines from making one type of chip to another isn't easy because different types of chips require different equipment to make, though there can be some overlap.

Wide shortages

There hasn't been a time when the shortage has affected so many types and brands of chips all at once, said Marcus Chen, vice president of sales for the Asia-Pacific at Fusion Worldwide, one of the many global distributors who act as middlemen to supply electronic components to buyers.

It usually takes at least two years to build and equip a semiconductor fabrication plant, known as a "fab," which can cost billions of dollars. The most advanced machines that can be installed in the plants can top $100 million and are so large they require as many as three 747s to deliver.

Once fabs are built, a chip typically takes three months to make—or longer for the most-advanced ones.

Semiconductor makers must decide whether to make multi-billion-dollar bets on whether this surge will last or taper off by the time new plants are up and running. Many are reluctant to alter long-term spending plans based on demand surges that could be short-lived.

Still, the biggest semiconductor companies are setting aside huge sums to boost overall capacity. TSMC earlier this month unveiled the industry's largest-ever investment, allocating $100 billion over the next three years to boost capacity. Most of the company's near-term spending, however, will go toward building the most-advanced chips. In the U.S., Intel Corp. last month pledged $20 billion for two sites in Arizona and signaled further investment commitments are to come this year. South Korea's Samsung Electronics Co. has earmarked $116 billion in investment by 2030 to diversify chip production.

In China, President Xi Jinping has made the country's independence in advanced technologies such as chips a national priority. Yet the goal remains elusive. One key player in the self-reliance push defaulted on billions of dollars in debt. Others have been hobbled by U.S. export controls restricting access to advanced chip-making technology.

China's biggest chip maker, Semiconductor Manufacturing International Corp., last month committed $2.35 billion with a government partner to build a new factory focused on older chip-making processes. The company anticipates the new facility to start production next year. But delays in getting new chip-making equipment is an obstacle, the Shanghai-based company's co-CEO, Haijun Zhao, told investors in February.

Chip makers are seeing a doubling, if not quadrupling, of delivery times for the machinery required to make semiconductors, said Bruce Kim, chief executive officer at Surplus Global Inc., which sells used chip-making equipment.

At GlobalFoundries, Mr. Caulfield said the firm plans to invest $1.4 billion to expand capacity at existing facilities this year, and will likely double that next year. Some of his customers have pledged investment capital to secure future capacity, accounting for 30% of the company's capital expenditure this year, he said. Before the pandemic, the number was zero.

New strategies

At Intel, Chief Executive Pat Gelsinger said the company would make some of its production capacity available to produce chips in particular short supply and needed by auto-component makers. Supply could start improving in six to nine months, Mr. Gelsinger said in an interview.

Guy Eristoff, chief strategy officer at Israel-headquartered foundry Tower Semiconductor Ltd., said chip production can be sped up to 3.5 times the usual time in rare cases by sorting production lines so that high-priority chips pass through quickly. Some equipment can be operated for longer before going into preventive maintenance, though this can come at the cost of lower yields.

Altogether, these measures mean some chips can be churned out in 30 to 40 days from the usual 120 days, Mr. Eristoff said. But doing so increases overall production times for other chips. The tweaks can at best increase a fab's production capacity by 5% and be sustained for only up to six months.

"There are all sorts of little things you can play with," said Mr. Eristoff. "But without buying more equipment, you cannot, in a sustained manner, run that much more than you are running right now."

Suppliers are wary that the surge in demand may not last, with panicked buyers increasing order volumes or placing orders with multiple companies. San Jose, Calif.-based Broadcom Inc., one of the world's leading chip companies, is trying to ensure orders coming in reflect actual demand. It recently reminded investors that it doesn't allow customers to cancel chip orders to deter some buyers from making purchase commitments out of fear of shortages.

"We see customers accelerating their bookings for early deliveries and attempting to build buffers and creating the demand-supply imbalance," CEO Hock Tan told investors. The company is nearly 90% booked for the year.

Auto makers are among the buyers that have felt the shortage most acutely, as cars need more semiconductors than ever before. Electronics made up more than 40% of a car's total cost in 2017, doubling from that in 2007, according to consulting firm Deloitte.

Their use is expected to grow, along with costs. German auto-chip maker Infineon Technologies AG said it expects the cost of chips in autonomous vehicles to jump to about $1,200 by 2030 from about $170 currently required for "Level 2" vehicles, or partly automated cars.

—Robert Wall in San Francisco contributed to this article.

New Soccer League Gets Booed

Continued from Page One

ancient, storied and successful soccer teams, including Arsenal, are in a state of bewildered mourning this week, following the unveiling of a lavishly funded Super League that would irrevocably alter the landscape of the sport.

These supporters have unleashed a tsunami of anger at their own teams—even though those clubs would be the direct beneficiaries of the proposed league.

Under the new plan, a small group of elite teams from England, Spain, and Italy—already some of the wealthiest sports enterprises in the world—would compete in a new circuit that would only enrich them further. Opponents say that would undermine the integrity of wildly popular national competitions, like the English Premier League and the main pan-European competition, the UEFA Champions League.

"I don't want to call them the Dirty Dozen," said Aleksander Ceferin, the president of European soccer's governing body, known as UEFA. "But UEFA is about developing football…and some people don't understand it."

The most controversial point is that 15 of the 20 teams in the Super League (three teams will be added later to the initial 12) would be installed there forever, raking in huge payouts instead of qualifying on merit, season after season. In other words, the group of 12, which brings together the likes of Real Madrid, Manchester United, Liverpool and Juventus, is effectively hoping to set up what is effectively a league closed to outsiders, akin to the National Football League or Major League Baseball.

"Football is the only global sport in the world with more than four billion fans," Real Madrid president and Super League chairman Florentino Perez said. "And our responsibility as big clubs is to respond to their desires."

Divining the desires of any four billion people is hard, except perhaps in this case. The backlash from die-hard fans was so sudden and so searing that it instantly became one issue even the most belligerent soccer supporters could agree on. With teams entrenched in communities for more than a century, often wrapping together social and political identities, the sport's traditional order isn't something to take lightly.

An Arsenal fan with his anti-Super League banner Monday at Emirates Stadium in north London.

TOLGA AKMEN/AGENCE FRANCE-PRESSE/GETTY IMAGES

"Every fan I've spoken to felt it was a betrayal of the history of the club," said Duncan Drasdo, the head of the Manchester United Supporters' Trust.

On Monday, the sidewalk outside United's Old Trafford home became the site of an impromptu protest. Fans held up a sheet bemoaning the Glazer family, owners of Man United and the Tampa Bay Buccaneers. Their club, it said, had been "created by the poor, stolen by the rich."

One United fan went viral with a video of herself taking a pair of scissors to her season ticket. Although a close inspection revealed meager sacrifice: The pass was for the 2019-20 season.

Less than 40 miles away in Liverpool, supporters were mounting their own demonstration outside Liverpool Football Club's historic Anfield stadium. Their signs read "LFC Fans Against European Super League" and "Shame On You RIP LFC 1892-2021."

That the club once trademarked the phrase "This Means More"— a profession of faith between the team and the city of Liverpool—makes the situation more awkward than most. Particularly when it found itself having to explain the Super League move to a group of supporters who felt uniquely insulted: Liverpool's own employees.

"We believe this decision is in the best long-term interests of Liverpool Football Club," Liverpool chief executive Billy Hogan wrote in all-staff note.

Soccer's governing bodies now face an existential decision about how to handle the rebel teams. UEFA on Monday announced that any players participating in the Super League, which hopes to open in 2022, would be barred from such major tournaments as the European Championship and the World Cup. The organization also was studying the legalities of suspending the clubs themselves "as soon as possible," Mr. Ceferin said.

In east London, West Ham fans are calling for widespread bans not only to preserve the traditions of English soccer, but because they have spotted an upside. The Hammers are having their best season in years and sit fourth in the standings. After Sunday night's news, they began circulating tables of what the standings would look like if the six super-clubs were ejected and their games vacated. It turns out West Ham would be nine points ahead in first place with just four games to play.

More surprising still for fans of the blue-collar club is that they have an unlikely ally in the president of the English Football Association.

"I share the concerns of fans about the proposed Super League," Prince William tweeted, "and the damage it risks causing to the game we love."

It is worth noting that the prince is a supporter of Aston Villa, which wasn't invited to the Super League, either.

More Riders Fear Subway Crime

MTA says concerns are well-founded, police officials contend the system is safe

By Paul Berger


ALAN CHIN FOR THE WALL STREET JOURNAL

A recent MTA survey found more subway riders are reluctant to take trains because of concerns about crime and harassment.

Phyllis Leibowitz swaps her vintage furs and gold-sequined bag for a down jacket and a fanny pack if she takes the New York City subway these days. “I am a tough chick,” said the fashion stylist and photographer. “But I don't want to call attention to myself.”

A recent survey by New York's **Metropolitan Transportation Authority** found that more riders are reluctant to take trains because of fears of crime and harassment. Officials at some other transit systems around the U.S. said they have noticed an increase in quality-of-life concerns, including harassment, following a rise in those who are homeless seeking shelter on buses and trains.

Ms. Leibowitz, who is 48 years old, used to think nothing of taking the subway, day or night. She last dashed for a nighttime train at Prince Street in Manhattan in December, only to find herself alone in an empty car at 8 p.m.

She said she wondered what she would do if someone entered from an adjoining car and demanded money or her phone while she was trapped in a moving subway car. When she disembarked two stops later at Union Square, her heart was racing. “I have never felt that unsafe in my entire life,” she said.

MTA officials said riders' fears are well founded. Instances of some serious crimes, such as robbery and felony assault, didn't decrease last year even as ridership plummeted, they said. According to MTA data, felonies and misdemeanors per million riders were higher during the first quarter of 2021 than in 2017, 2018 and 2019.

Sarah Feinberg, the interim head of the agency's subway division, has called on New York City to add 1,000 police officers to the 3,000 already committed to subway patrols.

Mayor Bill de Blasio responded last week by accusing the MTA, a state agency, of fanning rider fears. He said the MTA is discouraging ridership just as many people are considering returning to transit with the easing of Covid-19-related restrictions.

Ms. Feinberg countered, saying, “It cannot be the answer that I am told, ‘Just don't talk about what your customers are worried about.’ ”

Representatives for some transit systems in Washington and Chicago said they haven't surveyed riders about attitudes to crime during the pandemic or noticed an increase in crime. A spokeswoman for Metropolitan Atlanta Rapid Transit Authority in Atlanta said its riders' primary concern is an increase in homeless men and women seeking shelter on buses and trains.

Scott Kreher, Marta chief of police, said crowds tend to lead to lower crime rates. “I really feel like once the ridership picks back up again, I think the feeling and sense of security will come back,” he said.

New York City officials have an enormous task securing the subway, which covers 665 miles of track and 472 stations. The MTA has diverted some of its own force of more than 700 police officers, who usually patrol two commuter-rail systems, to focus on the subway.

The authority also pays for about 100 private security guards to watch stations and report incidents to police.

Kathleen O'Reilly, the **New York Police Department**'s chief of transit, said the MTA's complaints about crime are misleading and unhelpful.

A recent series of high-profile instances of riders being shoved onto tracks and the fatal stabbing of two homeless people in the system have given New Yorkers a false sense that crime is commonplace, Chief O'Reilly said.

“These are jarring crimes,” she said. “A relative handful of serious incidents doesn't translate into a crime increase.”

The subway has never been safer, Chief O'Reilly said, adding that the department currently records, on average, 3.5 major crime reports a day on a system carrying millions of people. Such crimes, which include grand larceny, rape and murder, fell 31% in 2020 from the previous year, she said.

Grand larceny, defined in New York as theft of property with a value greater than $1,000, often is caused by people leaving valuables unattended, officials said. If those crimes are removed from last year's data, the remaining major crimes increased, on average, by 2.7%, as ridership declined 62%.

‘I am a tough chick,’ one woman says, ‘but I don't want to call attention to myself.’

An NYPD spokesman didn't respond to a request for comment about the rise in some crimes.

E.J. Lee said that while riding the Times Square-Grand Central shuttle on April 7, she was stared at and followed by a man who struck the violin she carried on her back.

Ms. Lee, a Korean-American violinist, said she had a heightened fear for her safety because of a rise in anti-Asian hate crimes in the city. She said she rushed to a connecting train where the man followed her into an empty car and sat down next to her, prompting her to rush out before the doors closed.

She said she hasn't ridden the subway since.

Many New Yorkers say they must continue taking the subway, whether they feel unsafe or not.

Beatriz Lopez waited for the 7 train at the 61st Street-Woodside station in Queens on Friday morning en route to her job at the Warren Tricomi Salon at the Plaza Hotel in Manhattan. Ms. Lopez, who is 51, said she is concerned about Covid-19 and assaults.

“I try to travel with my husband when I can,” she said.

—Katie Honan contributed to this article.

NYPD Creates a Hate-Crime Board

By Ben Chapman

The New York Police Department is creating a civilian panel to help address a rise in hate crimes in New York City, department officials said Monday.

The NYPD Hate Crime Review Panel will help officers identify potential hate crimes occurring in New York City, said New York Police Department Commissioner Dermot Shea.

The panel will assess circumstances that present challenges in establishing whether race, national origin, ethnicity, religion, disability or sexual orientation were motivating factors in possible hate crimes, he said.

The NYPD will send cases it considers challenging to the panel for its recommendation to help determine whether evidence the department has gathered might indicate a hate crime.

The panel will work on crimes targeting all races. Its five volunteer members include Devorah Halberstam, cofounder and director of external affairs of the Jewish Children's Museum, and Fred Teng, president of the America China Public Affairs Institute, Mr. Shea said.

“Unfortunately, today we are facing nearly daily reports of hate crimes. We need to help stop this,” Ms. Halberstam said.

Mr. Teng, in an interview Monday, said he is honored to participate in the panel's work.

The NYPD recorded 135 hate crimes from Jan. 1 through April 18, up 45% from 93 in the same period in 2020, according to department figures.

An increase in hate crimes against Asian-Americans has propelled the overall rise, the figures show. Asians were targeted in 66 hate crimes from Jan. 1 through April 18, up from 12 such crimes in the same period in 2020.

NYPD officials have said some of the attacks on Asian-Americans have been motivated by the false belief that Asians are responsible for the Covid-19 pandemic. Reports of hate crimes against Asians have increased in cities across the U.S. during the pandemic.

New York City had the biggest increase in reports of hate crimes against Asians of any U.S. city last year, according to a study published by the Center for the Study of Hate and Extremism at California State University, San Bernardino.

Efforts by local, state and federal agencies to address the issue have intensified since the March shootings at Atlanta-area spas in which eight people, including six women of Asian descent, were killed.

Among its efforts, the NYPD last year created an Asian hate-crime task force, staffed by detectives of Asian descent, to investigate such crimes. As more incidents were reported in 2021, the department began to deploy undercover officers in an effort to discourage anti-Asian violence.

Poll Narrowly Backs Cuomo Staying in Office

By Jimmy Vielkind

A slight majority of New Yorkers said Gov. Andrew Cuomo shouldn't resign amid sexual-harassment allegations, but a growing majority of voters view him unfavorably and don't want him to seek re-election, a poll released Monday found.

Fifty-one percent of the 801 voters surveyed last week by the Siena College Research Institute said the Democratic governor shouldn't resign, while 37% of the voters said he should.

Even so, dozens of federal and state officials, including Senate Majority Leader Andrea Stewart-Cousins, have called for him to step down.

The level of support for Mr. Cuomo to stay in office was highest among Black voters and voters over 55 years old, the poll showed.

A Siena poll released on March 15 showed that 35% of voters thought the governor should resign and 50% didn't. But 57% of voters surveyed

51

Percentage of voters surveyed who say he shouldn't quit.

said they would prefer to vote for someone else in next year's gubernatorial race, compared with 33% who said they would vote to re-elect Mr. Cuomo.

The governor previously has said he was planning to run for a fourth term.

Five current and former aides to Mr. Cuomo have accused him of sexual harassment or inappropriate behavior in the workplace. The governor has denied allegations. He has asked New Yorkers to withhold judgment before an independent review overseen by Attorney General Letitia James is completed.

In a separate matter, federal prosecutors are examining the state's policies regarding Covid-19 in nursing homes. The governor and state officials said the nursing-home policies were in line with federal guidance.

Mr. Cuomo has said he is cooperating with both probes, as well as an impeachment inquiry by the Democrat-dominated state Assembly.

Members of the chamber's Judiciary Committee, which is leading the inquiry, will meet with investigators Wednesday.

Even with this backdrop, poll spokesman Steven Greenberg said the survey contained good news and bad news for the governor, whose favorability is now 40%—the lowest it has ever been measured by Siena. At this time last year, during the height of the coronavirus pandemic, Mr. Cuomo's favorability was 77%.

“On the other hand, a majority of voters—including Democrats by two-to-one and a plurality of independents—continue to say that Cuomo should not resign. And a similar majority say he can still effectively do his job as governor,” Mr. Greenberg said.

Indeed, 42% of voters surveyed said Mr. Cuomo is doing an excellent or good job as governor, and 60% said they approve of his handling of the pandemic.

“Public opinion goes up, it goes down, but if you're doing the job and people respect the job you're doing, to me, there's no more important barometer than that,” the governor said at a Monday news conference.

Rep. Lee Zeldin, a Long Island Republican who is running for governor, said the poll showed “Cuomo's Gotta Go, and it's going to take a new generation of leadership to get the job done.”

The poll was conducted between April 11 and 15. It has a margin of error of plus or minus 4.3 percentage points.

City Schools to Get $600 Million Increase Next Year

By Lee Hawkins

New York City schools will see their budgets boosted this fall, as all schools will for the first time receive all of the money they are owed under the city's Fair Student Funding Formula, city officials said Monday.

About $600 million will go to 1,164 of the city's 1,800 schools that had for years received less than 100% of their budget. Principals can use the funds at their discretion for budgetary items such as hiring more teachers and guidance counselors or bolstering special education and bilingual services.

The new funding will come primarily from a pending increase in state aid for the 2021-22 year. Mayor Bill de Blasio said he expects the aid to continue at the $600 million level “for the next few years,” supplying schools with the budgets they were promised but many hadn't received in more than a decade.

“That will now be the standard for every single school, starting with the school year that begins in September,” he said. But going forward, lawmakers will need “to create something that is sustainable after the next few years.”

The boost is meant to fulfill promises of funding equity for schools that serve students who cost more to educate.

In 2007, after a legal challenge from the advocacy group Campaign for Equity, the New York Legislature passed a complex funding formula that allocates aid to districts on a per-pupil basis, taking into account their numbers of students requiring added services, such as English-language learners and children with disabilities, among others.

But state budget shortfalls have kept many of the city's public schools from getting 100% of the money budgeted under the Fair Student Funding formula. The city formula distributes aid to each school on a per-pupil basis, with extra funding going to schools with more low-income or special needs students.

ANGELA WEISS/AGENCE FRANCE-PRESSE/GETTY IMAGES

For the first time, all schools will get all the money they are owed.

This year, instead of cutting funding, the state plans to increase school aid across the entire state by $1.4 billion and said it would spend another $2.8 billion during the next two budget cycles. This, legislators say, should fulfill the funding that was promised in 2007.

The additional state aid will allow the city to provide each school with their entire budget.

“The Campaign for Fiscal Equity case was decided in favor of the students and families in New York City, and yet those students and families never got their fair share of the funding,” Mr. de Blasio said, adding that the New York State Legislature has now “locked in the commitment.”

Candace Hugee, principal at Urban Assembly for Collaborative Healthcare in Brooklyn, called the announcement a “game changer,” since her school received about 91% of its funding last year.

“It's been a long time coming. I don't think it's any secret that for years that schools have been funded inequitably,” she said. “You may have a school with a population of 300 kids, but you may only be funded for 275, while a school in the same building might be funded for all their kids.”

She said she is still calculating the total impact on her school, but expects it to amount to “tens of thousands of dollars,” which will make a difference next fall. She expects to apply funds to address learning loss at the school, which will include tutoring services and paying teachers extra to work with students after school hours.

New York City Councilman Mark Treyger, a Brooklyn Democrat and former teacher, recalled his feeling as a teacher that “decisions were made based upon the realities of a budget rather than the needs of our kids.”

One school in his district, Abraham Lincoln High School in Coney Island, will see an increase in funding by 10%, he said.

GREATER NEW YORK

Princeton Gift Aims to Boost Diversity

By Melissa Korn

Princeton University is ramping up its effort to increase enrollment of first-generation and low-income students and ease their path to graduation, backed by a $20 million gift from Bloomberg Philanthropies.

On Monday, the school announced a new center, focused on improving access and opportunities for such students. It will house a range of existing programs such as targeted summer orientation, mentoring, social activities and workshops on topics like choosing a major and translating professors' jargon.

Bloomberg Philanthropies is giving the Ivy League school $20 million.

The center also will serve as a base for research to determine the most effective support mechanisms for first-generation and low-income students and how they can be used by colleges nationwide.

The goal is to share findings with other universities to scale up a range of efforts that can help get underrepresented students "to, through and beyond the university," said Khristina Gonzalez, an associate dean and the director of programs for access and inclusion at Princeton. She will head the new Emma Bloomberg Center for Access and Opportunity.

Ms. Bloomberg, daughter of the billionaire businessman and philanthropist Michael Bloomberg, is a 2001 Princeton graduate and Bloomberg Philanthropies board member.

Princeton and other highly selective universities have long faced criticism for their relatively homogeneous populations, made up largely of white, wealthy students.

The schools have pursued a range of efforts to improve both their realities and reputations, including increasing outreach to low-income high schools. But advocates for increased college access say more-meaningful progress is stymied by practices including binding early-decision admissions deadlines, which don't allow students to compare financial aid offers. Many institutions also give a boost in admissions to athletes and children of alums.

Princeton has had some success in boosting enrollment numbers for students from a range of racial and socioeconomic backgrounds. Twenty percent of the students who began in fall 2019 came from families earning $50,000 or less annually, more than double the proportion in 2010. Those who are first-generation college students nearly doubled, to 17.8%, in that time.

First-generation college students represent 22% of the class admitted to begin at Princeton next fall, a record high. But Princeton's undergraduate enrollment, under 5,300 and expected to grow to about 5,800 in the next few years, is among the smallest in the Ivy League. The school recently reinstituted a transfer-admissions program, expecting to enroll 12 students from other schools next fall.

Princeton's current efforts alone aren't expected to move the needle on improving enrollment and outcomes for low-income, first-generation or underrepresented minority students.

GREATER NEW YORK WATCH

CLEARING THE DECKS: A worker cleaned the Red Steps above the TKTS booth in Manhattan's Times Square on Monday.

TIMOTHY A. CLARY/AGENCE FRANCE-PRESSE/GETTY IMAGES

CONNECTICUT

State to Lift Most Covid-19 Restrictions

Connecticut plans to phase out many Covid-19 restrictions affecting businesses next month while keeping the mandatory indoor mask-wearing rules in place, Democratic Gov. Ned Lamont announced on Monday.

Beginning May 1, outdoor restrictions will be lifted on businesses, such as mask-wearing when social distancing can't be observed. Also, the rule that alcohol can't be served without food will be lifted, essentially allowing outdoor bar service.

Table seating outdoors will no longer be limited to eight people and business curfews will be moved back to 12 a.m.

"I think these are all ways we have earned the right to get back to our new normal," said Mr. Lamont.

Beginning May 19, all remaining business restrictions will end, including capacity limits on movie theaters. The state Department of Public Health will issue recommendations for the safe operation of indoor and large outdoor events.

—Associated Press

BROOKLYN

Man Is Ordered Held In Attack on Police

A man who threw bleach and a Molotov cocktail at police in Brooklyn admitted that he bought the materials to make explosives with the intent to injure police officers, federal prosecutors said Monday.

Lionel Virgile, 44 years old, was arraigned by videoconference in Brooklyn federal court on an attempted arson charge and ordered held without bail.

Prosecutors said Mr. Virgile splashed bleach at an officer when police pulled him over for running a red light Saturday morning, then later threw a lighted Molotov cocktail at a police car. The officer who was hit with bleach was treated at a hospital. The Molotov cocktail didn't explode, authorities said.

An FBI agent said officers found five more Molotov cocktails in Mr. Virgile's car.

Defense attorney Michelle Gelernt of the federal defender's office said she wasn't seeking bail for Mr. Virgile so there was no need for the prosecutor to detail his alleged offenses.

—Associated Press

HARTFORD

Suspect Arraigned in Tot's Shooting Death

A 19-year-old man was charged with murder Monday in the shooting of a 3-year-old Connecticut boy whose death dismayed and angered the community and prompted state lawmakers to call for more funding for urban anti-violence programs.

Hartford police said they arrested city resident Jaziah Smith for the killing of Randell Jones in a drive-by shooting on April 10. A message seeking comment was left with the public defender's office. A judge ordered Mr. Smith detained on $2.5 million bail during an arraignment.

The arrest came on the same day of Randell's memorial service and burial. Police said Randell was in a parked car with his mother, other relatives and a male passenger when another vehicle pulled next to them and someone opened fire. Authorities said the man in the car with Randell was the intended target.

Hartford police said the fatal shooting of a 16-year-old boy two hours later was related to the killing of Randell.

—Associated Press

NEW JERSEY

Drug Sentencing Guidelines Changed

New Jersey prosecutors must waive mandatory minimum prison terms for nonviolent drug offenses, the state attorney general said Monday in a new directive.

Attorney General Gurbir Grewal said the mandatory terms were "outdated policy," which was hurting residents and disproportionately affecting young men of color. "We can wait no longer. It's time to act," he said.

The decision comes after a state Criminal Sentencing and Disposition Commission called for the elimination of the minimum sentences for nonviolent drug offenses in 2019. All 21 of the state's county prosecutors have also signed a letter supporting the change. Democratic Gov. Phil Murphy applauded the new directive in a statement.

The change means that the imposition of mandatory minimum sentences will be "off the table" for current and future nonviolent drug offenders, and it allows those currently serving such sentences a chance for early release.

—Associated Press

P2JW110000-0-A01100-1--------XA

Judy Roeder, left, and Abbe Smerling visit in Judy's home.

FROM TOP: DAVID DEGNER FOR THE WALL STREET JOURNAL; ABBE SMERLING

Friendship Unshaken by Alzheimer's

'We have gone on this journey together'; friends who have been close for years find ways to continue the bond

By Clare Ansberry

Abbe Smerling and Judy Roeder, close friends for 30 years, raised their children, vacationed and celebrated holidays together. Abbe hosted the wedding rehearsal dinner for Judy's daughter. "It was one of the best parties we ever had at our house," Abbe says.

Now, after sharing many milestones in their lives, the two, who both live in the Boston area, have entered a new chapter in their friendship. Judy, 75 years old and a former psychotherapist, was diagnosed with mild cognitive impairment about eight years ago. As her Alzheimer's has progressed, Abbe, 70, has remained at her side, taking her on road trips, on weekend retreats, and to events at their temple.

"I just want to make her happy," Abbe says.

Many longtime friends are at similar crossroads as more people are diagnosed with Alzheimer's, a degenerative brain disease and the most common form of dementia. An estimated 6.2 million Americans age 65 and older have Alzheimer's and the number is expected to double by 2050 to 12.7 million, according to the Alzheimer's Association.

The disease has no known cure, but loneliness was associated with a 40% increased risk of dementia,

Judy and Abbe, here in 1998, have been friends for three decades.

according to a 2018 study published in Innovations in Aging. A 2019 study found that among those with Alzheimer's disease, having a close circle of friends is linked to better cognition. Maintaining those friendships, however, requires resolve and commitment.

"It's difficult for people to see the changes in their friends. They don't know what to say and do," says Darla Fortune, an associate professor in the department of Applied Human Sciences at Concordia University in Montreal, who along with two colleagues conducted extensive interviews on friendship and dementia, publishing the findings in December 2020.

Those who maintained long-term friendships often mentioned sticking to familiar and comfortable places, Dr. Fortune found. "She knows the waitresses and they all make a fuss over her, and she always gets a hug when she goes in," explained one woman who always took her friend with dementia to the same restaurant. Those interviewed also said they made the friendship a priority. "I want to make sure there are certain things we do together now," said one.

It's helpful for people in the early stages of Alzheimer's to let close friends know, says Beth Kallmyer, who oversees care and support programs for the Alzheimer's Association. "Tell your friends what is going on, talk about what you are experiencing, what you are comfortable doing," she says.

The conversation can be difficult. Shortly after Arthena Caston, 56, was diagnosed with mild cognitive impairment, which later progressed to early-onset Alzheimer's, she called her long-time college friend, Shaun Graham, to give her the news. The two women have been friends for more than 30 years, having met in 1982 as freshmen at Francis Marion University in Florence, S.C.

"She didn't say anything," recalls Arthena, who had been working in customer support for a large insurance company. "She was just quiet and then said, 'Baby girl, I'll call you back.' I knew she was crying."

Shaun didn't return the call for two weeks. "I couldn't talk to her, and I was hoping she wouldn't call me," she says. "I didn't want to cry and make her feel bad. I needed to be strong and supportive. It took me two weeks to get myself together." When she finally did call, she apologized. Arthena said she understood. A few months later, Arthena was matron of honor at Shaun's wedding.

That was five years ago. They now talk on the phone at least five days a week—sometimes several times a day—keeping their ties close in spite of living six hours away from each other, one in North Carolina and the other in Georgia. Shaun accompanied Arthena to an Alzheimer's Association conference in Chicago, sticking close to her in the disorienting airport and making sure Arthena's hotel door was locked at night. Last year, before the pandemic, Shaun and her husband drove from her home in Fayetteville, N.C., to Orlando, Fla., to listen to Arthena address an Alzheimer's summit.

"I love the fact she was there for me," Arthena says. "We have gone on this journey together."

Please turn to page A12

HOW TO BE THERE IN A DIFFICULT CHAPTER

Don't be afraid of silence, says Abbe Smerling, whose long-time friend has Alzheimer's. Tell stories and share news and updates, even if you get no response.

Adjust, says Beth Kallmyer of the Alzheimer's Association. If you and your friend liked to play cards, keep playing them. Maybe not bridge, but something less complex, like 21.

Be frank with your friend, says Arthena Caston, who has early-onset Alzheimer's. "It's a terminal diagnosis, and a lot of people don't want to hear that. But it is."

Focus on your friend, says Darla Fortune, who conducted a study on maintaining long-term friendships. Notice what interests them, makes them smile and laugh, and what makes them uncomfortable.

Call and visit, says Gil Roeder, whose wife, Judy, has Alzheimer's. The sound of a friend's voice and their presence can make his wife happy in the moment.

Don't Let Lack of Sleep Ruin Your Relationship

BONDS
ELIZABETH BERNSTEIN

IT'S THE LAST THING we need during an already exhausting pandemic: A partner who is interfering with our sleep.

Yet many of us are losing shuteye because our partner snores like a bear or hogs the covers. Stays up until the wee hours scrolling on a phone. Tosses and turns with insomnia. Or has a different sleep schedule that we're constantly trying to adjust to.

Wendy Troxel

Wendy Troxel is a senior behavioral and social scientist at Rand Corp. and clinical psychologist who specializes in sleep medicine. In her book to be published today, "Sharing the Covers: Every Couple's Guide to Better Sleep," she explores how sleeping together impacts both our slumber and our relationship. Here are edited excerpts of my interview with Dr. Troxel.

FROM LEFT: DIANE BALDWIN; GETTY IMAGES

How important is sleep for a relationship?

Science shows when you are poorly slept, your communication skills suffer, your problem-solving skills are compromised, and you're more irritable and prone to mental-health problems, including depression. Your frustration tolerance is lowered. You're more prone to conflict. And you're less able to read your partner's emotions, which is called empathic accuracy. All of these factors together can be a really toxic combination for a relationship.

But it's not just that sleeping poorly can compromise your relationship. Having conflict and strife in your relationship can compromise your sleep. So there's this vicious cycle.

Why is it so tough to sleep together?

The challenge that gets talked about most frequently is snoring. But there are other sleep disorders as well, including insomnia, restless leg syndrome or chronic nightmares. And there are run-of-the-mill behaviors that can intervene with a partner's sleep: tossing and turning; sheet stealing; differences in sleep schedules or temperature

preferences; one partner likes to binge-watch Netflix or be on a phone while the other one does not.

Yet most people prefer to sleep with their partner?

Yes. There are psychological benefits. We derive a sense of safety and security from sleeping with our partner. Sleep is a vulnerable state. You are lying down, semiconscious, eyes closed. It's hardwired for us to seek connection when we are feeling vulnerable.

Do men and women sleep differently?

Yes. Women are twice as likely to have insomnia, compared to men. And men are at least three times as likely to have obstructive sleep apnea compared to women.

Due to hormonal changes, women are more likely to have sleep disruptions at particular stages in life, including during pregnancy and the menopausal transition.

And there are differences in sleep-wake schedules. Generally, women are more likely to be morning people and men are more likely to be night people.

How problematic is it when partners have different sleep-wake patterns?

There's a limited amount of research looking at how sleep-wake preferences relate to relationship quality. It shows that couples who are mismatched show lower rates of relationship satisfaction, more conflict and less sexual activity than couples who are in sync in their sleep-wake schedules.

It's important to know that our preferences for being morning or evening people are genetically driven. It's not a choice. And our bodies do not adjust well to major shifts in our natural biological rhythm. And yet within a couple, if there are differences in sleep-wake preferences one partner tends to go along with another partner's schedule in a way that is not conducive to that partner's sleep. What often happens is that a night owl feels obligated to try and sleep at the time that works for the partner who happens to be a morning lark. And that night owl ends up having trouble falling asleep and gets frustrated and resentful.

Is there hope for these couples?

Yes. The same research showed that mismatched pairs who have good problem-solving skills did not suffer in their relationship. In other words, if you're a mismatched pair with good problem-solving skills, you're able to find workarounds. For many couples, it's the time before falling asleep that's most critical for a healthy relationship. Even if you have different bedtimes, you can preserve that time together in bed. Ideally, it's the one place where it's just the two of you, where you can relax, be intimate or cuddle. Spend quality time in bed when you are both awake. And then when the lark is ready to go to sleep, the owl gets out of bed, goes on with their evening, and returns to bed when sleepy.

WHAT'S YOUR WORKOUT?
JEN MURPHY

Swimmer Keeps Fit With Outdoor Routine

Jim Falconer swims in the Salish Sea near his home on Lopez Island, Wash.

GRANT HINDSLEY FOR THE WALL STREET JOURNAL

This winter, there were days the temperature of the Salish Sea off Washington state hovered just above 40 degrees, but that didn't deter Jim Falconer from going for a swim. "I made myself one pandemic promise," he says. "Weather would never interfere with my workouts."

At 76, he is in the best shape of his life after embracing an Ironman-worthy workout routine last year. When the pandemic hit in March 2020, he and his wife, Birte Falconer, decamped from their home in Seattle to their vacation home on Lopez Island, Wash. "It was cold and drizzly most days, but there wasn't much to do except explore the outdoors," he says.

Mr. Falconer, who works part time in private investment, began to run the trails and bike the back roads but he missed his pre-pandemic pool routine. He had dabbled in open-water swimming in his 40s when he did triathlons but never in water so cold. After a bit of research, he invested in a full wetsuit, persuaded his wife to be his lifeguard and dove in. "I immediately thought, 'Well, I just wasted $700,' " he says. "It was so unbearable I could barely last 10 strokes."

He stuck with it and after one month of twice-a-week swims he acclimated to the chilly temperature. "I now feel exuberant when I get out of the water," he says. "It's like a runner's high." His mix of bike, run and swim workouts helped him lose 15 pounds last year. He now weighs 135 pounds, a weight his scale hasn't seen since his 40s. He has also rediscovered a childlike joy in his workouts. "I float on my back at the end of a swim and when no one is looking, I pretend I'm galloping on a horse on my runs as if I were an eight-year-old kid," he says. "And on my bike I imagine that I am Greg LeMond in the Alps."

ESSENTIAL GEAR

Blueseventy Thermal Reaction wetsuit *($665)*

C5 Gore-Tex Thermo Gloves *($95):* "I was wearing double gloves cycling all winter until I invested in these," he says.

Aqua Sphere goggles and lenses *($58):* "I'm nearsighted so I buy interchangeable lenses," he says.

Hoka One One Speedgoat sneakers *($145):* "I credit their extra cushioning for getting me back running," he says. "I practically live in them now that I don't go into the office."

The Workout

Mr. Falconer exercises five days a week and slots in two recovery days. He alternates between cycling 15 to 20 miles on a hybrid bike, running for 50 to 75 minutes and swimming one mile. Admittedly competitive, he has also learned to accept his limits to avoid injury. "I now start my runs very slow, otherwise I am short of breath early on," he says. "If I can run an hour without stopping, I am a happy guy, regardless of speed." He sprinkles his cycling workouts with "some good out of the saddle hill climbs" and tacks on casual bike rides with his wife. "It's good for our relationship," he says.

Depending on the tides and wind direction, it typically takes him around 30 minutes to swim one mile. From the beach, his wife acts as his lookout. "The other day a couple of seals were getting too close and she warned me."

Mr. Falconer supplements his workouts with an hour of exercises that might include calf raises and using stretch cords to strengthen his muscles for swimming.

He says yard work, including building fences and chopping wood, double as workouts.

HOW TO SWIM OUTDOORS

The transition from swimming in a pool lane to navigating open water takes time and new skills, says Karen Burton Reeder, a former member of the USA Swimming Open Water National Team. She likens it to the transition from running on a track to embracing mountain trails. "Both are good workouts, but one provides more adventure in a less-controlled environment," she says.

Without lane lines, navigation is more challenging, says Ms. Burton Reeder. "Learning to sight by lifting your head and looking forward helps swimmers stay on course in open water," she says. "Swimmers can also take note of the sun's position or the shoreline and use those markers to help keep track when side-breathing."

Swimmers who are new to open water should have a person accompany them or swim in an area where lifeguards are present, she says. Tying a float buoy around your waist is a safety measure to help boaters see swimmers in the water, she adds.

Ms. Burton Reeder says it is essential to ask about water conditions: "Riptides can be a concern and lifeguards are usually aware of potential problem locations."

Friendship Unbowed by Alzheimer's

Continued from page A11

Both know that the disease will progress. "I want to be there for as long as I can be," says Shaun, who served in the Air Force and now works in transportation planning for her local county.

In Boston, Abbe and Judy, now both vaccinated, can visit, sitting on Judy's couch. Conversations are shorter than they used to be. Judy tends to repeat things and is easily distracted.

They reminisce, Abbe prompting Judy, reminding her about outings with their kids to the Happy Chicken restaurant, their road trip to Judy's hometown, Toms River, N.J., and how they danced together when their husbands, who were in a rock band called the Titanic, performed classics like "My Girl" at charity events. Judy hums the song.

They have been each other's confidante, companion and support for much of the last three decades. "Now we are going through this together," Abbe says.

A year ago, they went on a women's retreat and roomed together. Judy lost her keys several times and locked Abbe out of their room at night. In a large group discussion, Judy, who was always expressive and opinionated, said little or told the same childhood stories.

"I lost my close friend that she was. I lost that Judy," says Abbe. "I have another Judy, and I just want to do my best to keep her happy."

Abbe, searching out new ways for the two to have fun together, heard about the Memory Café, started in 2014 in Boston to give people with dementia and their family and friends a place to listen to musicians, storytellers and artists. "It's good," says Judy. Before the pandemic, they would go, sit side-by-side, hold hands, and sing "Take Me out to the Ball Game."

"We're creating an environment where people can stay connected," says Beth Soltzberg, who runs the program at the Jewish Family & Children's Service. It's one of about 1,000 such venues world-wide, listed in the Memory Cafe Directory.

Abbe keeps Judy updated about friends. "I tell her gossipy things. I know I won't get a response, but I still want her involved," she says. "I still want her to be someone I can talk to."

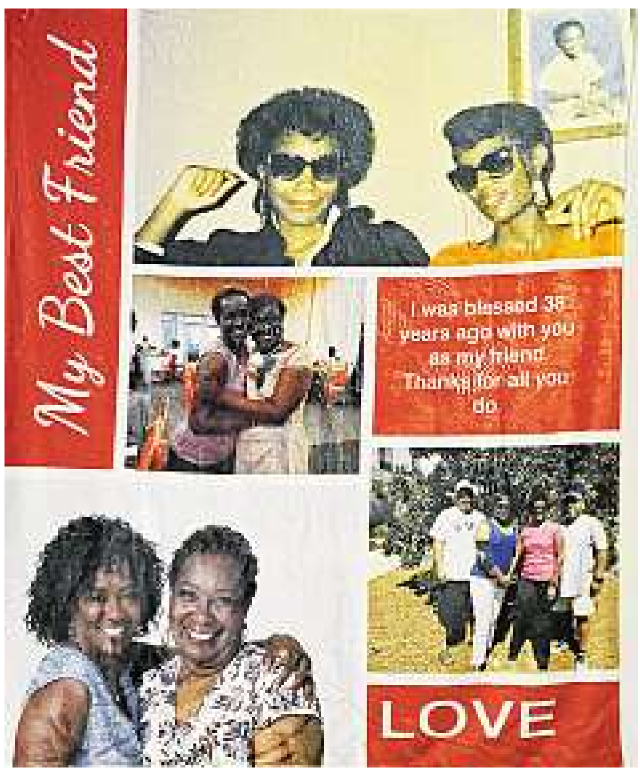
If she sees a movie or concert on TV that she thinks Judy will enjoy, she calls Judy's husband, Gil, and tells him to turn it on for her.

Gil is grateful for Abbe and a few other friends who have remained close to Judy. She no longer seems to notice that people don't come around or call, although he does: "People have disappointed me. I don't think they can deal with people so smart and vibrant going away and becoming someone different."

When the weather gets warm, Abbe and Judy will resume their walks. They look forward to going out with their husbands and eating outside.

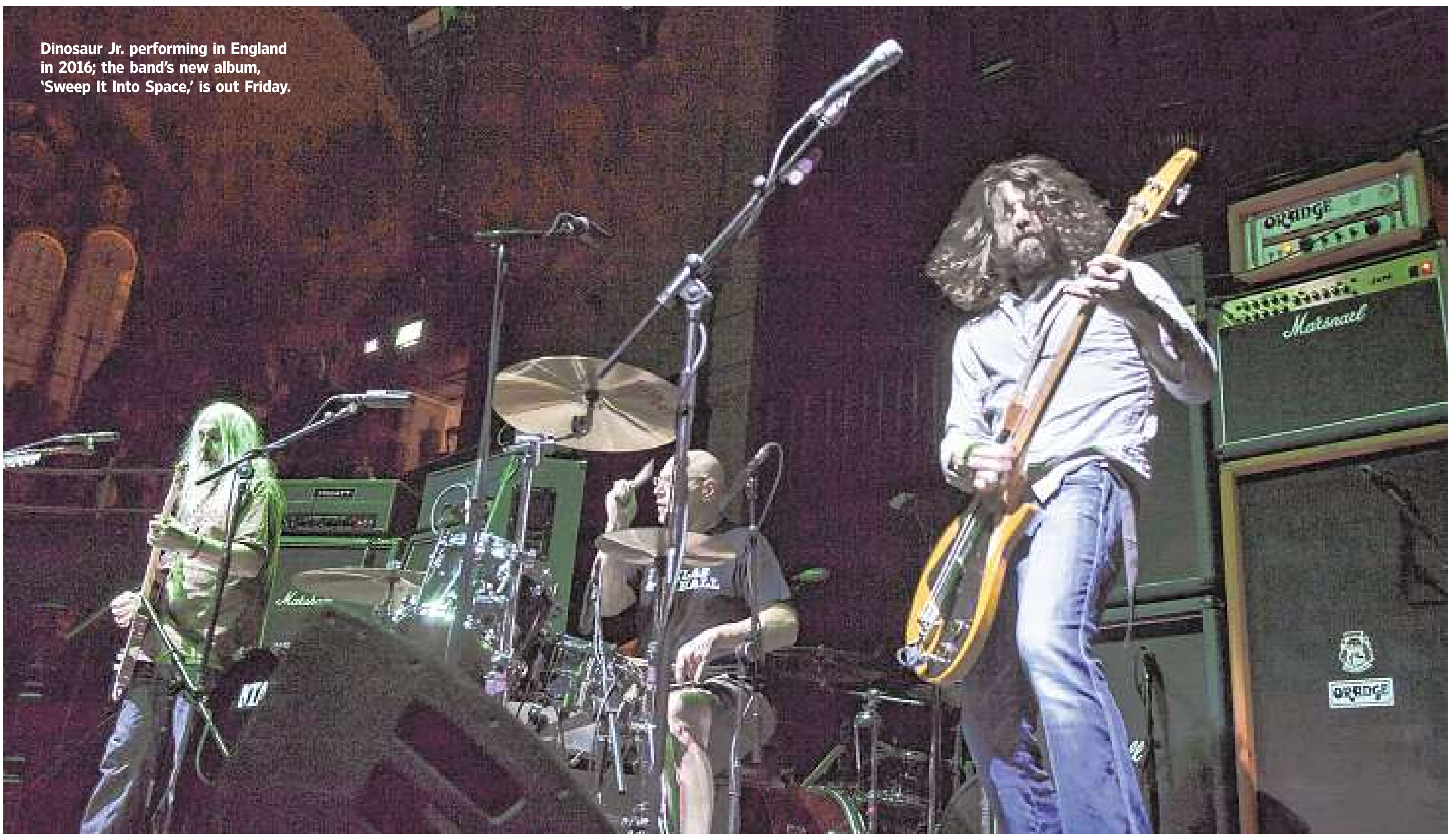
"That will be great," says Judy. "I like that."

Arthena Caston, left, and Shaun Graham at a birthday celebration in 2018. Arthena gave Shaun a blanket this past Christmas with photos ranging from college days to 2020.



FROM TOP: SHAUN GRAHAM, JOHN GRAHAM

ARTS IN REVIEW



Dinosaur Jr. performing in England in 2016; the band's new album, 'Sweep It Into Space,' is out Friday.

PETE DOHERTY/ZUMA PRESS

MUSIC REVIEW | MARK RICHARDSON

An '80s Group Keeps Roaring

Dinosaur Jr.'s new release does more than stave off extinction, maintaining its signature sound with extra poignancy

IN HIS 2001 BOOK, "Our Band Could Be Your Life," journalist Michael Azerrad tells the story of the American rock-music underground in the 1980s by focusing on the stories of 13 important groups from the decade. This was the era after the initial wave of punk rock but before the explosion of what came to be called alternative rock in the 1990s. Scanning the list of chapters now, one realizes that most of the featured outfits either split up years ago—noise-rockers Big Black, Minneapolis's Hüsker Dü—or, like the Replacements, stopped making records, forming periodically to make some money playing festivals or on reunion tours. It's difficult for any band to keep it together for 30-plus years, but it's even harder for those at the margins, living from one gig to the next.

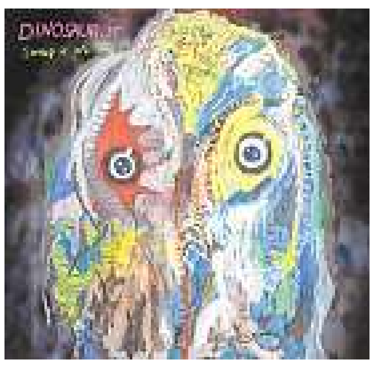
One act from Mr. Azerrad's book, however, is not only active but making some of the best records of its career: Dinosaur Jr., the Amherst, Mass., trio fronted by singer and guitarist J Mascis, returns Friday with its 12th studio LP, "Sweep It Into Space" (Jagjaguwar). The strong new collection continues the group's unlikely second act and holds its own among late-'80s classics.

By 1987, the year Dinosaur Jr. released its second album, "You're Living All Over Me," its sound was fully established, and it has varied little since. Some songs have the energy and anger of punk, some add rootsy touches, some veer toward punchy classic rock and, occasionally, heavy metal. Mr. Mascis sings with a casual drawl, sometimes coming across as if he has just woken from a deep slumber. He's an adept rhythm guitarist with a great ear for riffs, but he's best known for his exploratory solos, which reimagine a song's melody while never going on for too long. Bassist and vocalist Lou Barlow has an active and melodic approach on his instrument that owes much to post-punkers and new wavers like the Cure and Gang of Four. (Mr. Mascis fired him in 1989, and Mr. Barlow found indie rock success with projects including Sebadoh and the Folk Implosion until his return to Dinosaur Jr. prior to the 2007 comeback album "Beyond.") Drummer Patrick Murphy, always identified simply as Murph, has an economical and hard-hitting style that serves as the engine when Dinosaur Jr. cranks up the intensity.

> There's something to be said for executing perfectly within established parameters.

Mr. Mascis's melodies are clipped and simple but uncannily memorable—Kurt Cobain borrowed heavily from his style during Nirvana's run—and the catchy opener "I Ain't" is a fine example of how he arranges a few notes into a fleshed-out song that sticks with you. "I ain't good alone" is its repeating refrain, and it's an exemplary mantra for this band—both Mr. Mascis and Mr. Barlow sing of feeling alienated and cast aside, of searching for meaning and connection.

Recording for "Sweep It Into Space" started in the fall of 2019 and in early sessions, before the onset of the Covid-19 pandemic, singer-songwriter Kurt Vile served as co-producer alongside Mr. Mascis. Mr. Vile's own music owes a great deal to Dinosaur Jr. and while it's difficult to say precisely what his final contributions were, the mix of acoustic and electric guitars on some of these songs brings to mind his work. "I Ran Away" and "And Me" both have a delightful blend of chiming acoustic guitar on the strummed rhythm with a fuzzed-out lead darting between the chords. At times the record veers from its guitar-based template, as on "Take It Back," which is built around an earworm of a piano line. "Garden," one of two fine songs written and sung by Mr. Barlow, has a more sophisticated melodic sensibility than anything else here, with winding verse lines that build tension.

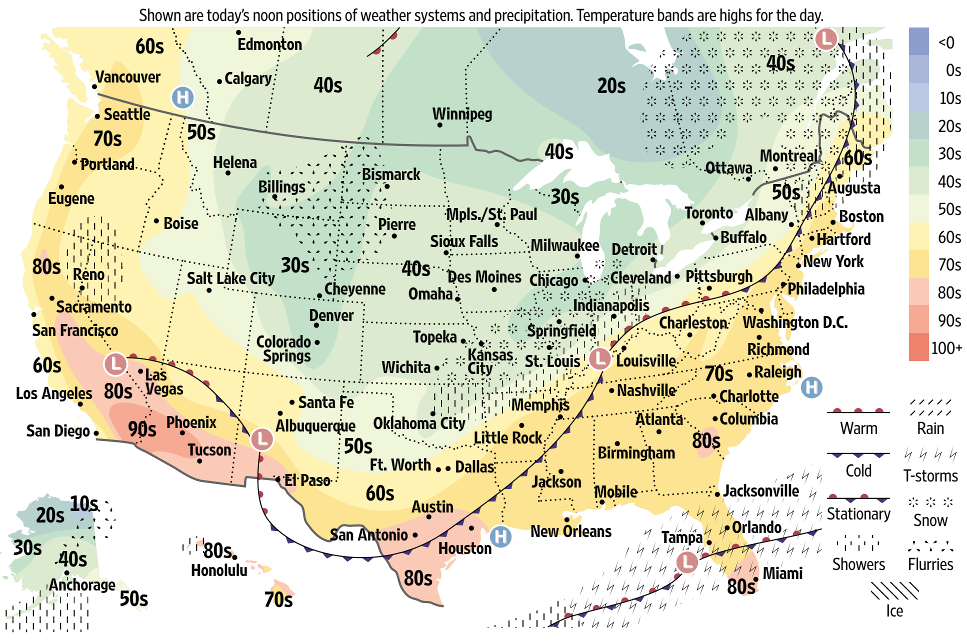


Mr. Mascis has always had side projects—solo records, film scoring, production for others. He made four Dinosaur Jr. records after Mr. Barlow's departure that were essentially solo outings, as he played nearly all the instruments. Following the return of the original lineup, it's as if Mr. Mascis has fully internalized what this group does best and sees no reason to stray from it. These guys make loud, warm and tuneful rock about trying to get by when the outside world—or your interior voice—is telling you to stop. If there's a complaint to be made, it's that Dinosaur Jr. albums tend to sound the same. But there's something to be said for executing perfectly within established parameters. They're also the kind of project where longevity lends the music extra poignancy. Well after its peers packed it in, Dinosaur Jr. is still making excellent records for new listeners and older ones who made the band part of their lives.

Mr. Richardson is the Journal's rock and pop music critic.

Weather

Shown are today's noon positions of weather systems and precipitation. Temperature bands are highs for the day.



U.S. Forecasts

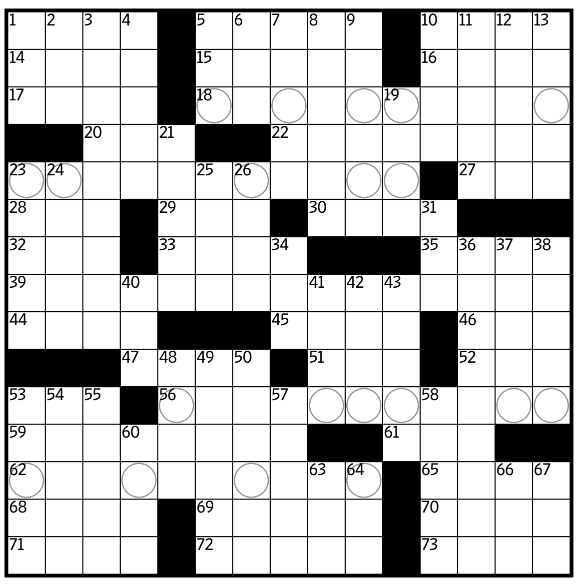
s...sunny; pc... partly cloudy; c...cloudy; sh...showers; t...t'storms; r...rain; sf...snow flurries; sn...snow; i...ice

City	Today Hi	Today Lo	Today W	Tomorrow Hi	Tomorrow Lo	Tomorrow W
Anchorage	44	34	pc	45	32	s
Atlanta	74	53	pc	62	41	s
Austin	80	42	pc	67	45	pc
Baltimore	74	54	s	67	37	t
Boise	63	39	s	66	39	s
Boston	70	49	pc	65	36	sh
Burlington	56	37	r	46	32	r
Charlotte	75	54	c	71	37	pc
Chicago	38	30	sn	45	32	sh
Cleveland	45	34	c	42	31	sn
Dallas	65	39	s	63	47	pc
Denver	39	23	pc	36	25	sf
Detroit	44	29	sh	44	27	sf
Honolulu	84	71	sh	85	71	s
Houston	80	47	s	72	47	s
Indianapolis	51	27	sh	47	30	pc
Kansas City	42	29	sn	49	28	pc
Las Vegas	87	63	s	81	61	s
Little Rock	72	34	pc	62	38	pc
Los Angeles	76	59	pc	67	58	c
Miami	89	76	c	86	69	t
Milwaukee	40	31	c	43	33	c
Minneapolis	45	28	pc	45	31	pc
Nashville	74	36	pc	56	37	c
New Orleans	76	57	pc	71	54	s
New York City	74	52	s	64	36	t
Oklahoma City	49	31	c	57	38	pc
Omaha	43	26	c	48	28	pc
Orlando	75	67	t	83	59	pc
Philadelphia	73	54	s	66	37	t
Phoenix	92	64	s	89	62	s
Pittsburgh	60	38	pc	42	29	c
Portland, Maine	63	41	pc	55	34	sh
Portland, Ore.	75	47	pc	78	47	pc
Sacramento	77	50	pc	85	48	s
St. Louis	43	33	c	54	33	pc
Salt Lake City	57	40	s	57	39	pc
San Francisco	62	50	c	64	50	c
Santa Fe	63	32	s	64	35	pc
Seattle	72	48	s	73	49	pc
Sioux Falls	46	25	c	47	27	pc
Wash., D.C.	74	57	s	65	38	t

International

City	Today Hi	Today Lo	Today W	Tomorrow Hi	Tomorrow Lo	Tomorrow W
Amsterdam	61	41	pc	52	39	sh
Athens	68	52	pc	69	53	pc
Baghdad	106	76	pc	104	76	pc
Bangkok	94	80	t	96	81	pc
Beijing	79	52	pc	62	50	c
Berlin	62	41	sh	61	36	sh
Brussels	61	43	pc	56	35	sh
Buenos Aires	75	66	s	76	67	pc
Dubai	91	74	s	96	78	s
Dublin	53	38	r	52	37	pc
Edinburgh	55	32	c	54	29	pc
Frankfurt	63	43	sh	63	36	sh
Geneva	62	42	s	59	46	sh
Havana	89	72	s	89	69	pc
Hong Kong	79	72	s	80	73	s
Istanbul	59	48	s	62	49	s
Jakarta	90	76	sh	91	75	s
Jerusalem	83	53	pc	73	52	c
Johannesburg	70	50	s	71	54	pc
London	63	45	pc	55	36	pc
Madrid	68	47	pc	64	51	sh
Manila	92	83	pc	92	83	c
Melbourne	64	49	sh	58	51	pc
Mexico City	81	54	s	79	56	s
Milan	67	46	pc	63	46	sh
Moscow	52	40	r	47	40	r
Mumbai	92	83	pc	93	82	pc
Paris	63	44	pc	65	40	c
Rio de Janeiro	79	72	pc	78	71	sh
Riyadh	98	75	s	100	75	pc
Rome	62	42	pc	63	48	pc
San Juan	88	75	s	87	75	pc
Seoul	69	46	c	77	56	pc
Shanghai	70	60	c	73	64	pc
Singapore	90	78	t	89	78	pc
Sydney	75	57	pc	70	53	s
Taipei City	83	70	s	84	73	s
Tokyo	70	58	s	71	57	s
Toronto	47	31	c	39	30	sn
Vancouver	62	44	s	61	45	pc
Warsaw	59	43	c	59	42	c
Zurich	60	36	sh	63	43	sh

The WSJ Daily Crossword | Edited by Mike Shenk



PIECEMEAL | By Carl Larson

Across

1 Ty with a .366 career batting average
5 Lawn sign verb
10 Bear whose porridge was too cold
14 Distinctive atmosphere
15 Grinding tooth
16 Autumn birthstone
17 Civil uprising
18 Double
20 Xbox 360 competitor
22 Really small
23 Unproven theories presented as fact
27 German equivalent of the French "le"
28 Had supper
29 Small batteries
30 Like flags and quilts
32 Broker's recommendation
33 Supporter
35 "I'll treat!"
39 Morning display, and a hint to the circled letters
44 "No ifs, ___ or buts"
45 Cray-cray
46 Twitter feed annoyances
47 Strong cotton variety
51 Deface
52 Course need
53 Admit (to)
56 Lakeside dock offering
59 Short-term lease length
61 Knight's address
62 1997 Tommy Lee Jones/Will Smith movie
65 Teases
68 Declares off-limits
69 Eagle's nest
70 Single-serving coffee pod
71 Soccer game cheers
72 Three-time All-Star fielder Sizemore
73 Its products often come with Allen wrenches

Down

1 Elevator compartment
2 French affirmative
3 Like the girl in a Van Morrison song
4 Dyeing art
5 CPR specialist
6 Underhanded
7 Skip the fancy ceremony
8 Berth places
9 Electronic music genre
10 Tavern frequented by Homer Simpson
11 Rose garden pest
12 Inca crop
13 Change
19 Hearty dinner
21 Chris with the 1989 song "Wicked Game"
23 "Star Wars" crime lord
24 Reversal on the road
25 Shin's neighbor
26 Cuba, por ejemplo
31 Neither follower
34 Fashion monogram
36 Bit of cleverness
37 Title role for Tyler Perry
38 Auto introduced in 1957
40 Egyptian reptile
41 Weighty work
42 Distinctive Harry Potter feature
43 Facials open them
48 Pic to click
49 Item also called a murse
50 Stag feature
53 Burger, fries and drink option
54 NBA great Shaquille
55 Bias-cut pasta
57 Catherine of "Schitt's Creek"
58 Former U.N. ambassador Haley
60 Whiff
63 Spanish hero El ___
64 Tab, for one
66 Expected
67 Place to be pampered

Previous Puzzle's Solution

▶ Solve this puzzle online and discuss it at **WSJ.com/Puzzles.**

SPORTS

By Joshua Robinson

Super League Moves to Head Off Bans

The shocking announcement from 12 European clubs has left soccer's authorities scrambling

Manchester United, above, along with Real Madrid and Barcelona, pictured right, are part of a group seeking to form a Super League.

European soccer had been hearing the words "super league" as a veiled threat for over 20 years before the battle broke out in earnest on Monday.

The idea of a closed league made up exclusively of the game's elite, playing marquee matches every week, had been around since at least the 1990s. Powerful Italian clubs cooked it up first, and Manchester United once made a failed push. Real Madrid took over as agitator in chief in the 2000s.

Yet until Sunday night, no organization had made a formal break with UEFA, European soccer's governing body. Then on Monday the breakaway Super League led by 12 of the most powerful clubs in the game doubled down on its announcement by taking legal steps to protect its teams from being banned by the game's established, but shell-shocked, authorities.

UEFA had already threatened to suspend teams participating in the Super League, which hopes to begin play in 2022, from its competitions such as the Champions League. On Monday, it amplified the threat by saying that any player participating in the Super League would be excluded from the World Cup and the European Championships.

The battle, which will define the shape of soccer's biggest stage for decades, is the result of years of tension between the organizers of the most lucrative tournaments and some of the richest teams in sports aiming to increase their share of the earnings.

"This idea is a spit in the face of all football lovers," UEFA president Aleksander Ceferin said of the Super League proposal, which he called "a closed shop run by a greedy, select few."

The wealthy clubs—including six in the English Premier League and top teams in Spain and Italy— announced late Sunday that they intend to form a new pan-European competition for themselves and a few other teams. The move would further enrich those clubs and badly undercut the lucrative Champions League competition that is controlled by UEFA.

In a letter received by UEFA and FIFA, soccer's world governing body, an unnamed representative of the Super League said that it had taken legal "protective steps" in response to threats that its clubs would soon be banned from domestic and international competition such as the Premier League and Champions League. The group did not specify where it had taken those steps.

"For this reason, SLCo has filed a motion before the relevant Court in order to ensure the seamless establishment and operation of the competition in accordance with applicable laws," the European Super League Company wrote in the letter, which was obtained by The Wall Street Journal.

Soccer authorities on Monday fumed at the Super League announcement and weighed punitive sanctions against the 12 clubs, which could include immediate suspension from domestic leagues and major tournaments. Ceferin added that he was hoping UEFA's legal team could green-light a ban "as soon as possible."

Under the Super League proposal, those clubs would continue to play in their domestic leagues but leave behind the prestigious, pan-European Champions League in favor of a new lavishly paid competition that would begin play in 2022. It would give the richest clubs more guaranteed matches against each other to drive broadcasting revenue.

> Under the proposal, the Super League would begin play in 2022.

The ultimate vision is for a 20-team competition with 15 permanent members and five more qualifying through merit—as opposed to the current Champions League model of 32 teams all qualifying based on the previous season's results. (UEFA also unveiled an expanded 36-team format on Monday with more guaranteed games for clubs starting in 2024.)

The 12 Super League clubs said they had secured over $4 billion in funding to share between them as a way to bounce back from the financial damage of the global pandemic. They have also promised to expand "solidarity payments" to smaller clubs in order to keep developing the game.

But so far, they have found few supporters outside their alliance. Opposition came swiftly from U.K. Prime Minister Boris Johnson, French President Emmanuel Macron, domestic rivals around Europe, and soccer fans around the world.

"The newly proposed top European competition is nothing more than a selfish, egotistical proposal designed to further enrich the already super rich," Spain's La Liga said on Monday.

Spanish club Real Betis published a new version of La Liga standings on its website, excluding the three Super League teams, Real Madrid, Barcelona and Atletico Madrid. Betis is now in third place. Not that threats of punishment have slowed down Real.

"We are going to help football at all levels to take its rightful place in the world," Real Madrid president Florentino Perez said of what is already the world's most popular sport. "Football is the only global sport in the world with more than 4 billion fans and our responsibility as big clubs is to respond to the desire of the fans."

At the moment, they can't even respond to the wishes of all of Europe's super-clubs. French powerhouse Paris Saint-Germain is a notable absentee from the group of 12, while Germany's Bayern Munich and Borussia Dortmund also rejected the proposal. Dortmund CEO Hans-Joachim Watzke added on Monday that the two Bundesliga clubs had taken "a clear stance in rejecting plans for the establishment of a Super League."

Should UEFA or FIFA bans for the Super League teams come now, they could effectively stop the current season in its tracks, just as leagues prepare to crown champions across Europe.

But soccer's governing bodies are already concerned that any ban or injunction wouldn't find much to build from in recent European law. In 2017, European Commission regulators sided with a pair of Dutch speedskaters when they sought to compete in highly paid events that weren't sanctioned by the sport's governing body, the International Skating Union.

That decision was upheld late last year by the Luxembourg-based EU General Court, which called the ISU's rules "contrary to EU competition law."

"The ISU is required to ensure...that third-party organisers of speedskating competitions are not unduly deprived of access to the relevant market," the court added.

The other example authorities will look at is EuroLeague basketball, an organization that formed through a similar breakaway in 2000 to bring together the most successful teams on the continent. A majority of them hold long-term contracts with organizers, meaning they can never be relegated from the league and are guaranteed a hefty share of the television rights payments.

The EuroLeague ultimately came to an agreement with basketball's world governing body, FIBA, but only because FIBA was left with little choice against a bloc of the sport's most popular clubs. In 2015, the body renewed its threats to suspend clubs and the national teams of countries associated with the EuroLeague. FIBA ultimately backed down.

Ceferin, the UEFA president and a former criminal lawyer, was more optimistic about his chances of blocking the breakaway.

"If anything goes against all the competition laws in the world, it's the Super League," he said. "Maybe we were naïve. We did not know that we had some snakes close to us."

JASON GAY

The Knicks Aren't Bad. This Is Huge News.

Knicks forward Julius Randle has blossomed into an All-Star this season.

We need to talk about the Knicks.

You: *Oof. Do we really? Isn't there anything else to talk about? What about a muddy bike race in Belgium? There must be one of those you could prattle on about.*

No, I really think we need to do this. The New York Knicks.

You: *Aw, come on! What about that Super-Duper Soccer League, the breakaway club of fancy teams that's got everyone riled up?*

Yeah, that's a big deal, the Super League, and soccer fans are flipping out. But I still think we should talk about the Knicks.

You: *Fine. Why?*

Because they're pretty good.

You: *"Pretty good?" That's all it takes to get into the newspaper these days? "Pretty good?"*

You have to understand: for the Knicks, a mournful experimental theater outfit based in Madison Square Garden, achieving "pretty good" is seismic news. It's worthy of a parade. This story deserves to be splashed atop the Journal's front page, and I'm personally insulted that it's not.

After all, the Knicks are a once-great franchise which acquired, around the century's turn, a halting allergy to success. They have not finished with a winning record in eight seasons. They have had only two winning seasons since going 48-34 in 2000-01. Two! The Knicks finish in the bottom murk of the standings so often, it's effectively a residency. In fact, if another club slides beneath New York to finish last in the NBA's Atlantic Division, I believe they have to pay the Knicks a substantial royalty.

As someone who lives in New York, I don't find any of this amusing. OK, that's a lie. It's a little amusing. The Knicks have been a hard-to-love operation, coasting on the distant past, presuming geography alone makes them relevant.

But I also feel bad. I am friends with many, many longtime Knicks fans, good people with vivid recollections of those wonderfully combative teams in the 1990s—a few of them can remember the championship glory of the early 1970s—and all of them talk about the franchise like it is a family member who stole their car and dog and never came back.

Take a Mets baseball fan, and strip away the handful of positive recent memories. That's a Knicks fan.

Until now.

As I said, they're pretty good. Nothing more, but it's something. At the moment, New York is 31-27, entering Monday's play, sitting sixth in the Eastern Conference standings, a game and a half in front of 2020 finalist Miami, and right in the mix for playoff qualification. On Sunday, the Knicks defeated New Orleans, giving them six wins in a row for the first time since 1023. (OK, it's the first time since 2014, but it feels like 1023.)

How's it happening? Not with superstars. Forever, the Knicks formula has been to desperately covet the best players in the game, get ignored by them in their free agency prime, and then acquire them—late in their careers, often after injury.

These 2020-21 Knicks, by contrast, are a team short on basketball celebrities. They are led by Julius Randle, a 26-year-old power forward on his third team who's blossomed into a bona fide All-Star (23.5 points and 10.5 rebounds per game). The rest of the roster is a mix of peripatetic veterans (Nerlens Noel, Alec Burks. Reggie Bullock, long-ago league MVP Derrick Rose) and young talent (RJ Barrett, Immanuel Quickley) who habitually outwork starrier clubs, like the Zion Williamson-led Pelicans on Sunday.

Behind the revival is a methodical team president Leon Rose, and another undervalued asset, head coach Tom Thibodeau. Thibodeau arrived in the offseason with a reputation for getting quirky rosters to play defense and over-perform, and that's more or less what's happened here. The Knicks rank third in the league in defensive efficiency—that's the number of points allowed per 100 possessions—and are atop the league in opposing field goal percentage, which means opposing teams shoot worse against the Knicks than any other NBA club.

Do such things, and wins follow. In an off-balance, pandemic-disjointed season, the Knicks have played hard and changed the mood. When Williamson gushed about the Garden after losing Sunday—"I love playing here," he said—the news was met with curiosity but also restraint.

Throw all future hope behind an electric player who *might* come here one day? That's what the Knicks *used* to do.

What's jarring is the contrast to the team over the bridge, the Brooklyn Nets, who have assembled a team of superstars (Kevin Durant, Kyrie Irving, James Harden) straight out of an old Knicks fever dream, and, on the rare occasion they are healthy enough to play with each other, look like one of the greatest basketball teams ever created. Even if they don't get everyone healthy, Brooklyn is the vastly better team in town, and a legitimate contender for the NBA championship.

And yet, the Nets, for all their talent, still aren't soulfully wired to the city like the Knicks. Maybe the dynamic will shift if Brooklyn wins a title. But this remains a Knicks town, evidenced by rowdy thrall for an overachieving club.

New York is a proud city trying to recover after a difficult year. There are headwinds everywhere, and it will be a long road back to full strength. But when you step onto the concrete on a spring day, you can see the blossoming trees, the crowded outdoor cafes, and parks full of runners, strollers and dogs, and it's possible to feel like much better days are around the corner.

The Knicks are pretty good. It all feels possible.

FROM TOP: STU FORSTER/REUTERS; ÁNGEL RIVERO/UE/ZUMA PRESS; ELSA/PRESS POOL

OPINION

Joe Biden, 'Union Guy'

MAIN STREET
By William McGurn

"I'm a union guy," says Joe Biden. He's been saying this since he kicked off his presidential campaign at a Teamsters hall in Pittsburgh two years ago, and he said it again at the White House recently when he launched his American Jobs Plan.

So when a union sought to organize the 5,876 workers at an Amazon warehouse in Bessemer, Ala., it came as no surprise that Mr. Biden lent his imprimatur to the effort. What did come as a surprise was the outcome. The employees ended up voting against the union by a margin of more than 2 to 1—a blow to Big Labor, a shock to the press, and a personal embarrassment for the president, who plainly thought it would go the other way.

Though Labor Secretary Marty Walsh shrugged off the defeat, it isn't a hopeful sign for the Biden administration's efforts to reverse the slide in private-sector union membership from a peak of 34.8% in 1954 to 6.3% today. This American Jobs Plan is the latest in a White House agenda whose scope and spending has the media chattering about a "transformative presidency" on the order of FDR. The president loves to talk about a gleaming new economy full of green, unionized and well-paid jobs, but if Mr. Biden really does succeed in transforming the American economy, it will be with an industrial policy that takes us back to the 1970s.

For Mr. Biden shares the old prevailing assumption that labor and capital are enemies. In this dynamic, a union is the only hope for better pay and job security. To be fair, it might have looked that way for much of American history, with big strikes that often turned ugly on both sides a regular feature of American life.

Much of the press implicitly accepts this template too. Maybe that's why so many stories from Alabama presented Amazon's warehouse as if it were a sweatshop out of "Norma Rae," the 1979 union drama that won Sally Field an Oscar. Except that in the real-life sequel, rather than looking to a union as the key to their job security and well being, the Amazon workers weighed the risks and benefits and said no thanks.

At least they had the option. Though the president talks about ensuring workers have a "free and fair choice," his plan includes the Protecting the Right to Organize Act. Among other things this would override the right-to-work laws of 27 states, which protect workers who aren't in a union from having to pay dues as a condition of their jobs. Worse, Mr. Biden's plan would enshrine "card check," in which unions that successfully challenge an election can bypass a secret ballot by collecting signed cards instead—leaving workers far more vulnerable to pressure.

Meanwhile, workers are making their own calculations. At least in the private sector, employees understand that their paychecks and benefits are linked to the success of the business. Workers at Amazon's Bessemer warehouse no doubt appreciated that if the union's pay demands and work rules ended up making them uncompetitive, the company could easily move its operation elsewhere.

The president's labor agenda is the same one he brought to Washington in 1973.

As for Mr. Biden, it is as if nothing has changed since 1973, when he first arrived in Washington. Though there are abusive employers, surely the larger message of these past few decades is that business are more aware of the value of their workforces. Rare is the business leader who won't tell you his greatest challenge is attracting and retaining good employees. As those Amazon workers appreciated, the interests of workers have changed along with changes in the economy.

For example, when yours truly worked in Hong Kong in the 1990s, a booming economy had driven unemployment in the then-British colony down to nearly 2%. Because Hong Kong workers weren't tied to their jobs for healthcare and retirement, they were much freer to leave one job for another. An employer told me it wasn't uncommon for workers to leave for as little as an extra 10 Hong Kong dollars a week—roughly US$1.25.

The point is, no labor law can offer a better incentive for employers to treat employees well than a worker's ability to leave for greener pastures. Even better, it doesn't depend on the benevolence of business, the intervention of government or the agitation of a union.

In today's world, workers have only one real guarantee of job security and decent treatment: a growing, dynamic economy that forces employers to compete for labor. Call it the security of opportunity. For it's the security that comes from workers' knowing they can tell the boss, "Take your job and shove it"—something possible only when a worker knows there's another job waiting out there with equal or greater pay.

Write to mcgurn@wsj.com.

Tokyo Flexes Its Talons

GLOBAL VIEW
By Walter Russell Mead

Japanese Prime Minister Yoshihide Suga's visit to the White House is being hailed in both countries as a major success. On the American side, officials rejoiced that Mr. Suga aligned Japan with U.S. talking points in Asia. As the prime minister said at a joint press conference, America and Japan both "oppose any attempt to change the status quo by force or coercion in the East and South China seas and intimidation of others in the region." References to the Taiwan Straits and the situation in Xinjiang added to the impression that Tokyo is becoming more forthright in supporting a tougher U.S. line.

On the Japanese side, there was also much to be happy about. President Biden chose Mr. Suga for his first Oval Office meeting with a foreign leader, an unmistakable sign of the priority the Biden administration attaches to the relationship. Better still, American officials didn't press the prime minister for a list of specific commitments that might have been difficult to sell at home—or that would ignite a firestorm in the volatile relationship between Beijing and Tokyo.

Mr. Suga hedged comments on Taiwan and Xinjiang carefully. On Taiwan, he said at the joint press conference that the summit "reaffirmed" the U.S.-Japan consensus. On Xinjiang he said that he had "explained Japan's position and initiatives" to the president. Neither the press conference nor the joint statement Messrs. Biden and Suga issued after their discussion used the word "genocide."

While Washington and Tokyo broadly agree about the risks of China's behavior, Japan still prefers to stay a few steps behind America. Geography, economics and history all connect Japan to China. While officials in Tokyo fully understand that China's growing military might and territorial assertiveness require a robust Japanese response, neither the country's business community nor the public wants to be too confrontational with a neighboring superpower. On military and human rights issues alike, the Japanese consensus is shifting, but Tokyo's postwar tradition of cautious diplomacy won't change overnight.

And then there is the American question. The oscillations in U.S. policy under both President Obama and President Trump left Japan with a severe case of whiplash. Mr. Obama's flaccid response to China's construction of artificial islands in the South China Sea horrified Prime Minister Shinzo Abe's government. Mr. Obama made the Trans-Pacific Partnership the centerpiece of his Asia policy, but Mr. Trump campaigned against it before rejecting the deal in office.

Tokyo cannot be 100% sure where the Biden administration's China policy is going. While Mr. Suga was in Washington, John Kerry was in China pushing for a grand bargain on climate. The Biden administration's rhetoric on issues ranging from Taiwan to Xinjiang is hawkish, but Mr. Biden has proposed a small cut to the defense budget, adjusted for inflation. Under the circumstances, Mr. Suga's most prudent course was to avoid offending anyone in Washington without unduly shocking China—and this is what he seems to have accomplished.

Suga was hawkish on China, but the soft-power U.S.-Japan alliance needs work.

The alliance with Japan is the single most important international relationship America has. Without Japan's economic weight, technological capabilities and geographical position, the U.S. cannot build an effective coalition to balance China. But without strong and stable American support, Japan can't last as an independent great power in China's front yard.

These facts drive the U.S. and Japan together, but alliances between democracies cannot live by realpolitik alone. Mr. Suga spoke in Washington about the universal values of freedom, democracy, human rights and the rule of law that the two countries share. So far, so good. But the soft power of the alliance—the human contacts, the mutual understanding between societies, the sense of common destiny—is significantly weaker than the bonds that tie America to other allies like the U.K. and Israel.

In the 2018-19 school year, fewer than 9,000 U.S. students were studying in Japan. In 2019 only about 7,000 U.S. students registered to take the Japanese-Language Proficiency Test—of hundreds of thousands of registrants world-wide. Compared with Japan, China sent about twice as many students per capita to study in the U.S. pre-Covid. Among students from 29 Asian countries tested for English-language proficiency, Japanese students ranked 27th, ahead of only Laos and Tajikistan.

Few American academics, think tankers and journalists have a deep knowledge of Japan. There are only a rare few U.S. citizens like Japan Society President Joshua Walker—who grew up in Japan the child of missionaries, and has both private sector and government experience in America.

For the foreseeable future, the U.S.-Japan alliance is likely to remain the cornerstone of American foreign policy. Building the social and cultural ties that can support that relationship is an urgent task for both countries.

ExxonMobil's Plan to Capture Carbon

By Darren W. Woods And Joe Blommaert

As President Biden convenes the virtual Leaders Summit on Climate later this month, America has a unique opportunity to spearhead a breakthrough approach to reducing carbon emissions.

About 80% of the world's energy-related carbon emissions come from three critical sectors of the economy: power generation, commercial transportation and industrial manufacturing. Meaningful progress toward achieving the world's climate goals requires emission reductions from these sectors.

One of the proven technologies available that could play a major role is carbon capture and storage, or CCS, the process of sequestering industrial emissions and safely storing them permanently underground. CCS also promises the potential to reduce carbon emissions significantly at a cost competitive to other solutions, especially for the manufacturing sector.

For the past three years at ExxonMobil we have been studying the concept of creating multiuser CCS "hubs" in industrial areas. They would be located near safe geologic storage sites. A CCS Innovation Zone would bring together government incentives and private-sector investment.

How to create new jobs by the thousands while ameliorating climate change.

The heavy-industry area of the Houston Ship Channel on the Gulf Coast of Texas is an ideal location to apply this concept. This area houses one of the country's largest sources of industrial emissions and is close to the Gulf of Mexico's vast subsurface storage potential, where the CO2 would be permanently stored in the pore space of the rocks, thousands of feet below the seafloor.

Based on Energy Department numbers, we estimate there is adequate capacity along the Gulf Coast to store around 500 billion metric tons of CO2. We further estimate that the Houston concept has the potential to store up to 100 million metric tons of carbon a year by 2040. The project could help the city of Houston achieve its goal of becoming carbon-neutral by 2050.

The Houston CCS Innovation Zone concept would require the "whole of government" approach to the climate challenge that President Biden has championed. Based on our experience with projects of this scale, we estimate the approach could generate tens of thousands of new jobs needed to make and install the equipment to capture the CO2 and transport it via a pipeline for storage. Such a project would also protect thousands of existing jobs in industries seeking to reduce emissions. In short, large-scale CCS would reduce emissions while protecting the economy.

Government's role would be to put in place a stable regulatory and legal environment and enable CCS to receive private investment and government incentives directly. Establishing a price on carbon would also provide the market certainty required to enable businesses to generate returns on carbon-reducing investments.

The lessons and knowledge gained in Houston could be applied to other parts of the country with similar industrial concentrations, including the Midwest and elsewhere along the Gulf Coast.

As the world's leader in CCS, with about 40% of the total anthropogenic CO2 captured to date and multiple CCS projects under way around the world, ExxonMobil is eager to play our part to advance this promising concept. CCS would bring us closer to the lower-carbon future we all seek.

Mr. Woods is ExxonMobil's chairman and CEO. Mr. Blommaert is president of ExxonMobil Low Carbon Solutions.

BOOKSHELF | By James Rosen

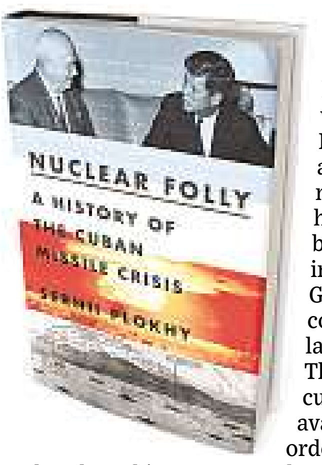
The Big Red Gamble

Nuclear Folly

By Serhii Plokhy
(Norton, 444 pages, $35)

On Oct. 23, 1962, a delegation of prominent Romanians arrived at the Kremlin to meet Soviet Premier Nikita Khrushchev. Their host was foul of mood. Boorish and suspicious by nature, the strongman had spent a sleepless night deliberating with the Presidium over what to do in the escalating crisis for which Khrushchev himself was responsible: his secret installation, across that summer, of nuclear-weapons systems and some 40,000 Soviet troops in Cuba.

Aerial reconnaissance revealed the installations to the Americans on Oct. 14, and President Kennedy, in a televised address eight days later, announced a naval quarantine to block delivery of additional weapons to the island. All sides—with the exception, perhaps, of Fidel Castro, who relished Havana's role at the center of world events—feared that any display of aggressiveness, or miscalculation, could trigger an apocalyptic nuclear exchange.



At the reception in their honor, the Romanians watched Soviet Defense Minister Marshal Malinovsky approach his boss with bad news: The U.S. Navy was on high alert, readying the blockade. "Khrushchev flew into a rage," Gheorghe Gheorghiu-Dej, a Romanian communist leader, reported later to Romanian intelligence. The premier was "yelling, cursing and issuing an avalanche of contradictory orders." He "threatened to 'nuke' the White House, and cursed loudly every time anyone pronounced the words America or American."

The vast literature on the Cuban Missile Crisis has made it a case study across scholarly disciplines: intelligence analysis, nuclear brinkmanship, game theory, organizational psychology. To this literature, the Oct. 23 Kremlin outburst—which appears midway through Serhii Plokhy's superb "Nuclear Folly: A History of the Cuban Missile Crisis"—would appear to mark a significant contribution: an eyewitness account of one of the saga's two key decision makers exhibiting not only uncontrolled anger but delirium. Khrushchev's threat to "nuke" the White House, his "avalanche of contradictory orders," constitute the most troubling behavior we could imagine in a leader "managing" such a crisis.

And indeed, a review of some acclaimed previous studies, such as Michael Beschloss's "The Crisis Years" (1991), Michael Dobbs's "One Minute to Midnight" (2008) and the revised edition of Graham T. Allison's 1971 political-science classic "Essence of Decision" (1999, co-authored by Philip Zelikow), finds none of them mentioning this shocking scene—nor the one Gheorghiu-Dej witnessed at breakfast the next day. This time the bad news came from the KGB's Vladimir Semichastny: a cable reporting that Kennedy had canceled a trip to Brazil to oversee the quarantine. Mr. Plokhy, a professor of history at Harvard, provides this account, drawing on Gheorghiu-Dej's report: "Khrushchev's face grew red as he read the cable. He started 'cursing like a bargeman,' threw the paper on the floor, and stamped on it with his heel. 'That's how I'm going to crush that viper,' he shouted, also calling Kennedy a 'millionaire's whore.'"

Another arresting passage unmentioned in the earlier books relates the confession of Vasilii Kuznetsov, the Soviet deputy foreign minister: "From the very beginning of the crisis, fear of the possible course of further developments arose within the Soviet leadership and increased with every passing hour."

In a rage, Khrushchev started yelling and cursing and threatened to 'nuke' the White House, calling JFK a 'millionaire's whore.'

Mr. Plokhy's endnotes frequently cite Russian and Ukrainian sources: declassified KGB documents, memoirs of retired Soviet apparatchiks, studies by Russian scholars, much of it new to English readers. The range of such references conveys the scope of the author's research and explains how he could add so much to the documentary record of a subject covered so voluminously. "Nuclear Folly" is an immense scholarly achievement, engrossing and terrifying, surely one of the most important books ever written about the Cuban Missile Crisis and 20th-century international relations.

The central conclusion here—that the U.S. and U.S.S.R., hobbled by poor information, made decisions in the dark—is amply illustrated, if not new. Other arguments appear less persuasive. Mr. Plokhy posits a re-examination of October 1962 as useful in redressing today's nuclear proliferation—an attempt at latter-day relevance that this book, a landmark in its field of study, didn't need. Relatedly, he laments the Trump administration's withdrawal from the Intermediate-Range Nuclear Forces Treaty, signed by President Reagan and Soviet leader Mikhail Gorbachev in 1987. But aside from a few broad policy prescriptions, Mr. Plokhy provides no insight into how the U.S. policy makers of 2019 should have handled an arms-control agreement negotiated with an entity that no longer exists, an accord that was no longer being honored by the Russian Federation.

Though never stated explicitly, the great lesson of "Nuclear Folly" is that authoritarianism corrupts decision making. Mr. Plokhy recounts how Soviet Air Forces commander Sergei Biriuzov, dispatched to Havana in advance, falsely assured Khrushchev that the Cuban terrain would conceal the missiles from U-2 overflights. Biriuzov knew better but "probably felt that he had no choice," Mr. Plokhy writes. This absence of candor compounded the Soviet leader's innate deficiencies. His interaction with the Presidium "was nothing like the meetings of ExCom," the author notes, referring to the unit of the National Security Council that Kennedy convened for crisis deliberations. With few exceptions, Soviet officials were expected "to approve and endorse Khrushchev's decisions or to remain silent."

The most forceful argument in "Nuclear Folly," then, isn't for a particular approach to non-proliferation but rather for the tactical advantage enjoyed, in times of crisis and beyond, by liberal democracies. Only such governments allow the freedom of thought necessary for its leaders to fashion sound assessments when they discover a strategic adversary, armed with a hostile ideology and weapons of mass destruction, is on the move.

Mr. Rosen is a Washington correspondent for the Sinclair Broadcast Group and the author of "Cheney One on One."

OPINION

REVIEW & OUTLOOK

The Battle Over an Alzheimer's Treatment

Biogen's promising drug is caught in the FDA's bureaucratic limbo.

The Food and Drug Administration is under scrutiny for giving too much weight to risks over benefits in recommending to pause Johnson & Johnson's Covid-19 vaccine. This tradeoff is also at the heart of another heated debate over whether the FDA should approve the first drug shown to slow the progression in Alzheimer's disease.

The FDA has long been plagued by a culture of bureaucratic over-caution. But during the late Obama and Trump presidencies it showed more flexibility and accelerated new medicines. Doctors who favor more government control as under Europe's health systems, however, say the agency is approving too many high-priced drugs. Biogen's Alzheimer's drug aducanumab is now ensnared in this fight.

* * *

More than six million Americans suffer from Alzheimer's, and the number is expected to soar as the U.S. population ages. The disease's tragic symptoms are well-known—progressive memory loss, abnormal behavior, and inability to perform everyday tasks.

Brain scans show the buildup of amyloid plaque and tangles of tau proteins, which typically begins decades before patients show cognitive problems. Hypertension, obesity, diabetes, smoking, poor sleep and the APOE4 gene variant put people at higher risk. But scientists have yet to identify Alzheimer's cause.

This has frustrated the search for treatments, especially since Alzheimer's usually is diagnosed after irreversible brain loss. Some medicines can temporarily improve memory, attention or mood, but none slow the neurological and cognitive degeneration.

Some 10 to 20 clinical trials on Alzheimer's drugs have initiated each year since 2008. Aducanumab, a monoclonal antibody drug, is the first disease-modifying medicine to show efficacy. It works by targeting specific molecules on the amyloid to clear plaque. While more than 25 trials on medicines employing this strategy have ended in failure, Biogen has learned from their mistakes.

The company used PET scans to screen trial participants to ensure they had Alzheimer's—rather than other forms of dementia—and were not in advanced stages of the disease. This filtered out patients who wouldn't benefit from the drug.

A late-stage trial showed a high-dose treatment removed 71% of the plaque build-up after 18 months and also had a significant impact on disease progression. After 78 weeks of treatment, patients receiving a high dose were 84% less of a burden to care givers than were the controls. They showed a 91% smaller decline in the ability to prepare a meal and 39% smaller reduction in capacity to discuss current events.

In short, patients treated with high doses of Biogen's drug were much more independent and capable. Yet because of the long history of failed Alzheimer's medicines, skeptics say Biogen's promising result is a false positive. They cite a second concurrent late-stage trial by Biogen that indicated aducanumab didn't have a statistically significant benefits on symptoms.

But in a post-hoc review, Biogen found the likely reason for the discordant results. The two trials had nearly identical designs, but patients in one received the high dose longer, and the benefits increased with time.

A quirk of randomization also resulted in twice as many "rapid progressers"—people who go downhill quickly—being assigned to the high dose arm than to the control arm in the trial that showed no benefit. The positive effects for many patients receiving the drug were partly offset in the data by these rapid progressers.

Biogen worked with FDA scientists to analyze the discrepancies between the two trials. The FDA noted in June 2019 that the evidence from the positive trial could be "considered exceptionally persuasive." Biogen applied in July for drug approval. Physicians and groups that work with Alzheimer's patients have urged the agency to approve the drug.

Yet an outside panel of scientists that the FDA convened in November to advise it—none of whom specialize in treating Alzheimer's patients—lambasted Biogen for massaging the data. They said the positive results from the one trial could be a fluke and urged the FDA to require Biogen to conduct another—which could take five or more years to complete.

Three panelists wrote in the Journal of the American Medical Association suggesting that the FDA's "unusual degree of collaboration" with Biogen could have "potentially compromised" its objectivity. Yet this kind of "collaboration" between drug makers and the FDA is one reason for the rapid development of Covid vaccines.

* * *

The FDA doesn't have to heed its advisory panels, though it rarely rejects its recommendations. FDA Acting Commissioner Janet Woodcock has been criticized for doing so, especially for correct decisions in the cases of Sarepta's Duchenne muscular dystrophy drug and an extended-release opioid by Zogenix. Now a contender to be FDA Commissioner, Ms. Woodcock is under political pressure from the left to reject Biogen's drug.

Doing so could set back Alzheimer's drug development by years and discourage investment against an affliction that causes terrible hardship. It would send the signal that the FDA will turn a blind eye to complexity—and that it cares more about its own reputation among certain medical elites than for patients.

Studies are rarely conclusive, so FDA scientists need to interpret and analyze evidence holistically. The risk of approval is that some Alzheimer's patients won't benefit from the medicine, and U.S. taxpayers via Medicare will pick up the cost.

But Biogen's drug could extend the independence of Americans still in the early stages of the disease, which would save the health system hundreds of billions of dollars. The elderly would be able to recognize grandchildren longer. And with the advent of blood tests that can identify people at risk for Alzheimer's years before symptoms occur, millions more Americans could eventually benefit.

The U.S. may be on the cusp of an Alzheimer's breakthrough, and the FDA's first duty is to patients.

John Kerry's Climate Kowtow

How much will Biden trade away in exchange for empty promises?

These columns noted last year that putting John Kerry in charge of climate negotiations with China was a recipe for coming home "dressed in a barrel." After Mr. Kerry's sojourn to Shanghai last week, the question is: What happened to the barrel?

President Biden's climate envoy emerged from two days of meetings with counterpart Xie Zhenhua with a joint statement that says little new. The two sides say they "are committed to cooperating with each other and with other countries to tackle the climate crisis." Both countries will work "to strengthen implementation of the Paris Agreement" limiting carbon emissions. Mr. Kerry didn't make any big concessions to Beijing, and Beijing didn't make any new promises about emissions limits it would break anyway.

In one sense that's a relief. But all this empty hot air isn't cost free in U.S. prestige and the missed opportunity to engage in more important talks. Making climate the sole focus of an early visit tells the Chinese that the U.S. puts that single issue above everything else in the bilateral relationship. China is happy to jibber-jabber about climate with the Americans if it means not having to engage on Taiwan, Hong Kong, Beijing's repression of Uighurs in Xinjiang, the South China Sea, North Korea, or intellectual property theft.

But Beijing is clear that it will ignore any carbon-emissions commitments that might impinge on China's economic growth. "Some countries are asking China to do more on climate change," deputy foreign minister Le Yucheng said last week. "I am afraid this is not very realistic."

Instead of triggering a rethink in Beijing, Mr. Kerry's Shanghai jaunt gave China's leaders a new opportunity to go on the public-relations offensive. "China welcomes the U.S. return to the Paris agreement and expects the U.S. side to uphold the agreement," vice-premier Han Zheng told Mr. Kerry in a jab at Washington's withdrawal from the pact under President Trump. Mr. Kerry also flattered Beijing by all but begging President Xi Jinping to join another global climate confab later this week.

Meanwhile, Mr. Kerry sounds like he's blessing China's green industrial-policy ambitions by including in the joint statement a pledge to pursue "policies, measures, and technologies to decarbonize industry and power." For China, that means more industrial than green policy. Chinese officials will keep the words handy to read back to U.S. officials in future discussions about trade distortions or subsidies. Mr. Kerry is telling China the U.S. is fine with both as long as they're for green energy.

Beijing's rhetorical flourishes concerning the Paris agreement are especially rich. In the years since the Trump Administration withdrew from that pact in 2017, American carbon emissions have kept falling and in 2019 hit their lowest level since 1992, and their lowest per capita since 1950, thanks in large part to the revolution in shale drilling for natural gas.

China saw its emissions rise in the same period, and its commitment under Paris to reduce emissions doesn't even begin until 2030. As a Reuters dispatch in February put it: "China approved the construction of a further 36.9 GW of coal-fired capacity last year, three times more than a year earlier, bringing the total under construction to 88.1 GW. It now has 247 GW of coal power under development, enough to supply the whole of Germany."

* * *

Chinese leaders don't mind Paris because they know it binds them to nothing while Western nations will harm their economies with new regulation and misallocated resources. The Chinese must be dumbfounded that a U.S. Administration wants to kill the shale natural gas boom that has kept energy prices low and made the U.S. less reliant on foreign oil.

The lack of any new agreement is a blessing since it would limit the U.S. without doing so for China. But Mr. Kerry has shown, in Iran and elsewhere, that he will leave no concession unmade in his pursuit of a bad deal. No wonder Beijing thinks America is in decline.

LETTERS TO THE EDITOR

What's Behind the Attack on the U.S. Senate?

Regarding your editorial "Targeting the U.S. Senate" (April 12): The most storied deliberative body on earth is now under siege from myopic politicians who want to use polarization as a pretext to steamroll the opposition. Those in favor of nuking the filibuster seem to misidentify it as the main culprit of legislative paralysis rather than looking at political division itself. They appear convinced they have garnered a strong mandate from voters to enact transformative policies. This will not end well.

In this political climate, a House-like majoritarian Senate guarantees a tectonic change of policy direction once power shifts. And a policy pendulum swinging too hard is sure to dent both parties and the country.

Cheney Wen
Taipei

The editorial laments that "the Senate's traditional 60-vote requirement to pass legislation hangs by a thread." But this "tradition" dates only to 1975, when the Senate adopted the so-called two-track rule. Under a two-track fillibuster, no debate on the floor need occur and other Senate business is not disrupted. Senators do not even need to be present to prevent a vote.

That is not how a democracy should work. The 60-vote requirement has not produced the "world's most deliberative body" but the world's most cowardly body. Rather than answer to their constituents for votes on controversial legislation, senators can avoid voting altogether.

There is nothing sacrosanct about this rule. If the minority party wants to block legislation, its senators should be forced to hold the floor to continue debate.

David Schneyer
New York

Your editorial seems puzzled as to why Democrats are unconcerned about a filibuster-free Republican Senate. The answer is simple: They don't anticipate a Republican majority in the Senate for decades.

In addition to creating new states that will reliably vote Democratic, they can expand the franchise to left-leaning groups such as felons and teenagers, scrap the Electoral College and pack the courts. If nothing else works, they can outlaw The Wall Street Journal editorial page and ultimately the Republican Party as "hate groups."

George Newman
Montclair, N.J.

Home Price Rises Aren't Explained by Duties

While U.S. softwood-lumber duties clearly have made it more expensive for Canadian lumber producers to ship across the border ("Why Are Home Prices Soaring?" Review & Outlook, April 8), Canadian imports have declined for a different reason. More than two billion board feet of sawmilling capacity in British Columbia have been shuttered since 2019 due to timber losses caused by insect infestation and wildfire. The region has lost 15% of its total output capacity.

This decline occurred while annual U.S. demand for lumber has increased by more than 2.5 billion board feet. Builders in the U.S. can't buy enough lumber to meet demand, irrespective of the prevailing tariffs. As demand has outpaced supply, lumber prices have broken $1,000 per thousand board feet. Most Canadian mills can produce lumber profitably at $400 per thousand board feet or less. The addition of 9% tariffs wouldn't prevent them from matching or beating any price a U.S. producer would seek.

Chung-Hong Fu
Timberland Investment Resources
Brookline, Mass.

Your editorial points to "a tariff on Canadian lumber that Biden can kill," but legal proceeding to address Canadian lumber subsidies are not an import tariff that can be removed with a White House edict. You also cite lumber costs from the National Association of Home Builders, but these include nonlumber products. Since April 2020, average new home prices have increased by $56,000, per the Census Bureau. Lumber price has increased by $673 per thousand board feet, so the lumber in a new home costs about $10,000 more in total than a year ago—less than a fifth of the home-price increase, if builders pass along the entire increase to the buyer.

Canada's share of the U.S. lumber market is around 25%. The import duty is 9%, so only 2.25% of a home's lumber cost is in the duty, or 0.08% of the whole cost of the home—roughly $1.41 a month in a 30-year mortgage at current interest rates.

Like U.S. mills, which have expanded production by more than 11 billion board feet since 2016, Canadian lumber mills are running flat out, exporting as much as they can produce. One must look elsewhere to explain high home-building costs: land, labor and soaring demand have boosted prices of all inputs, not only lumber.

Zoltan van Heyningen
U.S. Lumber Coalition
Washington

Online College Worked Pre-Pandemic and Pre-Zvi Galil

Tunku Varadarajan credits Zvi Galil as a pioneer in online teaching, having launched an online degree program in 2014 at the Georgia Institute of Technology ("The Weekend Interview with Zvi Galil: The Man Who Made Online College Work," April 3). Mr. Galil is later described as "an accomplished salesman" who "rattles off arresting figures."

As the current president of the University of Phoenix, which launched online degree programs in 1989 and was accredited in 1978, I welcome Mr. Galil to the actual pioneer's club. His eight-year "experiment" stands on the shoulders of innovators who have championed distance learning for over 40 years. We have been making online college work way before the pandemic, serving working adult learners by allowing them to earn the degrees they need while balancing work and family obligations. That spans more than one million alumni who have found value in earning their diplomas online. They know better than anyone that quality online college works.

Peter Cohen
President, University of Phoenix

Peale Did a Fine Portrait But Muffed Sitter's Name

"Icons: A City Reimagines Its History" (Review, April 3) about the new, early American galleries at the Philadelphia Museum of Art mentions one of the "most talked-about works" of artist Charles Willson Peale, that of Yarrow Mamout. It describes him as "being deported from Guinea." The bland euphemism "deported" obscures the horror of his coming to Annapolis, Md., as cargo in a slave ship and a sale into slavery that was assisted by the son of the colony's governor. Yarrow Mamout was a literate Fulani Muslim. His given, Muslim name was Mamout, and Yarrow was his last name. The confusion was Peale's.

James H. Johnston
Bethesda, Md.

Prince Philip, Trump and British Etiquette at Dinner

In "Prince Philip Is Gone, Just When America Needs Him Most" (Free Expression, April 13), Gerard Baker writes, "The Prince Philip America needs is the man who completely unafraid to say the unsayable." Has Mr. Baker ever heard of Donald Trump? He says the unsayable all the time. That's why he was elected president.

Ed Arzouian
Lanesboro, Pa.

Mr. Baker cites the prince's comment on the U.S. Ambassador's July 4 dinner toast. It reminded me of an incident I witnessed at a far less prestigious dinner at London's Cavalry and Guards Club after a British-American seminar. The traditional loyal toast, offered by a British speaker, was made with the respectful participation of the Americans. An American then offered a toast to our president. Before he could finish, however, he was interrupted by sarcastic comments. Subsequent meals saw similar interruptions. Philip will be missed, but not because of his British tendency to interrupt with sarcasm during dinner toasts.

Michael T. Callahan
Leawood, Kan.

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Pepper ... And Salt

THE WALL STREET JOURNAL

"I swear to tell my own truth . . ."

An American Epidemic of 'Covid Mania'

By Joseph A. Ladapo

What are the lessons of Covid-19? It depends who you ask. Some believe politicization of the pandemic response cost lives. Others believe a stronger U.S. public-health system would have reduced Covid-19 deaths significantly. Still others say lockdowns should have been longer and more stringent, or that they were ineffective. But one lesson that should transcend ideological differences: Don't put one illness above all other problems in society, a condition known as "Covid mania."

The problem isn't only the overreaction to the virus but the diminution of every other problem.

The novel coronavirus has caused suffering and heartbreak, particularly for older adults and their loved ones. But it also has a low mortality rate among most people and especially the young—estimated at 0.01% for people under 40—and therefore never posed a serious threat to social and economic institutions. Compassion and realism need not be enemies. But Covid mania crowded out reasoned and wise policy making.

Americans groaned when leaders first called for "two weeks to slow the spread" in March 2020. Months later, many of these same Americans hardly blinked when leaders declared that lockdowns should continue indefinitely. For months Covid had been elevated above all other problems in society. Over time new rules were written and new norms accepted.

Liberty has played a special role in U.S. history, fueling advances from independence to emancipation to the fight for equal rights for women and racial minorities. Unfortunately, Covid mania led many policy makers to treat liberty as a nuisance rather than a core American principle.

Covid mania has also wreaked havoc on science and its influence on policy. While scientists' passion for discovery and improving health has fueled research on the novel coronavirus, Covid mania has interpreted scientific advancements through an increasingly narrow frame. There has only been one question: How can scientific findings be deployed to reduce Covid-19 spread? It hasn't mattered how impractical these measures may be. Discoveries that might have helped save lives, such as better outpatient therapies, were ignored because they didn't fit the desired policy outcome.

A prime example is mask research. However one feels about wearing masks, look at the evidence from California. Despite a mask mandate imposed last April and steady, high rates of compliance, California experienced a surge in Covid-19 cases over the winter.

CHAD CROWE

Mandating masks may help in some settings, but masks are not the panacea officials have presented them as. In September, then-Centers for Disease Control and Prevention director Robert Redfield declared that "this face mask is more guaranteed to protect me against Covid than when I take a Covid vaccine."

The statement was remarkable because he made it before seeing vaccine trial data. Those data and data from people who have recovered from Covid clearly demonstrate that this statement is false. Immunity is far more effective than whatever efficacy masks may offer.

Covid mania is also creating new conflicts over vaccine mandates. The same people who assured the public that a few weeks of lockdown would control the pandemic now argue that vaccinating children, for whom no vaccine has yet been approved, is essential to end the pandemic. Children account for less than 0.1% of Covid deaths in the U.S. Is enough known about vaccines to conclude that their benefits outweigh potential risks to children?

"Yes" is the answer of a salesman, not a scientist. Mandating a vaccine for children without knowing whether the benefits outweigh the risks is unethical. People who insist we should press on anyway, because variants will prolong the pandemic, should be reminded that a large reservoir of unvaccinated people in the U.S.—and in the world—will always exist. We cannot outrun the variants.

The good news is that recent state legislative efforts in Utah, Tennessee and Ohio to ban vaccine passports may burst the Covid mania bubble. If passports are banned, then risks from Covid must be assessed in the same way other risks—such as playing a sport or starting a new medication—are considered. In many places throughout the country, zero has become the only tolerable risk level. Why else are people who have been vaccinated or recovered from Covid still asked to wear masks? Reasonable policies cannot sprout from unreasonable levels of risk tolerance.

The pandemic has been devastating for many Americans, but policies grounded in Covid mania have compounded the harm and delayed a return to normal life. The challenges ahead require rational decision making that considers costs and benefits and keeps sight of the countless things in life that matter.

Dr. Ladapo is an associate professor at UCLA's David Geffen School of Medicine.

The Chauvin Trial and the Chelsea Handler Standard of Justice

FREE EXPRESSION
By Gerard Baker

While an apprehensive nation awaits the outcome of a Minneapolis police officer's murder trial, it's possible that the administration of American justice could soon be characterized by what future historians may come to call the Chelsea Handler standard.

As the trial of Derek Chauvin got underway a month ago, Ms. Handler, who has a day-job as a comedian but has branched out recently into the field of jurisprudence, issued a profound observation on Twitter: "So pathetic that there's a trial to prove that Derek Chauvin killed George Floyd when there is video of him doing so."

You might think that more than 800 years after the Magna Carta and 230 years after the Bill of Rights, some notions of due process, presumption of innocence and protection against arbitrary justice might have embedded themselves in the minds of even our densest celebrities.

But while it's easy to mock, we should be careful not to assume that this taste for summary conviction on the basis of popular sentiment is confined to unfunny comedians. It seems to be widely shared among the ideologues who now control the Democratic Party, the media and cultural elites.

Rep. Maxine Waters of California, chairman of the House Financial Services Committee, joined demonstrations this weekend in Minnesota. She told supporters that if the Chauvin trial verdict goes the wrong way, "we've got to not only stay in the street but we've got to fight for justice."

You may recall a president got pilloried a while ago for urging his supporters to "fight" for their desired outcome. It was noted then that the term is a well-worn rhetorical phrase that doesn't necessarily amount to a literal incitement to violence. But there can't be much doubt about the import of what Ms. Waters said. She made her remarks in Brooklyn Center, a few miles from the barricaded Minneapolis courthouse where the Chauvin trial is taking place and the site of the killing last weekend of a black man by a police officer. The place has been aflame for the past week in an orgy of rioting.

The Handler standard, or the Maxine maxim—the idea that we don't really need a trial to know whether someone is guilty of a heinous crime—has always had its adherents. There have surely been miscarriages of justice—acquittals of guilty people and convictions of innocent ones—throughout history. The jury system is never perfect.

Today's progressives prefer summary trial convictions based on popular sentiment.

But what's frighteningly new about our current climate is that the rejection of apparently unwelcome trial outcomes is now part of the dominant progressive critique of our longstanding political and civic order. If U.S. institutions are the product of white-supremacist exploitation—as is essentially the consensus of the people who run the government, most corporations, and leading cultural institutions—then the judicial system itself is inherently and systemically unjust. If the principle of equality before the law is to be supplanted by the objective of "equity" in outcome, then only outcomes that serve the higher objective of collective racial justice can be considered legitimate.

So trials that produce the "wrong" verdict are not just miscarriages of justice. They are an indictment of the entire system.

The ascendancy of this new progressive radicalism adds a frightening element to the unease the nation feels this week as the jury deliberates in Minneapolis. By all accounts the trial of Mr. Chauvin has been rigorous, methodical and fair. The prosecution seemed to make a strong case that Mr. Floyd died at least in part as a result of the officer's actions. The defense may have sowed some doubts about whether Mr. Chavin's intent rose to the level of culpability required of the most serious charges.

But under our new rules, the jury's verdict will be tolerated only if it goes the "right" way.

This rejection of the legitimacy of the judicial process is rooted in the same neo-Marxist ideology—a race- and identity-based interpretation of structuralism—that holds sway over the minds of much of our ruling class.

To the old Marxists, the capitalists were the exploiters. In "The ABC of Communism," published in 1920, Bolshevik leaders Nikolai Bukharin and Yevgeni Preobrazhensky used language that sounds strikingly familiar today. They denounced the courts as instruments of "bourgeois justice," which was "carried on under the guidance of laws passed in the interests of the exploiting class," and recommended instead the establishment of "proletarian courts."

In one of the more savage ironies of history, some two decades later the authors themselves were tried by such courts under Josef Stalin and sentenced to death.

Yet even Stalin thought some kind of judicial proceeding was necessary. Our modern revolutionaries would dispense even with show trials.

The Agenda Behind Buttigieg's Claim That Highways Are 'Racist'

By Steven Malanga

The Biden administration claims that its proposed $2 trillion infrastructure program would accomplish everything from expanding mass transit to launching an era of green energy. Transportation Secretary Pete Buttigieg has articulated another ambitious goal recently: reversing the "racist" history of America's highway system.

"Black and brown neighborhoods have been disproportionately divided by highway projects or left isolated by the lack of adequate transit and transportation resources," Mr. Buttigieg tweeted in December. In an interview earlier this month, he reiterated that "there is racism physically built into some of our highways" and said the infrastructure program includes money "specifically committed to reconnect some of the communities that were divided by these dollars."

The average American might not think of highways as relics of Jim Crow. But some urban planners claim that building the Interstate Highway System in the 1950s evolved into a plot to segregate black neighborhoods. The point of running new highways, the theory goes, was providing middle-class whites with a path into suburbia. Academic literature is filled with studies with titles like "Segregation Along Highway Lines" and "White Men's Roads Through Black Men's Homes: Advancing Racial Equity Through Highway Reconstruction."

Activists now argue it's time to right those wrongs, including by dismantling roadways in the same way vandals have been pulling down Civil War monuments. "Want to tear down insidious monuments to racism and segregation? Bulldoze L.A. freeways," a Los Angeles Times opinion piece argued last summer. In New Orleans, activists want to tear down a section of the Claiborne Highway that crosses the traditionally black Tremé neighborhood of New Orleans.

The Congress for the New Urbanism, a nonprofit, has a list of their top 10 "teardowns" in places from Dallas to Tampa, Fla., to Denver. Supporters point to several dismantled roads as models, including a Milwaukee project that eliminated a mile-long freeway spur 20 years ago. In Mr. Buttigieg, activists have a transportation secretary who seems willing to commit federal money to the effort.

There's little doubt that some post-World War II federal road projects were misguided and poorly planned. Some local officials saw gleaming new roads as a way to replace deteriorating neighborhoods. Planners arrogantly imposed their visions on unwilling residents, undermining communities around the country—but not only Mr. Buttigieg's "black and brown ones."

In his acclaimed book "The Power Broker," biographer Robert Caro tells how New York's 20th-century master builder, Robert Moses, constructed the Cross Bronx Expressway through the largely Jewish neighborhood of East Tremont, tearing down 54 apartment buildings and displacing thousands of residents. The Indianapolis portion of Interstate 70 that runs through working-class Southside cut into a neighborhood of Jews, Italians, Germans and blacks. Boston's Central Artery, built in the 1940s and 1950s, displaced residents and businesses in that city's largely Italian-American North End.

But reversing the damage decades later under the banner of racial justice carries enormous risks. Boston's so-called Big Dig project is an example of what can go wrong. City planners quickly recognized that the elevated Central Artery was a mistake; it increased traffic in surrounding neighborhoods as cars exited the roadway, and it blocked an access to the city's waterfront.

Midcentury road projects displaced blacks and whites alike. Tearing them down now won't help.

The ambitious solution—tear it down and build a tunnel—began in the early 1980s but wasn't finished until 2005. It cost five times its original estimates and disrupted the city for decades. Even with federal aid, local governments piled up billions of dollars in debt.

Here is the point of claiming the highway system is racist: turning an environmentalist agenda into a moral crusade. It is a way to sell the infrastructure plan the Biden team has been pitching. For cities, much of that plan, now reflected in a bill the administration says would double spending for mass transit, revolves around getting people off roads and into public transportation.

Many Americans are uninterested in this agenda. Mass-transit ridership has been declining since 2014, falling by double digits before the pandemic in more than two dozen major metro areas, despite billions of dollars in government subsidies. Since the pandemic, ridership has further collapsed, down by more than two-thirds. Merely returning to prepandemic levels will be a challenge, as employees continue to work from home. Data also show a significant number of people leaving dense cities, where mass transit is most used.

Even in normal times, designing and financing a transportation plan for the next 50 years would be challenging. Doing so amid a pandemic that is reshaping cities—and based on vague 70-year-old accusations of racial injustice—risks creating a new generation of boondoggles.

Mr. Malanga is senior editor of City Journal.

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God Is in the Punch Line

By Mike Kerrigan

G.K. Chesterton closed out "Orthodoxy," his 1908 masterpiece of Christian apologetics, with a radical thought. He proposed that the one thing too great for God to have shown us when he walked on the earth was his mirth. This suggests that the idea of a blissfulness we can't even imagine was important to Chesterton. The mere possibility it's true, that one thing our mortal minds can't begin to fathom about God's nature is his joyousness, offers me consolation beyond measure.

It comforts me because it means that laughter—one manifestation of earthly joy I love to experience—is far from mundane. It can be sanctifying. In its edifying echo can be heard something important about the Divine, unreachable by reason alone, if only we listen. Rollicking mysticism that effortlessly makes your sides hurt: What's not to like about that?

This hopeful insight makes me think differently about cheery laughter. Does humor reflect something about God's loving creativity, conceiving of something good out of nothing? Or his perfect patience in playing the long game with us, his imperfect creations, which surely requires a sense of humor?

Chesterton loved paradoxes, so it shouldn't surprise us that the best and wisest jokes often come from children. I experienced such a moment the other day. My 10-year-old son, Jack, and I simultaneously noticed that my wife, Devin, had conspicuously removed her engagement ring and placed it atop a paper towel on the kitchen counter.

Surely she was going to put it back on, but there it sat, for a moment as foreboding to me as a Dear John letter. And not only to me. Picking up on the disquiet, Jack looked up and deadpanned: "Well, I guess she played us both for fools."

What was God telling me? I don't know. But that's the great thing about the search for deeper meaning that mirth invites. Maybe you find it; maybe you don't, but both paths lead to joy.

Mr. Kerrigan is an attorney in Charlotte, N.C.

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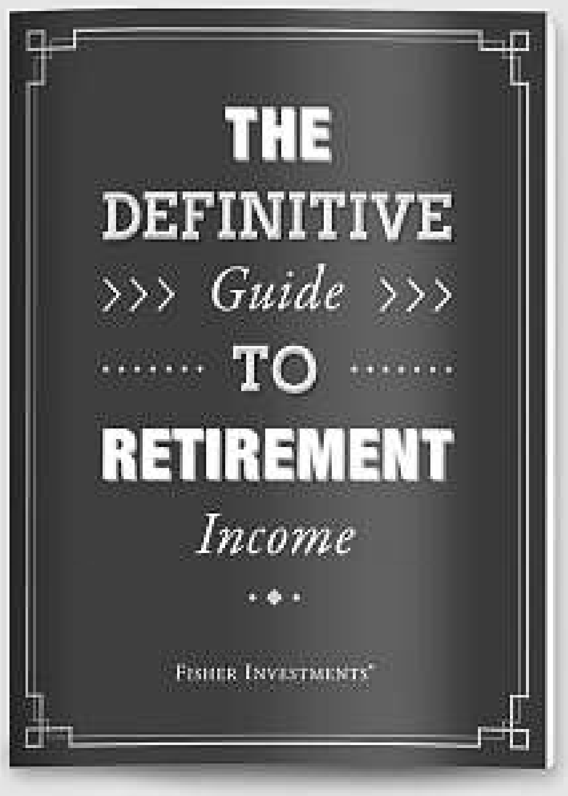

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TECHNOLOGY: IBM POSTS HIGHER REVENUE B4

BUSINESS & FINANCE

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Credit Suisse Brokerage Chiefs to Leave

Departures follow ouster of top risk officer, investment banker after Archegos

By Juliet Chung And Margot Patrick

Credit Suisse Group AG said two executives in charge of its prime brokerage unit will leave in the wake of its $4.7 billion loss from the collapse of hedge fund **Archegos Capital Management**.

In an internal memo Monday, it said John Dabbs and Ryan Nelson will immediately step down as co-heads of prime services, and assist the bank through mid-May for an orderly transition.

Their departures come after Credit Suisse pushed out its top risk officer and the head of its investment bank this month. Several other employees working in equities and risk management also left.

Credit Suisse and other banks racked up heavy losses when Archegos, a U.S. family investment firm, couldn't meet margin calls on large, concentrated stock positions at the end of March.

Credit Suisse was slow to unwind its positions compared with other banks and was left with the heftiest loss. It lent more to Archegos relative to its size than other lending banks, The Wall Street Journal previously reported.

In addition to the staff departures, the bank has launched an internal investigation into what went wrong.

A focus of the investigation has been on the bank's prime brokerage unit, which managed the relationship with Archegos and allowed the investor to accumulate substantial leveraged positions in individual stocks.

Credit Suisse and other banks sold Archegos what are known as total return swaps, a type of contract that allows investors to have economic exposure to a stock without holding the underlying shares or disclosing their positions publicly to markets.

Mr. Dabbs worked for Credit Suisse since 2009. Mr. Nelson joined in 2018 from crosstown rival UBS Group AG. Together, they led a turnaround of the prime brokerage business that involved focusing on fewer clients to improve profits.

Credit Suisse says that it is one of the top four prime brokerages in the U.S., based on industry rankings. Prime brokerage units of banks service hedge funds, helping them make trades, offering them credit, and introducing them to outside investors.

After disclosing the $4.7 billion loss from Archegos on April 6, Credit Suisse slashed its dividend to conserve capital, and Chief Executive Thomas Gottstein said "serious lessons will be learned."

The problems from Archegos came only weeks after the collapse of another Credit Suisse client, **Greensill Capital**, with which the bank ran a $10 billion set of investment funds. Credit Suisse says costs related to those funds and a loan to Greensill could be material but hasn't given a figure.

Credit Suisse reports first-quarter earnings on Thursday. In its April 6 statement, Credit Suisse said it expects to post a pretax loss of around $1 billion to reflect the Archegos losses.

China's Meituan Is Raising Billions

By Joanne Chiu

China's **Meituan** is raising nearly $10 billion from investors, hoping that it will be able to gain an edge on its e-commerce rivals by spending heavily on technology allowing it to deliver goods using drones and self-driving cars.

Meituan is one of China's most valuable tech companies. Its app lets users order various real-world services including meals and groceries, as well as organizing bookings for hotels, flights, taxis and restaurants.

The Hong Kong-listed company is raising net proceeds of about $7 billion by issuing stock and a further $2.97 billion by selling convertible bonds, it said Tuesday.

The huge capital-raising is considerably bigger than the $4.2 billion Meituan raised in its 2018 initial public offering and suggests there is still a healthy appetite among investors for Chinese tech technology companies, even though shares in Meituan and many peers have pulled back recently.

Earlier this month, **Prosus** NV raised $14.6 billion by selling down a small part of its stake in **Tencent Holdings** Ltd., the internet and videogaming giant.

Meituan said it plans to use some of the net proceeds on projects such as researching and developing autonomous delivery vehicles, drone deliveries and other cutting-edge technology.

In a separate statement Monday, the company unveiled a new generation of self-driving delivery cars that it said were smarter and safer than previous versions, with a longer battery life and capable of carrying heavier loads.

Meituan said it has been working on this technology for five years and began making deliveries in a district of Beijing last year. It plans to roll out the service to other Chinese cities within three years.

The company raised about $6.6 billion by selling shares to institutional investors. Tencent, a major shareholder in Meituan, has pledged to buy $400 million of stock subject to approval from independent shareholders. After the share sales, Tencent and its associates will own about 17.2% of Meituan.

Meituan will also issue two sets of zero-coupon convertible bonds with a combined face value of $2.98 billion, due in 2027 and 2028.

Meituan set the offer price at 273.80 Hong Kong dollars a share, the equivalent of $35.27 and representing a discount of 5.3% compared with Monday's closing price. That was close to the upper end of an indicative price range of HK$265 to HK$274, as shown by a term sheet on Monday.

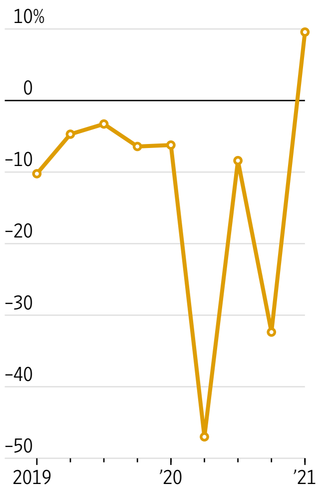
Meituan's shares rose 1.2% to 292.60 Hong Kong dollars in early trading on Tuesday.

Meituan had an operating loss of 2.9 billion yuan, equivalent to $445 million, in the fourth quarter, compared with an operating profit of 1.4 billion yuan a year ago.

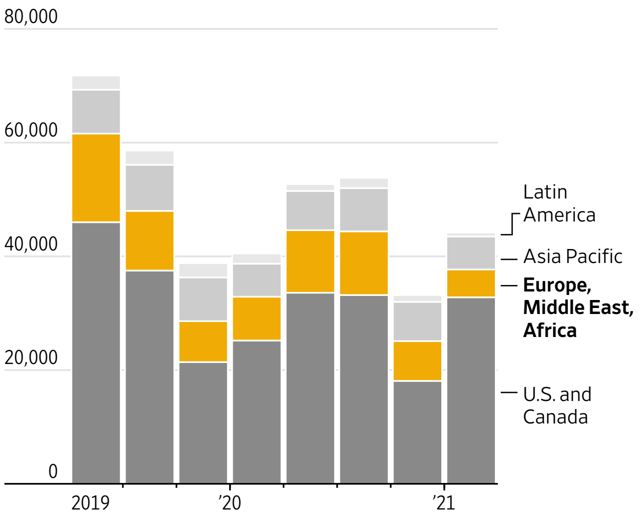
ONDREJ DEML/CTK/ZUMA PRESS

Harley said a 30% increase in motorcycle volumes in North America helped sales exceed expectations for the first quarter.

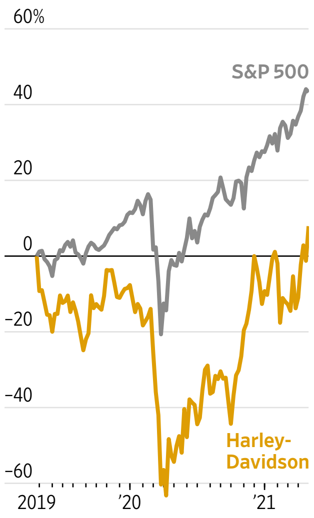
Revenue, change from previous year



Quarterly retail motorcycle sales, by region



Share and index performance



Sources: S&P Capital IQ (revenue); the company (sales); FactSet (performance)

EU Imposes 56% Tariff on Harley

By Alistair MacDonald And Colin Kellaher

Harley-Davidson Inc. has been hit with a **European Union** import ruling that the motorcycle maker says would impose a massive tariff increase on its products and keep it from functioning competitively in Europe.

The Milwaukee-based company has been one of the highest-profile U.S. casualties of recent trade disputes, after the EU added a 25% duty on its bikes and other U.S. goods in 2018. Those levies were a response to tariffs the Trump administration imposed on steel and aluminum from producers in Europe and elsewhere.

On Monday, Harley-Davidson said Belgium's Economic Ministry, on behalf of the EU, had notified the company that it was revoking an agreement that allowed the business to supply Europe with certain motorcycles produced at its international manufacturing facilities at tariff rates of 6%.

Harley-Davidson said the EU ruling would apply to its entire lineup and subject all products—regardless of origin—to a 56% import tariff within the trade bloc.

The European Commission, the EU's executive arm, declined to comment.

The company also had positive news to offer Monday with a sales update. It said a 30% increase in motorcycle volumes in North America helped sales exceed expectations for the first quarter. It also raised its 2021 forecast for motorcycle revenue to growth of 30% to 35%, from a previously projected 20% to 25%.

Harley-Davidson shares

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Rivals of SpaceX's Satellites Cite Risk

By Bojan Pancevski

Elon Musk's internet satellite venture has spawned an unlikely alliance of competitors, regulators and experts who say the billionaire is building a near-monopoly that threatens space safety and the environment.

The Starlink project, owned by Mr. Musk's **Space Exploration Technologies** Corp. or SpaceX, is authorized to send some 12,000 satellites into orbit to beam superfast internet to every corner of the Earth. It has sought permission for an additional 30,000.

Now, rival companies such as **Viasat** Inc., OneWeb Global Ltd., Hughes Network Systems and **Boeing** Co. are challenging Starlink's space race in front of regulators in the U.S. and Europe. Some complain that Mr. Musk's satellites are blocking their own devices' signals and have physically endangered their fleets.

Mr. Musk's endeavor is still in beta testing but it has already disrupted the industry, and even spurred the European Union to develop a rival space-based internet project to be unveiled by the end of the year.

The critics' main argument is that Mr. Musk's launch-first, upgrade-later principle, which made his **Tesla** Inc. electric car company a pioneer, gives priority to speed over quality, filling Earth's already crowded orbit with satellites that may need fixing after they launch.

"SpaceX has a gung-ho approach to space," said Chris McLaughlin, government af-

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Crash Probed

U.S. highway-safety officials are investigating a fatal accident in Texas last weekend involving a Tesla electric vehicle........................ B4

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Foreign Buyers Cool on Beijing's Debt

By Frances Yoon

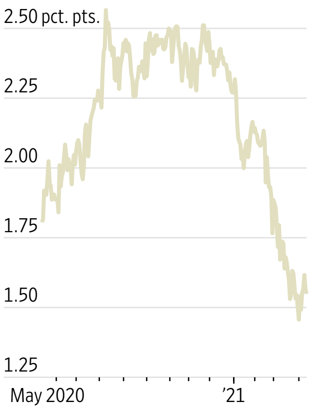
A huge run-up in foreign holdings of Chinese government bonds has stalled, with international investors hitting pause on their purchases as China's interest-rate advantage over the U.S. has shrunk.

International ownership of Chinese government debt declined slightly in March to the equivalent of $313 billion, according to the China Central Depository & Clearing Co. Holdings fell about 1% to 2.04 trillion yuan, from 2.06 trillion yuan a month earlier.

That was the first drop in foreign investors' positions since February 2019. It came in a month when the yuan weakened more than 1% against the dollar, after strengthening more than 9% from June through February.

Meanwhile, prices for U.S.

Yield premium on China government bonds



Note: For 10-year bonds, over equivalent U.S. Treasury notes

Source: FactSet, Tullett Prebon

Treasury notes and other global government debt have been falling, pushing yields higher. That has shrunk the extra yield that China's sovereign debt offers over international rivals.

This spread has narrowed to about 1.6 percentage points, after topping 2.2 percentage points throughout the second half of last year, data from FactSet and brokerage Tullett Prebon shows.

Jason Pang, a Hong Kong-based portfolio manager at J.P. Morgan Asset Management, said he had recently taken some profits on Chinese government bonds, or CGBs, and redeployed funds into local-currency government bonds in Southeast Asian countries such as Malaysia and Indonesia.

"We now expect a rotation out of CGBs into other assets to capture more value," said Mr. Pang. Still, he added that Chinese bonds had been more stable than bonds elsewhere this year, offering investors shelter from market volatility as prices fell and yields rose in other markets.

The dollar is likely to keep strengthening in the coming months, and U.S. Treasury yields are likely to rise further, with benchmark 10-year yields hitting 2% by mid-2021, said Aidan Yao, senior emerging Asia economist at AXA Investment Managers. As of Monday, the yield on the 10-year Treasury note was slightly less than 1.6%.

Mr. Yao said that meant China could see reduced inflows, or even further mild outflows, of foreign money from its sovereign-bond market in the near future. He said discussions with clients such as global pension funds and insurers suggested many investors were still learning about China's onshore bond market, and said hedging was an issue.

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BUSINESS & FINANCE

Peloton Faces Mounting Pressure

Chairwoman of House panel says treadmills pose 'grave and immediate risks'

By Sharon Terlep

Pressure mounted on **Peloton Interactive** Inc. on Monday when the chairwoman of a House consumer-protection panel called on the company to recall its treadmills.

The move comes days after a federal safety agency told people with young children or pets to stop using the treadmills and urged a recall of the product, which it says is responsible for dozens of injuries and at least one death.

Peloton has called the advisory by the Consumer Product Safety Commission "inaccurate and misleading." On Sunday, Peloton Chief Executive John Foley said in a letter to customers that it has "no intention" of stopping sales or recalling the machines.

The company had no response to Monday's statement by Rep. Jan Schakowsky (D., Ill.), who chairs the Consumer Protection and Commerce Subcommittee.

"The videos and reports of children being sucked under Peloton treadmills are harrowing, and they graphically illustrate the grave and immediate risks these products pose to users and their families," Ms. Schakowsky said.

Public clashes with the CPSC, the federal agency charged with protecting U.S. consumers from dangerous products, are rare. Typically the commission works with companies to voluntarily issue safety guidance or recalls on products. The CPSC can't force a recall but has sued companies to compel them to comply.

The commission's investigation in part looks at whether the Peloton treadmill's taller height and unusual belt design pose a greater risk to children, a CPSC spokeswoman said.

Peloton says the treadmills are safe when users follow safety recommendations, which include keeping children and pets away from the machine and removing the machine's safety key when it isn't in use to prevent its belt from moving.

Influential product-review publication Consumer Reports, which previously tested and reviewed the treadmill, on Monday called Peloton's handling of the issue "outrageous," and urged the company to take further action. "What Peloton should do is make sure that its customers know the company is putting safety first and that it's going to make them whole," said William Wallace, Consumer Reports manager of safety policy.

The publication said Peloton's treadmills are designed differently than most, with "an unusual belt design that uses individual rigid rubberized slats or treads that are interlocked and ride on a rail." Most treadmills use a thin, continuous belt.

The CPSC's advisory came after its investigation into the death of a child involving one of the machines turned up dozens of instances of injuries.

Peloton initially refused to identify to the commission the family of the child who was killed until the company was compelled to do so by a subpoena. Mr. Foley, the Peloton CEO, has defended the company's decision to withhold that information. "Government agencies shouldn't have unfettered access to consumers' private information, and I am proud that we took a stand to protect these Members' privacy," he said in Saturday's letter.

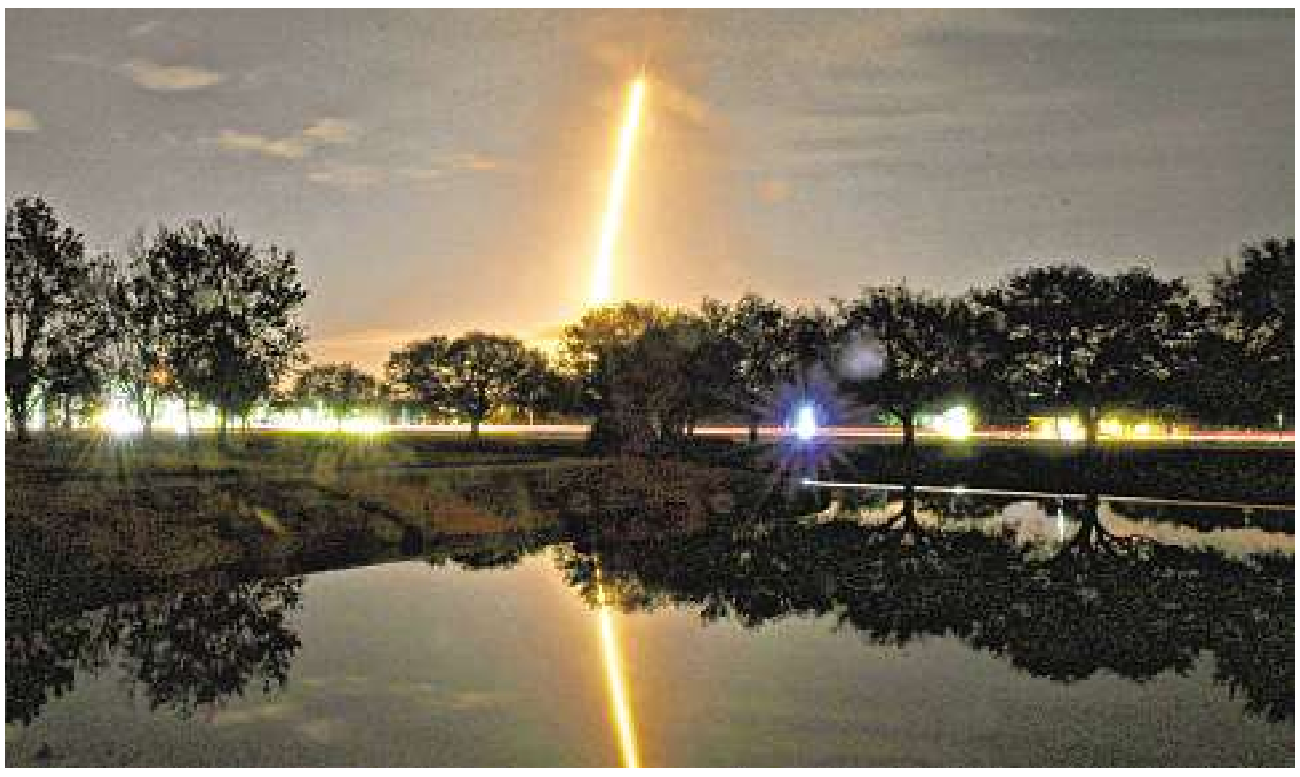
The agency has said it is investigating whether other types of treadmills pose the same risk as Peloton's.

There were 22,500 emergency room visits from treadmills in 2019, according to the CPSC. There were 17 deaths related to treadmills between 2018 and 2019.

Peloton said that it contacted the commission within a day of learning of the fatal accident.

In addition to sending direct messages to owners to adhere to warnings and follow safety instructions, the company now has its instructors deliver safety messages during classes.

Best known for stationary bicycles, Peloton unveiled its treadmill-style machine in 2018. That machine, at first called the Tread, is now called the Tread+ after Peloton introduced a pared-down, less-expensive version.



TIM SHORTT/FLORIDA TODAY/ASSOCIATED PRESS

The launch of a SpaceX Falcon 9 rocket in 2018. The company is on track to stake a claim for most of the free orbital real estate.

Harley to Fight 56% EU Tariff

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rose 9.7% in Monday trading on the New York Stock Exchange.

Harley-Davidson had lowered its EU tariff bill by sending motorcycles to Europe that were made in Thailand. With the end of that arrangement, the company now finds itself battling EU trade authorities over a tariff imposed on motorcycles that are no longer produced in the U.S.

The motorcycle maker said it plans to lodge an immediate legal challenge to what it called an unprecedented decision that "underscores the very real harm of an escalating trade war to our stakeholders on both sides of the Atlantic."

The company is in the midst of overhauling sales and production strategies.

The Office of the U.S. Trade Representative declined to comment.

Harley-Davidson received word of the EU's tariff increase late Friday, a person familiar with the matter said.

While the EU's original round of tariffs hit other high-profile U.S. goods, such as jeans made by Levi Strauss & Co. and Kentucky bourbon, vocal support from then-President Donald Trump pushed Harley-Davidson into the spotlight as a U.S. victim of the trade barbs exchanged in recent years between the U.S. and Europe and China.

Harley-Davidson said in 2018 that EU tariffs would raise the cost of each bike shipped to the trade bloc from the U.S. by about $2,200. Rather than raise prices, the company said it would shift production of motorcycles for the EU market to outside the U.S., prompting Mr. Trump to accuse the company of raising the white flag.

More recently, the U.S. and EU have suspended some import tariffs. In March, the two sides agreed to suspend tariffs on wine, luggage, produce and other goods related to a long-standing dispute over government subsidies to Boeing Co. and Airbus SE. Washington also suspended tariffs on U.K. luxury goods, including Scotch.

Europe, the Middle East and Africa had been among Harley-Davidson's largest markets outside of the U.S., but its first-quarter results showed almost 3,000 fewer motorcycles sold in the sales region, marking a 36% decline from a year earlier.

The company attributed the decline to shipping delays related to the pandemic and its decision to stop selling some popular motorcycle models in the region. Harley-Davidson will soon offer a new motorcycle known as the Pan America and designed for on-road and off-road use. Company executives anticipate the model will be popular in Europe.

The EU tariff decision comes at a time when the company has curtailed sales activities in lesser foreign markets to focus on North America, Europe and Japan. Harley-Davidson is in the midst of overhauling its sales and production strategies under Chief Executive Jochen Zeitz, a longtime director picked for the top post early last year. The company in 2020 slashed production of motorcycles as part of a plan to reduce inventories of bikes at dealers and boost prices for used models.

—Bob Tita and Yuka Hayashi contributed to this article.

DAVID PAUL MORRIS/BLOOMBERG NEWS

Harley raised its 2021 forecast for motorcycle revenue to growth of 30% to 35%, from 20% to 25%. A dealership in Oakland, Calif.

SpaceX Satellites Criticized

Continued from page B1

fairs chief for rival OneWeb. "Every one of our satellites is like a Ford Focus—it does the same thing, it gets tested, it works—while Starlink satellites are like Teslas: They launch them and then they have to upgrade and fix them, or even replace them altogether," Mr. McLaughlin said.

SpaceX didn't respond to requests for comment.

Around 5% of the first batch of Starlink satellites failed, SpaceX said in 2019. They were left to gradually fall back to earth and vaporize in the process.

In November 2020, astrophysicist Jonathan McDowell of the Harvard-Smithsonian Center for Astrophysics calculated that the Starlink failure rate was nearly 3%. Mr. McDowell said Starlink has vastly improved the design of their satellites since then, and that the failure rate is currently below 1%, and on track to improve further.

Even with the constant improvement, Mr. McDowell said, Starlink will operate so many satellites that even a low failure rate would mean a relatively high threat to orbital safety because of the potential for collisions. "They clearly have been making continuous improvements...but it's a challenging thing they are doing and it's not clear that they will be able to manage the final constellation," he said.

Starlink operates more than 1,300 spacecraft in Earth's lower orbit and is adding some 120 more every month. Its fleet is now on track to top the total number of satellites that have been launched since the 1950s—around 9,000.

Orbital space is finite, and the current lack of universal regulation means companies can place satellites on a first-come, first-served basis. And Mr. Musk is on track to stake a claim for most of the free orbital real estate, largely because, unlike competitors, he owns his own rockets.

In the coming days, the Federal Communications Commission in the U.S. is set to approve a request by SpaceX to modify its license and allow a greater number of satellites to orbit at a lower altitude of around 550 kilometers, or about 342 miles. If approved, competitor satellites would have to navigate around SpaceX's fleet to place their own spacecraft.

Other companies operating in space have asked the FCC to impose conditions on SpaceX, including lowering its fleet's failure rate to 1 in 1,000, and improving collision-avoidance capabilities while ensuring they don't block the transmissions of other craft orbiting above them.

"You should have fewer satellites and make them more capable," Mark Dankberg, Viasat founder and executive chairman, said.

On Twitter, Mr. Musk commented on Mr. Dankberg's earlier warnings that his company posed a hazard to orbital traffic by tweeting: "Starlink 'poses a hazard' to Viasat's profits, more like it."

A spokesman for Boeing, which is also challenging Starlink at the FCC, said it is "critically important to the future of a safe and sustainable orbital environment that standards be globally consistent and enable a competitive playing field."

In the region of space where Starlink operates, satellites orbit the earth at 18,000 miles an hour. Any collision could spread high-velocity debris that could make the orbit unusable for years.

Competitors say Starlink satellites have low maneuverability, meaning that other firms' craft have to act when collisions threaten.

Starlink satellites came alarmingly close to other spacecraft twice in the last two years, including on April 2, when a Starlink satellite prompted another operated by OneWeb, controlled by Indian conglomerate Bharti Global and the U.K. government, to make evasive maneuvers, according to OneWeb and the U.S. Space Command.

Mr. Musk's satellites are equipped with an AI-powered, automated collision avoidance system. Yet that system had to be switched off when a Starlink satellite came within 190 feet of the rival's satellite this month, according to OneWeb's Mr. McLaughlin.

When contacted by OneWeb, Starlink's engineers said they couldn't do anything to avoid a collision and switched off the collision avoidance system so OneWeb could maneuver around the Starlink satellite without interference, according to Mr. McLaughlin.

Starlink hasn't revealed details about their AI collision avoidance system. Mr. McDowell, the astrophysicist, said it was hard to take any such system seriously when it remains unclear what data it uses to operate.

A similar incident took place in 2019, when a Starlink satellite was on a near-collision course with an EU weather satellite, according to the European Space Agency, which runs EU satellites.

The agency said it was only able to contact Starlink via email and the company told it they would take no action, so EU engineers had to initiate a collision avoidance maneuver.

SpaceX didn't reply to requests for comment about the two incidents.

BUSINESS NEWS

Coca-Cola's Sales Rebounded in March

Demand steadily gains with introduction of vaccines, allowing people to eat out again

By Jennifer Maloney And Dave Sebastian

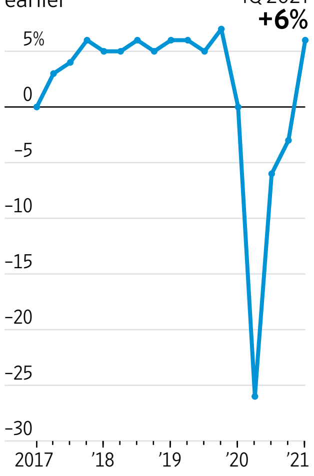
Coca-Cola Co. said its sales volume in March returned to prepandemic levels as the rollout of Covid-19 vaccines allows more people to eat out again.

The beverage company's sales plummeted a year ago as restaurants, stadiums, cinemas and other venues closed around the world. The company said demand steadily improved in the first quarter of this year, and in March sales volume reached the same level it stood in March 2019.

GEORGE FREY/BLOOMBERG NEWS

The company's sales fell a year ago as restaurants, stadiums and cinemas closed around the world.

Coca-Cola's organic revenue, change from a year earlier*



*Excludes currency fluctuations, acquisitions and divestitures

Source: the company

Coke Chief Executive James Quincey said he expects that positive trajectory to continue, despite new pandemic-related lockdowns in some parts of the world.

"The rollout of the vaccines is ultimately starting to work," particularly in the U.S. and the U.K., he said in an interview. But he noted that it would take time to distribute the vaccine in countries such as India, which is battling a new surge in coronavirus cases.

"Parts of the world will get vaccinated and will start to come out and particularly some of the developing markets are going to take longer—not just more months but, you know, into next year and potentially beyond—to really get it under control," Mr. Quincey said. He added that the possibility of new variants presents a bit of the unknown.

This year, Coke expects high-single-digit percentage growth in organic revenue, which excludes currency swings and acquisitions or divestitures. On that basis, Coke's revenue grew 6% in the quarter ended April 2.

The company's unit-case volume, or the number of 24 8-ounce servings of finished beverages sold, was flat for the quarter compared with the same period a year earlier. Its volume fell by 6% in the U.S. and by 2% in Europe, the Middle East and Africa but grew by 9% in Asia. Even as the U.S. reopens, fountain-drink sales there are still weak, Mr. Quincey said, noting that "it's not an on-off switch."

The company said its profit in the quarter fell 19% to $2.25 billion.

Separately on Monday, the company said it plans to list Coca-Cola Beverages Africa as a separate, publicly traded company. The Atlanta-based company said it would sell a portion of its stake in the Africa bottling business through the initial public offering, which it expects within the next 18 months. Shares will be listed in Amsterdam and Johannesburg, with Amsterdam being the primary exchange, the company said.

The stand-alone listing would let the unit access capital independently to meet investment needs, said Jacques Vermeulen, CEO of Coca-Cola Beverages Africa.

Layoffs and other cost-cutting measures have helped Coke mitigate its revenue declines and improve operating-profit margins. The company, which employed 80,300 people as of the end of last year, in December said it would cut 2,200 jobs.

◆ Heard on the Street: Coke cautions about pandemic.....B12

GameStop CEO to Step Down, in Latest Shuffle at the Helm

By Sarah E. Needleman And Dave Sebastian

GameStop Corp. said Chief Executive George Sherman will step down by July 31, the latest in a series of changes to the videogame retailer's leadership team since Chewy Inc. co-founder Ryan Cohen became a board member in January.

Mr. Sherman has been the chief executive officer of the Grapevine, Texas, company since April 2019. GameStop agreed to allow Mr. Sherman to retain more than one million shares of restricted stock, valued at roughly $184 million as of Monday's close, as part of a separation agreement.

GameStop has been seeking to replace Mr. Sherman, who has been the fifth person to hold the role since late 2017, people familiar with the matter have said. The company has been working with a search firm to evaluate candidates, and has been targeting people with a background in the technology or videogame industries.

"GameStop appreciates the valuable leadership that George has provided throughout his tenure," Mr. Cohen said. "He took many decisive steps to stabilize the business during challenging times."

GameStop shares, which have been on a roller coaster since the start of the year, rose more than 6% to $164.37 each on Monday.

STEPHANIE KLEIN-DAVIS/THE ROANOKE TIMES/AP

George Sherman will retain shares valued at $184 million.

Mr. Cohen initially took a stake in GameStop in August and has since been prodding the company to sharpen its focus on e-commerce and other technology initiatives to help reduce its reliance on bricks-and-mortar retail. He has also urged sweeping changes to GameStop's management and board of directors as part of the overhaul.

Mr. Sherman, who had worked at retailers Victra and Advance Auto Parts Inc., joined GameStop shortly after it failed to sell itself. Sales had been stagnant for years as the company was grappling with mounting challenges, most notably a trend of people moving away from buying hard copies of videogames in lieu of digital downloads. When the pandemic hit, he led GameStop through a series of store closures.

GameStop previously said Mr. Sherman didn't qualify for some performance-based incentives before entering into the separation agreement. Last week, the company said the CEO forfeited roughly 587,000 restricted shares, for failing to meet company performance goals as prescribed in his employment contract. He is expected to exit from the role holding 1.12 million shares of GameStop stock.

At least three of Mr. Sherman's lieutenants have left the company or announced plans to depart within the past few months. Several hires for management roles of late have hailed from Chewy and Amazon.com Inc., such as Matt Francis, who had served as head of engineering at Amazon Web Services and joined GameStop as its first technology chief in February. Jenna Owens, the company's new operating chief, held several senior roles at Amazon before GameStop.

Mr. Cohen has been nominated to serve as chairman of GameStop's board, a panel that is undergoing a similar refresh as a majority of its members step down. At the company's annual meeting in June, Mr. Sherman could remain a director if re-elected, a securities filing shows.

The remade board and leadership team will face pressure to deliver a turnaround that measures up to its recently inflated share price, driven up by a Reddit-fueled trading frenzy and a so-called short-squeeze, when rising prices prompt investors to buy back shares they sold short to reduce their losses.

Individual investor Keith Gill, who gained fame for helping to drive the trading frenzy by disclosing bullish investments in GameStop on Reddit and YouTube, has continued to buy shares in the company, according to recent posts.

SCOTT J. ENGLE VIA REUTERS

The NTSB said its probe would focus on the vehicle's operation and the fire that local officials said engulfed the car for roughly four hours.

Regulators Probe Tesla Crash That Killed Two People in Texas

By Rebecca Elliott

U.S. safety officials are investigating a fatal weekend crash involving a **Tesla** Inc. vehicle, adding to a series of probes into incidents involving the electric-vehicle maker.

The accident has raised questions both about how the car was operated and the challenges of dealing with a fiery crash.

Local authorities believe the Tesla Model S sedan was operating without anyone in the driver's seat when it crashed into a tree Saturday night north of Houston, killing the two men inside.

On Monday, Tesla Chief Executive Elon Musk injected additional uncertainty into the situation. Mr Musk tweeted that "Data logs recovered so far show Autopilot was not enabled." The car didn't have the upgraded version of the driver-assistance system that the company calls "full self-driving," he added.

The National Highway Traffic Safety Administration and the National Transportation Safety Board both said Monday they were investigating the crash. NHTSA has enforcement authority over auto makers, while the NTSB issues safety recommendations. "We are actively engaged with local law enforcement and Tesla to learn more about the details of the crash and will take appropriate steps when we have more information," NHTSA said in a statement.

The NTSB said on Twitter that it was sending two people to investigate, adding that its probe would focus on the vehicle's operation and the fire that local officials said engulfed the car for roughly four hours. Authorities on Monday were still investigating whether the vehicle's advanced driver-assistance system, known as Autopilot, was engaged at the time of the crash.

Mark Herman, the Harris County constable over Precinct 4, where the accident happened, said his office looked forward to working with Mr. Musk.

"In this world, anything is possible, and we'll let the science and facts take us wherever direction," he said, adding that his office planned to seek additional information and send at least one search warrant to Tesla on Tuesday.

Tesla collects information on the use of its vehicles, including Autopilot, that can help to determine how they were operated.

Tesla on Sunday and Monday didn't respond to requests for comment on the crash.

Mr. Musk said for a driver to activate the basic version of the company's driver-assistance feature a road must have lane lines, which aren't present where the accident took place.

The company has said that Autopilot made Tesla vehicles safer than others. Tesla tells drivers using the feature to pay attention to the road and be ready to take control of the vehicle.

Sen. Richard Blumenthal (D., Conn.), who sits on the Commerce, Science and Transportation Committee, on Monday called for "comprehensive oversight" to prevent deaths tied to advanced driver-assistance systems.

"Using Tesla's driverless system—or any other—shouldn't be a death risk," he tweeted. "Advancements in driving technology must first & foremost be safe." He has previously expressed concern about the safety of advanced driver-assistance technology.

Tesla's shares fell 3.4% in Monday trading.

Musk Faces New China Test After Woman's Protest

By Trefor Moss

SHANGHAI—A single protester with a disputed claim about the safety of **Tesla** Inc. electric vehicles has hit a nerve in China, sending complaints about the company ricocheting across the Chinese internet and refocusing attention on alleged quality issues in a critical market for Tesla.

The woman climbed atop a Tesla Model 3 sedan at the Auto Shanghai expo on Monday, shouting allegations about faulty brakes on Tesla vehicles while wearing a T-shirt that read "The Brakes Don't Work" and "Invisible Killer."

Videos uploaded by visitors then showed her being dragged away by security guards, who had previously attempted to use open umbrellas to hide the woman from onlookers. When The Wall Street Journal visited the Tesla stand later Monday morning, the company had beefed up security.

The protest at the Tesla booth, a rare public display of defiance in China, was picked up by state media outlets and quickly went viral. Within a few hours, more than 150 million people had viewed a hashtag of the incident on China's Twitter-like Weibo platform, remarking on how Tesla's booth had become "a platform for rights defenders."

Many users sympathized with her plight, with one accusing Tesla of "hoodwinking Chinese consumers" and others calling on the public to turn to Chinese competitors. Another user with more than five million followers who claims to have purchased three Tesla vehicles said in another widely liked post that he never had any problems with the braking system but offered up his own litany of complaints about other alleged glitches.

A company media representative at the booth said that the protest was a matter for the police and that she couldn't comment on the allegations of quality defects.

Tesla said on Weibo that the protester was a Tesla customer from Henan province whose father was involved in a February accident in which his Model 3 had crashed into another vehicle.

The woman had demanded a full refund, claiming that a technical problem with the car had caused the crash, according to Tesla. However, the company said that the woman's father had crashed due to excessive speed.

Tesla said it had been in contact with the woman and was willing to help her find a solution.

In an earlier statement, the company identified the woman as a Ms. Zhang, who has staged other protests against the company.

The woman's claims couldn't be independently verified, and she couldn't be reached to comment.

On Tuesday, Shanghai police said Ms. Zhang is under detention for five days after damaging the car onto which she had climbed. There was one more woman involved in protesting. She wasn't detained but warned by police for distorting public orders.

In a Weibo post following the incident, a woman claiming to be Ms. Zhang said that her father and mother were in the car and were injured and hospitalized. She said that she would seek justice through the legal system and that the incident exposed the true face behind Tesla's vaunted brand.

Grace Tao, a Tesla vice president and one of the company's

At a Shanghai auto show, a woman shouted allegations about faulty brakes.

top executives in China, in an interview last month with Chinese online automotive news channel Dongchedi, said technical problems were rare and were treated seriously whenever they came to light. "I can say confidently that most [of these customer complaints] are based on a misunderstanding," she said.

On Tuesday, China's state-run Xinhua news agency said in an commentary that Tesla's response has been "arrogant." It said car makers operating in China must have respect for the market and accept "supervision from customers."

Tesla sales have grown rapidly in China since the company began building cars in Shanghai more than a year ago. March was Tesla's best month in China to date, with 35,478 made-in-China Model 3 and Model Y cars sold, according to the China Passenger Car Association.

As it has grown, though, the company has faced a growing chorus of complaints from disappointed customers, including several allegations of brake failures, prompting regulators in Beijing to summon Tesla for a public dressing-down over quality problems in February. Tesla responded by vowing to make improvements.

—Raffaele Huang and Bingyan Wang contributed to this article.

Lithium Miners Sign $3 Billion Deal

By Rhiannon Hoyle And David Winning

SYDNEY—**Orocobre Ltd.** agreed to buy rival Australian miner **Galaxy Resources Ltd.** in an all-stock deal that would create a $3 billion miner and one of the world's biggest producers of lithium, a commodity used in batteries for electric vehicles and other high-tech products.

The deal comes at a time when lithium prices are climbing because of concerns about shortages of the commodity and a bigger-than-anticipated electric-vehicle boom. Orocobre runs the Olaroz lithium operation in northern Argentina, while Galaxy runs the Mt. Cattlin mine in Australia and has projects under development in Argentina and Canada.

Based on the companies' closing share prices on Friday, a combined company would have a market value of 3.96 billion Australian dollars, equivalent to $3.06 billion. If the deal consummates, the new miner would be the fifth-largest global lithium miner, the companies said.

Orocobre will acquire all of the shares in Galaxy, whose shareholders will receive 0.569 Orocobre shares for each of their own stock. Orocobre shareholders will own 54.2% of the combined group and Galaxy shareholders will own the remaining 45.8%. Galaxy Chairman Martin Rowley will become nonexecutive chairman of the combined group, with Orocobre Chief Executive Martín Pérez de Solay becoming CEO.

Lithium prices are expected to rise sharply in the coming years because of ballooning demand for electric vehicles. Lithium is the commodity most expected to benefit from an electric-vehicle boom because widely used lithium-ion batteries contain around 7% to 10% lithium regardless of the overall battery chemistry, Macquarie said.

The Australian bank substantially upgraded its price forecasts for the commodity last week, citing expectations of a shortfall of lithium from 2022 that will widen as electric-vehicle demand rises.

Already this year lithium prices have been rising, particularly in China, because of a strong recovery in battery demand and disruptions to supplies from Australian producers.

The Orocobre-Galaxy tie-up would give the companies geographical and product diversification, including across brine and hard-rock types of lithium production, they said in a joint statement.

IBM Says Sales on Track for 2021 Growth

By Maria Armental

LUKE MACGREGOR/BLOOMBERG NEWS

The company is preparing to spin off a major part of its information-technology services operations.

International Business Machines Corp. posted higher revenue ahead of a landmark split of the business this year that is part of Chief Executive Arvind Krishna's plan to revive growth at the tech company.

IBM on Monday said first quarter sales rose about 1% to $17.73 billion, generating net income of $955 million. Wall Street on average expected sales of $17.32 billion and net income of $1.28 billion, according to FactSet.

IBM still expects revenue to grow this year and anticipates $11 billion to $12 billion in adjusted free cash flow for the year. IBM shares rose more than 3% in after-hours trading. The stock is up about 11% in the past 12 months.

Mr. Krishna, in the top job a year, has pledged to restore growth at IBM this year after a prolonged period of stagnation. The company expects revenue to return to growth and projects about $11 billion to $12 billion in adjusted free cash flow for the year and $12 billion to $13 billion in 2022.

"While it's still early in the year and a lot remains to be done, we are confident enough to say that we are on track," Mr. Krishna said in a conference call with analysts, adding that customer spending patterns have strengthened.

The company is preparing to spin off a major part of its information-technology services operations. Mr. Krishna said he would focus IBM on the booming field of cloud-computing and artificial intelligence. In the latest quarter, total cloud revenue rose about 21% to $6.5 billion.

IBM has undertaken a number of acquisitions to bolster both areas, including the purchase of software company Red Hat that closed in 2019, to strengthen its efforts in the so-called hybrid-cloud where customers mix on-site and cloud-based data storage and processing tools. IBM last week said it agreed to buy for an undisclosed amount a small Italian company, called **myInvenio**, that it said would advance its AI and hybrid cloud activities.

The company last week said the services business it plans to spin off by the end of this year would be called Kyndryl and be based in New York City. It will be run by IBM veteran Martin Schroeter.

The IT services operations that IBM is partly shedding were central to former Chief Executive Lou Gerstner's drive in the 1990s to transform it from a lumbering tech giant focused on computing hardware to a huge player in services that were booming at the time. The spinoff announcement comes a few months after the Armonk, N.Y., company said it was eliminating an unspecified number of jobs.

IBM also is exploring the potential sales of Watson Health, The Wall Street Journal previously reported.

The unit, which employs artificial intelligence to help hospitals, insurers and drugmakers manage their data, was once a flagship initiative for Mr. Krishna's predecessor, Ginni Rometty, isn't currently profitable, people familiar with the matter have said.

Mr. Krishna said its Watson line, which goes beyond health "remains critically important to us. To be absolutely clear, Watson is the brand product name for our AI capabilities."

High Court Stays Out Of Tribune Lawsuit

By Jonathan Randles

The U.S. Supreme Court has closed the door on an attempt by creditors of the former Tribune Co. to claw back billions of dollars in shareholder profits that flowed from its 2007 leveraged buyout, about a year before the publisher filed for bankruptcy.

The justices declined to hear an appeal brought by some Tribune bondholders and retirees, who for more than a decade have been pushing for the right to sue over the buyout. Monday's decision leaves in place earlier rulings by federal district and appeals courts that rights to pursue legal action over the Tribune buyout under state law were extinguished through the company's 2008 bankruptcy.

Efforts by Tribune creditors to sue billionaire investor Sam Zell and others behind the buyout have been closely followed by bankruptcy professionals.

Among those who asked the Supreme Court to take up the appeal was a group of law professors, as well as bankruptcy trustees who have clawed back billions of dollars on behalf of victims of Bernie Madoff and creditors of Toys "R" Us and Sears Holdings Corp.

The law professors broadly argued that lower-court rulings in favor of Tribune shareholders had effectively blessed risky transactions that enrich corporate insiders while loading companies with debt, threatening everyone else the business owes, including retirees dependent on pensions.

Acting Solicitor General Elizabeth Prelogar said in March there isn't a pressing need for further review of the issue by the Supreme Court.

Lawyers representing former Tribune creditors and former shareholders didn't return messages seeking comment.

EXPEDIA GROUP

A scene from Expedia's new ad campaign. The online travel company's marketing effort also includes the introduction of trip insurance and itinerary-planning products.

Travel Brands Rethink Marketing

By Alexandra Bruell

A new ad from **Expedia** kicked off the online travel company's most expensive brand marketing effort in five years. In the ad, actress Rashida Jones embodies Expedia as a companion for a woman traveling alone to a foreign country. Ms. Jones transforms the traveler's sad hotel room into a larger, more pleasant space with a snap of her fingers, and helps remove her from a precarious situation involving women taking selfies.

The marketing effort, which also includes the introduction of new trip insurance and itinerary-planning products, was inspired by research showing not only rising demand for travel as restrictions from the pandemic abate, but also consumers' desire for travel companies to provide more than deals, said Shiv Singh, senior vice president and general manager at Expedia, a unit of **Expedia Group** Inc.

"The travel space in some regards was more-transaction oriented. It was where you find the best deal, you go for the cheapest ticket," said Mr. Singh. "That's changed now. People think about value differently."

Expedia's campaign won't be alone: Airings of TV commercials promoting travel websites have more than doubled in the 50 days ended April 12, compared with the previous 50 days, according to media measurement firm iSpot.tv. Other travel and tourism marketers are also ramping up their marketing as the industry moves to reassert itself after a year of lockdowns and limits on movement.

They are re-evaluating and recalibrating their pitches in the process. Some brands are delivering messages about safe gathering, while others are focusing on promotional ads that feature deals.

"In the past 13 months we've seen a completely unprecedented slashing of advertising budgets in the travel industry," said Kevin Kopelman, an analyst at financial services firm Cowen who covers online travel companies and hotels.

But a recent increase in demand has been driving travel organizations to boost their marketing spending—although not necessarily to pre-pandemic levels—while thinking strategically about striking the right tone in their messaging, Mr. Kopelman said.

A campaign from Expedia Group's Vrbo that began running in December, for example, encourages families to gather again without mentioning the pandemic that has kept so many apart. For families stuck at home together during the pandemic, on the other hand, Universal Orlando Resort is running a commercial offering 40% off to lure them back out.

Expedia described its new marketing push as a shift from its messaging in recent months, when it tried to strike a more inspirational tone. One cheery TV ad that aired in March showed an animated couple whose furniture morphs into travel experiences.

Marriott International Inc. spent the first quarter of this year posting content on social media meant to keep consumers dreaming of travel, and running automated digital ads to capitalize on any new demand.

Now the company will shift its focus to brand marketing that can drum up demand, said Brian Povinelli, senior vice president of brand, loyalty and portfolio marketing at Marriott International.

"More than ever, the last 12 months has challenged us to be much more flexible and nimble in our marketing approach and execution," Mr. Povinelli said in an email.

Travel and tourism brands, such as popular U.S. tourist destinations, are eager to get travelers spending again, said Alex Leikikh, global chief executive of MullenLowe Group, an **Interpublic Group of Cos.** ad agency network that works with a number of travel marketers, including JetBlue Airways Corp., Royal Caribbean International and Wyndham Hotels & Resorts Inc.

"These industries and these states' destinations and hotels—they've been hurting badly for the last 12 to 14 months and need revenue now," Mr. Leikikh said. Promotions that feature deals can generate revenue while also building brands over time, especially with "stimulus flowing from the government and people going back to work," he said.

Some tourism and entertainment organizations are reviewing agencies that can support their advertising or media needs. Las Vegas Convention and Visitors Authority and Visit California are running processes to hire new agencies, according to people familiar with the matter. The concert giant **Live Nation Entertainment** Inc. is also running a process to hire an agency that can service its $130 million media account, people familiar with the matter said.

"Everybody is trying to figure out how to get into the market first with the right message," said Casey Burnett, managing partner and founder of marketer and agency search consulting firm Burnett Collective. "It's all about market share."

BUSINESS & FINANCE

Oil Giants Turn to Carbon Storage

By Sarah McFarlane

Oil companies have for decades made money by extracting carbon from the ground. Now they are trying to make money putting it back.

Energy giants such as **Exxon Mobil** Corp. and **Royal Dutch Shell** PLC are pushing carbon capture and storage—where carbon is gathered and buried underground—as part of a drive to reduce both their own and their customers' emissions. Executives say the service could become a new source of income when the industry is grappling with how to adapt to a lower-carbon economy.

Oil companies have long captured carbon from their operations, albeit mostly to produce more oil. Now they want to retool that skill as a service they can sell to heavy-polluting industries like cement and steel, burying their carbon in the ground indefinitely for a fee, rather than releasing it into the atmosphere. Yet critics question the environmental benefits and high cost of such projects.

CHEVRON/REUTERS

A Chevron liquefied-natural-gas project in Western Australia is part of its new carbon-capture and storage ambitions.

Last month, Shell, **Total** SE and **Equinor** ASA launched a joint venture to store carbon in a rock formation thousands of feet beneath the seabed off the coast of Norway. The state-backed Northern Lights project is set to be the first time companies outside the oil industry will be able to pay to have their carbon gathered and stored.

Exxon has said it plans to form a new business unit to commercialize carbon capture and storage, forecasting it could become a $2 trillion market by 2040. **Chevron** Corp. has formed partnerships on storage projects, while **BP** PLC is codeveloping storage projects in the U.K. and Australia.

Oil executives' sales pitch: We will provide your energy, then take back the carbon to minimize your footprint.

Carbon capture and storage "is becoming a business rather than just a solution," Maarten Wetselaar, director of integrated gas, renewables and energy solutions at Shell, recently said, adding that the company plans to include carbon storage as "part of an integrated energy package" to energy customers.

Shell already captures and stores its own carbon at sites in Australia and Canada, and says it wants to develop additional commercial facilities.

The Norway project, set to start in 2024, already has waste company Fortum Oslo Varme SA and HeidelbergCement AG as customers. Shell says it has further interest from 10 other companies, including Microsoft Corp. and ArcelorMittal, although no binding contracts have been signed.

Most carbon-storage projects rely on government funding. Norway is covering about 80% of the $1.6 billion cost of the Northern Lights project, with the rest split equally between Shell, Equinor and Total.

Deployed since the 1970s, most of the 26 sites operating carbon capture today are focused on injecting carbon into wells to recover more oil, with a handful dedicated to storing carbon, according to the Global CCS Institute, a think tank that advocates the technology.

Carbon capture typically works through the use of chemicals, to which the carbon sticks, to filter out emissions from a source like fumes at a power plant.

In the early 2000s, governments saw carbon capture as a way to clean up electricity generated by fossil fuels, but the technology was held back by high costs. Recent moves by governments and companies to reduce emissions are rekindling interest in carbon capture beyond the energy industry.

A record 17 new carbon-capture projects were slated for development last year, according to the Global CCS Institute. Many are focused on hard-to-decarbonize sectors like steel and cement making, where manufacturing processes release carbon dioxide.

Some researchers say the technology isn't the most efficient way to reduce emissions. "Transitioning energy infrastructure away from fossil fuels as well as planting trees and reducing deforestation is a much better way to address carbon emissions," said Mark Jacobson, professor of civil and environmental engineering at Stanford University.

U.S. Study Faults Pipeline Oversight

By Ted Mann

WASHINGTON—Federal officials aren't adequately monitoring the integrity of 8,600 miles of active oil-and-gas pipelines on the Gulf of Mexico's seafloor, and for decades have allowed the industry to abandon old pipelines with little oversight, a new report to Congress shows.

The Government Accountability Office report faults the Interior Department's offshore oil-safety regulator's reliance on surface observations and pressure sensors, rather than subsea inspection, to monitor for leaks.

The agency's own staff acknowledges those techniques could fail to detect a slow discharge from a pipeline over a long period, particularly in deep water where most oil production occurs, the report says.

The report urges the regulator, the Bureau of Safety and Environmental Enforcement, to resume work on a long-stalled update to pipeline rules.

BSEE currently requires monthly inspections of pipeline routes in the Gulf by helicopter or marine vessel, to look for oil sheens or gas bubbles on the surface to determine whether a pipeline is leaking.

By comparison, the bureau's Pacific office requires subsea pipeline inspections, in part because of seismic concerns, on its much smaller network of 200 miles of active pipelines.

In interviews with the GAO, BSEE officials acknowledged that "surface observations are not generally reliable indicators of pipeline leakage," because diffused leaking oil and gas can move far from the source, especially in deep water.

While BSEE and industry groups have discussed ways to improve subsea leak-detection systems, the report said a federal rule requiring such monitoring is needed.

"BSEE officials told us that industry has been largely receptive to improving leak detection but noted that the bureau cannot compel industry to take any action to detect leaks that is not described in its regulations," the report said.

The report urges the regulator to resume work on updating pipeline rules.

An Interior Department official, responding in the GAO report, said the department "generally agrees with the report findings" and that it is following the GAO's urging to draft new rules governing offshore pipelines.

The GAO also found that BSEE and its predecessors allowed the oil industry to leave thousands of miles of decommissioned pipelines on the seafloor rather than incur the cost of raising them back to the surface.

Federal regulations allow BSEE to permit operators to decommission pipelines in place, cleaning and burying them in the seabed. The GAO found that the agency doesn't ensure standards are followed, even as it allowed 97% of the miles of decommissioned pipelines taken out of use in the Gulf since the 1960s—nearly 18,000 miles—to remain in place.

BSEE also has failed to fully consider whether decommissioned pipelines represent a hazard to navigation and commercial fishing, like trawlers that can be damaged by snagging on undersea pipelines, the report said. Eighty-nine trawlers reported damage from snagging on oil-and-gas equipment between 2015 and 2019, the report found.

BSEE's failure to inspect decommissioned pipelines also means officials don't have a complete record of which equipment has been properly cleaned and buried, or whether hurricanes and underwater landslides have moved buried pipelines, potentially creating navigation hazards and environmental damage.

Celebrity-Backed Oatly Files Its Paperwork for an IPO

By Kimberly Chin

Oatly Group AB formally filed paperwork Monday for an initial public offering in the U.S., nine months after private-equity giant **Blackstone Group** Inc. and a handful of high-profile celebrities took a stake in the oat milk producer.

The Swedish company entered the U.S. market in 2017 with its alternative dairy products that have grown in popularity among consumers seeking healthier options with less impact on the environment.

In July, The Wall Street Journal reported the company had sold a $200 million stake to a group led by Blackstone and included Oprah Winfrey, Natalie Portman, former Starbucks Corp. chief Howard Schultz and the entertainment company founded by Jay-Z. The sale of the roughly 10% stake valued Oatly at about $2 billion. In February, the oat-milk maker confidentially filed for an IPO in the U.S.

The retail value of the plant-based dairy industry in the Americas is expected to hit $7 billion by 2025, according to Euromonitor.

The growing appetite for plant-based alternatives has put pressure on dairy-milk companies like Dean Foods Co., which filed for bankruptcy in 2019. Meanwhile, companies focused on plant-based alternatives have seen demand from consumers and investors alike take off in recent years. For example, shares of plant-based food maker Beyond Meat Inc. have increased 441% since it went public in 2019.

As part of the filing on Monday, the company said it had revenue of $421.4 million in 2020, compared with $204 million in 2019. Its losses for the year, however, widened to $60.4 million, compared with $35.6 million a year earlier.

Oatly plans to raise $100 million from a sale of its American depositary shares, a placeholder figure companies often use to calculate filing fees and is often changed.

It didn't disclose how many ADSs it intends to offer to the public, according to registration documents filed with the Securities and Exchange Commission on Monday.

The company plans to list its ADS on the Nasdaq Stock Market under the symbol OTLY.

The company, which was founded in 1994, launched its first oat-milk product under the brand Oatly in 2001. Oatly says the process of making oat milk, which involves steeping oats in water, consumes less water than making almond milk.

CORPORATE WATCH

UNITED AIRLINES

Rebound Sought As Carrier Posts Loss

United Airlines Holdings Inc. reported weaker results than analysts were expecting for the first quarter as it looks for a broader rebound in demand as Covid-19 vaccines are distributed.

The Chicago airline reported a net loss of $1.36 billion for the quarter, compared with a loss of $1.7 billion for a year earlier, when the spread of the coronavirus was first intensifying.

Revenue fell to $3.22 billion from $7.98 billion, year over year, and was weaker than the $3.26 billion consensus estimate.

The number of passengers United flew in the first quarter fell 52% year over year.

—*Micah Maidenberg*

HERMAN MILLER

Knoll to Be Acquired In $1.8 Billion Deal

SYLVIA JARRUS FOR THE WALL STREET JOURNAL

Andi Owen, chief executive of Herman Miller.

Herman Miller Inc. agreed to acquire **Knoll** Inc. in a $1.8 billion cash-and-stock deal that would merge furniture makers.

Under the deal, Knoll shareholders would swap each share for $11 in cash and 0.32 shares of Herman Miller stock. The companies said the deal's terms represent a 45% premium to Knoll's closing share price on Friday.

Herman Miller shareholders would own about 78% of the combined company, while Knoll shareholders would own about 22%.

Andi Owen, chief executive of Herman Miller, will be CEO of the combined company, while Knoll CEO Andrew Cogan will leave after working at Knoll for 30 years. The combined company is expected to have annual revenue of $3.6 billion, 19 brands and a presence in more than 100 countries, the companies said.

—*Matt Grossman*

PROLOGIS

Warehouse Owner Sees Strong Demand

Prologis Inc. said demand for its properties was strong in the first quarter, reflecting the broader economic recovery from the Covid-19 pandemic.

The owner of warehouses and logistics properties said rental revenue rose to $1.02 billion from $879 million. Average occupancy in Prologis's properties stood at 95.4% in the first quarter, down a bit from 95.8% in the fourth quarter.

Prologis said earnings fell to $367.3 million for the fourth quarter from $491.1 million a year earlier. It increased its financial expectations for the year, saying it expects per-share earnings of $2.80 to $2.90, up from its previous view of $2.36 to $2.52.

—*Micah Maidenberg*

MARKETS DIGEST

EQUITIES

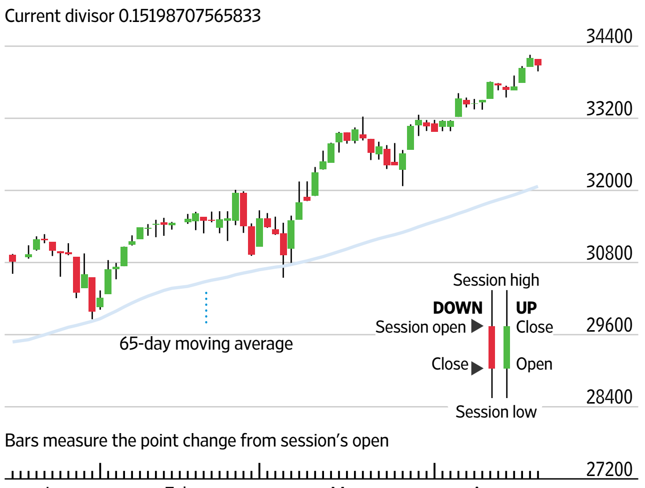
Dow Jones Industrial Average

34077.63 ▼123.04, or 0.36%

High, low, open and close for each trading day of the past three months.

	Last	Year ago
Trailing P/E ratio	30.38	18.57
P/E estimate *	21.02	20.61
Dividend yield	1.75	2.79
All-time high	34200.67, 04/16/21	

Current divisor 0.15198707565833

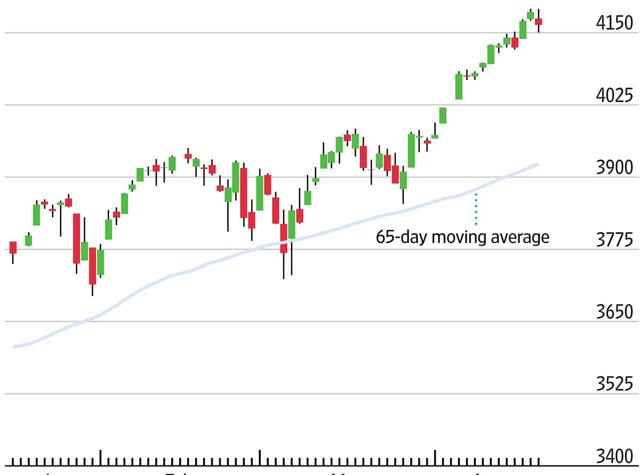


S&P 500 Index

4163.26 ▼22.21, or 0.53%

High, low, open and close for each trading day of the past three months.

	Last	Year ago
Trailing P/E ratio *	45.51	22.10
P/E estimate *	23.82	20.75
Dividend yield *	1.39	2.13
All-time high	4185.47, 04/16/21	

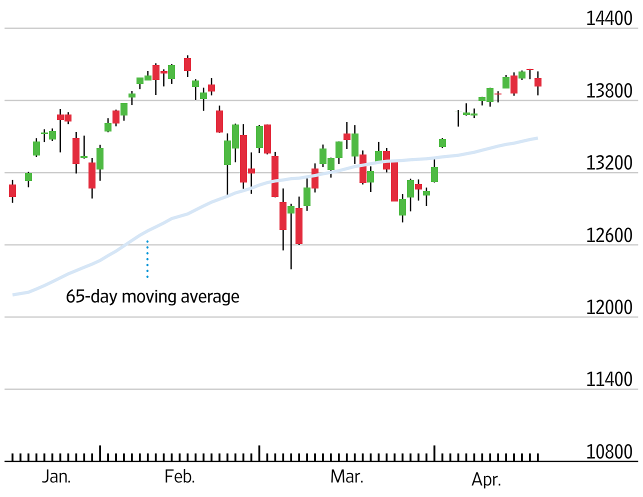


Nasdaq Composite Index

13914.77 ▼ 137.58, or 0.98%

High, low, open and close for each trading day of the past three months.

	Last	Year ago
Trailing P/E ratio *†	40.12	26.86
P/E estimate *†	30.51	25.77
Dividend yield *†	0.71	1.00
All-time high:	14095.47, 02/12/21	



*Weekly P/E data based on as-reported earnings from Birinyi Associates Inc.; †Based on Nasdaq-100 Index

Major U.S. Stock-Market Indexes

	Latest High	Low	Close	Net chg	% chg	52-Week High	Low	% chg	% chg YTD	3-yr. ann.
Dow Jones										
Industrial Average	34182.38	33980.56	**34077.63**	-123.04	**-0.36**	34200.67	23018.88	**44.1**	11.3	**11.4**
Transportation Avg	14920.59	14748.85	**14798.84**	-120.71	**-0.81**	14969.58	7761.00	**85.7**	18.3	**11.5**
Utility Average	926.34	918.13	**920.83**	-2.88	**-0.31**	923.71	744.49	**15.8**	6.5	**9.7**
Total Stock Market	43678.49	43300.03	**43446.60**	-288.45	**-0.66**	43735.05	27478.69	**53.3**	10.8	**15.8**
Barron's 400	1004.09	992.02	**996.17**	-7.92	**-0.79**	1004.09	557.81	**73.5**	16.9	**11.2**
Nasdaq Stock Market										
Nasdaq Composite	14041.79	13842.57	**13914.77**	-137.58	**-0.98**	14095.47	8263.23	**62.5**	8.0	**24.3**
Nasdaq-100	14025.64	13835.75	**13907.67**	-134.24	**-0.96**	14041.91	8403.00	**59.4**	7.9	**27.1**
S&P										
500 Index	4191.31	4150.47	**4163.26**	-22.21	**-0.53**	4185.47	2736.56	**47.5**	10.8	**15.6**
MidCap 400	2727.46	2691.02	**2704.18**	-16.90	**-0.62**	2721.08	1490.58	**76.5**	17.2	**12.2**
SmallCap 600	1352.73	1324.45	**1333.40**	-14.55	**-1.08**	1397.66	692.66	**88.3**	19.2	**11.3**
Other Indexes										
Russell 2000	2261.11	2219.05	**2232.00**	-30.67	**-1.36**	2360.17	1185.09	**84.0**	13.0	**12.4**
NYSE Composite	16186.29	16076.57	**16107.56**	-78.73	**-0.49**	16186.29	10706.44	**46.4**	10.9	**8.3**
Value Line	662.21	654.74	**657.01**	-5.20	**-0.79**	662.21	368.54	**73.7**	15.5	**5.5**
NYSE Arca Biotech	5566.08	5469.75	**5505.41**	-44.33	**-0.80**	6319.77	5021.50	**4.1**	-4.1	**6.3**
NYSE Arca Pharma	712.25	706.03	**710.67**	2.76	**0.39**	725.03	613.07	**9.6**	3.1	**10.5**
KBW Bank	123.78	122.05	**122.55**	-0.47	**-0.38**	124.01	62.74	**77.2**	25.2	**4.6**
PHLX§ Gold/Silver	149.33	146.56	**147.57**	-1.59	**-1.06**	161.14	105.29	**38.7**	2.3	**19.9**
PHLX§ Oil Service	52.61	51.35	**51.83**	-0.08	**-0.15**	63.89	25.80	**96.2**	16.9	**-30.6**
PHLX§ Semiconductor	3240.95	3141.20	**3171.00**	-82.08	**-2.52**	3305.43	1588.70	**90.2**	13.4	**35.1**
Cboe Volatility	18.61	16.78	**17.29**	1.04	**6.40**	45.41	16.25	**-60.6**	-24.0	**2.7**

§Nasdaq PHLX

Sources: FactSet; Dow Jones Market Data

Late Trading

Most-active and biggest movers among NYSE, NYSE Arca, NYSE Amer. and Nasdaq issues from 4 p.m. to 6 p.m. ET as reported by electronic trading services, securities dealers and regional exchanges. Minimum share price of $2 and minimum after-hours volume of 50,000 shares.

Most-active issues in late trading

Company	Symbol	Volume (000)	After Hours Last	Net chg	% chg	High	Low
Apple	AAPL	12,977.2	134.88	0.04	**0.03**	134.93	134.43
PTC Inc.	PTC	12,055.8	139.80	..	**...**	140.83	138.40
Lattice Semiconductor	LSCC	7,574.0	55.60	-0.29	**-0.52**	56.19	55.50
SPDR S&P 500	SPY	7,160.7	415.17	-0.04	**-0.01**	415.42	415.07
ViacomCBS Cl B	VIAC	6,776.9	38.60	0.20	**0.52**	38.99	38.23
Domtar	UFS	5,543.2	39.07	...	**...**	39.23	39.07
AT&T	T	5,283.7	29.97	-0.02	**-0.07**	30.00	29.95
iShares MSCI Emg Markets	EEM	4,938.0	54.15	...	**...**	54.38	53.97

Percentage gainers...

Company	Symbol	Volume (000)	Last	Net chg	% chg	High	Low
22nd Century Group	XXII	1,114.3	3.90	0.35	**9.86**	4.13	3.53
SEMrush Holdings	SEMR	95.8	16.90	1.15	**7.30**	17.35	15.62
comScore	SCOR	503.1	3.40	0.15	**4.62**	3.44	3.25
IBM	IBM	1,970.8	137.50	4.38	**3.29**	139.63	133.00
Bloom Energy	BE	99.6	22.95	0.66	**2.96**	23.47	22.29

...And losers

Company	Symbol	Volume (000)	Last	Net chg	% chg	High	Low
Futu Holdings ADR	FUTU	1,375.3	167.30	-10.62	**-5.97**	178.00	166.40
Up Fintech Holding ADR	TIGR	163.2	19.62	-0.59	**-2.92**	20.21	19.52
Ebang International	EBON	209.0	4.21	-0.12	**-2.77**	4.35	4.20
MicroVision	MVIS	74.0	10.22	-0.28	**-2.67**	10.65	10.01
United Airlines	UAL	1,009.0	53.82	-1.17	**-2.13**	55.49	53.53

Trading Diary

Volume, Advancers, Decliners

	NYSE	NYSE Amer.
Total volume*	855,963,326	28,864,156
Adv. volume*	337,391,672	11,598,221
Decl. volume*	506,650,404	16,697,221
Issues traded	3,444	282
Advances	1,099	95
Declines	2,191	172
Unchanged	154	15
New highs	236	7
New lows	32	2
Closing Arms†	0.68	0.53
Block trades*	4,684	228
	Nasdaq	**NYSE Arca**
Total volume*	4,412,126,262	208,383,161
Adv. volume*	1,834,886,590	47,688,718
Decl. volume*	2,496,982,255	159,145,921
Issues traded	4,367	1,486
Advances	1,164	362
Declines	3,036	1,095
Unchanged	167	29
New highs	143	180
New lows	104	6
Closing Arms†	0.52	1.00
Block trades*	28,145	1,040

* Primary market NYSE, NYSE American NYSE Arca only.
†(TRIN) A comparison of the number of advancing and declining issues with the volume of shares rising and falling. An Arms of less than 1 indicates buying demand; above 1 indicates selling pressure.

International Stock Indexes

Region/Country	Index	Close	Latest Net chg	% chg	YTD % chg
World	**MSCI ACWI**	**702.99**	–1.95	**–0.28**	8.8
	MSCI ACWI ex-USA	**348.68**	0.52	**0.15**	6.8
	MSCI World	**2944.05**	–9.30	**–0.31**	9.4
	MSCI Emerging Markets	**1348.55**	–0.14	**–0.01**	4.4
Americas	**MSCI AC Americas**	**1616.53**	–9.47	**–0.58**	10.1
Canada	**S&P/TSX Comp**	**19204.42**	–146.90	**–0.76**	10.2
Latin Amer.	**MSCI EM Latin America**	**2410.70**	5.60	**0.23**	–1.7
Brazil	**Sao Paulo Bovespa**	**120933.78**	–180.15	**–0.15**	1.6
Chile	**Santiago IPSA**	**3382.82**	–13.94	**–0.41**	18.4
Mexico	**S&P/BMV IPC**	**48072.62**	–654.36	**–1.34**	9.1
EMEA	**Stoxx Europe 600**	**442.18**	–0.31	**–0.07**	10.8
Eurozone	**Euro Stoxx**	**443.61**	–0.77	**–0.17**	11.6
Belgium	**Bel-20**	**3996.90**	18.47	**0.46**	10.4
Denmark	**OMX Copenhagen 20**	**1512.27**	–6.94	**–0.46**	3.2
France	**CAC 40**	**6296.69**	9.62	**0.15**	13.4
Germany	**DAX**	**15368.39**	–91.36	**–0.59**	12.0
Israel	**Tel Aviv**	**1642.12**	–5.25	**–0.32**	9.5
Italy	**FTSE MIB**	**24691.46**	–52.92	**–0.21**	11.1
Netherlands	**AEX**	**711.94**	–4.86	**–0.68**	14.0
Russia	**RTS Index**	**1476.58**	–20.47	**–1.37**	6.4
South Africa	**FTSE/JSE All-Share**	**68094.28**	–604.50	**–0.88**	14.6
Spain	**IBEX 35**	**8711.40**	97.90	**1.14**	7.9
Sweden	**OMX Stockholm**	**913.60**	–7.53	**–0.82**	18.9
Switzerland	**Swiss Market**	**11209.84**	–53.13	**–0.47**	4.7
Turkey	**BIST 100**	**1377.23**	–30.91	**–2.20**	–6.7
U.K.	**FTSE 100**	**7000.08**	–19.45	**–0.28**	8.4
U.K.	**FTSE 250**	**22490.86**	–31.32	**–0.14**	9.8
Asia-Pacific	**MSCI AC Asia Pacific**	**209.14**	0.51	**0.25**	4.6
Australia	**S&P/ASX 200**	**7065.60**	2.15	**0.03**	7.3
China	**Shanghai Composite**	**3477.55**	50.93	**1.49**	0.1
Hong Kong	**Hang Seng**	**29106.15**	136.44	**0.47**	6.9
India	**S&P BSE Sensex**	**47949.42**	–882.61	**–1.81**	0.4
Japan	**Nikkei Stock Avg**	**29685.37**	2.00	**0.01**	8.2
Singapore	**Straits Times**	**3209.72**	7.96	**0.25**	12.9
South Korea	**Kospi**	**3198.84**	0.22	**0.01**	11.3
Taiwan	**TAIEX**	**17263.28**	104.47	**0.61**	17.2
Thailand	**SET**	**1574.91**	25.95	**1.68**	8.7

Sources: FactSet; Dow Jones Market Data

Percentage Gainers...

Company	Symbol	Latest Session Close	Net chg	% chg	52-Week High	Low	% chg
Marlin Business Services	MRLN	21.46	7.22	**50.70**	22.90	5.50	**235.8**
Knoll	KNL	23.30	6.07	**35.23**	23.46	8.67	**147.3**
China Green Agriculture	CGA	16.87	3.72	**28.29**	17.73	1.77	**572.1**
TDH Holdings	PETZ	2.71	0.59	**27.83**	14.52	0.80	**201.1**
Galectin Therapeutics	GALT	2.78	0.59	**26.94**	3.85	1.70	**56.2**
Chemomab Therapeutics ADR	CMMB	34.49	7.23	**26.52**	168.80	12.00	**169.5**
BBQ Holdings	BBQ	13.83	2.61	**23.26**	15.47	2.01	**558.6**
Moxian	MOXC	4.65	0.83	**21.73**	7.38	0.55	**433.6**
American River Bankshares	AMRB	19.90	3.55	**21.71**	21.08	8.90	**101.0**
Recon Technology	RCON	8.05	1.41	**21.23**	9.70	0.75	**236.3**
FreightCar America	RAIL	5.49	0.81	**17.31**	7.84	0.90	**315.9**
Cricut Cl A	CRCT	23.34	3.34	**16.70**	24.40	14.88	**...**
Futu Holdings ADR	FUTU	177.92	24.91	**16.28**	204.25	10.00	**1592.9**
Immunome	IMNM	27.53	3.47	**14.42**	63.78	9.28	**...**
Siyata Mobile	SYTA	10.15	1.24	**13.92**	15.75	3.90	**...**

Percentage Losers

Company	Symbol	Latest Session Close	Net chg	% chg	52-Week High	Low	% chg
Haemonetics	HAE	74.68	-42.29	**-36.15**	142.11	74.10	**-30.4**
Tian Ruixiang	TIRX	12.80	-3.40	**-20.99**	103.87	11.10	**...**
Esports Technologies	EBET	20.09	-5.26	**-20.75**	54.00	18.65	**...**
UTime	UTME	36.96	-8.23	**-18.21**	107.33	11.40	**...**
Danimer Scientific	DNMR	25.99	-5.52	**-17.52**	66.30	9.60	**...**
Oriental Culture Holding	OCG	4.85	-1.02	**-17.38**	25.85	2.82	**...**
LifeMD	LFMD	8.25	-1.72	**-17.25**	33.02	1.25	**500.0**
180 Life Sciences	ATNF	8.33	-1.65	**-16.53**	13.05	1.90	**-22.6**
INmune Bio	INMB	11.37	-2.25	**-16.52**	29.99	4.03	**140.4**
Medley Management Cl A	MDLY	5.79	-1.11	**-16.09**	27.90	2.80	**17.2**
Diginex	EQOS	6.41	-1.20	**-15.77**	22.95	5.11	**-37.7**
Creatd	CRTD	3.43	-0.62	**-15.31**	19.41	2.10	**-51.6**
111 ADR	YI	10.36	-1.87	**-15.29**	45.88	5.20	**37.4**
Intrusion	INTZ	15.72	-2.75	**-14.89**	29.90	2.83	**391.3**
Takung Art	TKAT	17.86	-3.00	**-14.38**	74.11	0.77	**1253.0**

Most Active Stocks

Company	Symbol	Volume (000)	% chg from 65-day avg	Latest Session Close	% chg	52-Week High	Low
Sundial Growers	SNDL	**284,949**	-42.2	0.94	**11.06**	3.96	0.14
Clover Health Investments	CLOV	**235,824**	1081.0	9.67	**9.64**	17.45	6.31
Ambow Education ADR	AMBO	**178,333**	17160.0	2.45	**33.15**	6.43	1.41
Castor Maritime	CTRM	**135,597**	-24.8	0.49	**8.24**	1.95	0.11
Naked Brand Group	NAKD	**118,740**	-31.9	0.56	**16.37**	3.40	0.07
Apple	AAPL	**93,867**	-11.4	134.84	**0.51**	145.09	66.36
NIO ADR	NIO	**90,895**	-5.3	36.78	**1.91**	66.99	2.91
Zomedica	ZOM	**81,334**	-33.3	0.85	**-0.40**	2.91	0.06
ProSh UltraPro Shrt QQQ	SQQQ	**79,441**	-15.0	10.86	**2.84**	73.45	10.54
SPDR S&P 500	SPY	**77,358**	-5.6	415.21	**-0.49**	417.91	272.02

* Volumes of 100,000 shares or more are rounded to the nearest thousand

Volume Movers

Ranked by change from 65-day average*

Company	Symbol	Volume (000)	% chg from 65-day avg	Latest Session Close	% chg	52-Week High	Low
Knoll	KNL	27,974	**10084**	23.30	**35.23**	23.46	8.67
VicSh USAA MSCI USA Value	ULVM	571	**5886**	63.04	**-0.87**	63.59	39.12
VicSh USAA MSCI Intl Val	UIVM	469	**4480**	49.67	**-0.47**	50.00	34.14
VicSh USAA MSCI EM Value	UEVM	367	**4278**	50.33	**0.07**	50.59	34.00
Marlin Business Services	MRLN	1,571	**3854**	21.46	**50.70**	22.90	5.50
iSh Curr Hd MSCI Eurozone	HEZU	5,476	**3160**	35.21	**-0.48**	35.39	23.89
PTC Inc.	PTC	23,253	**3004**	139.80	**-4.35**	149.27	60.98
WT Int Rate US Agg Bd	AGZD	1,043	**2905**	47.08	**-0.07**	47.67	44.84
Roman DBDR Tech Acqn Cl A	DBDR	2,893	**2809**	10.11	**0.20**	10.75	9.45
Principal Quality ETF	PSET	481	**2805**	51.09	**-0.60**	51.40	34.68

* Common stocks priced at $2 a share or more with an average volume over 65 trading days of at least 5,000 shares †Has traded fewer than 65 days

CURRENCIES & COMMODITIES

Currencies

U.S.-dollar foreign-exchange rates in late New York trading

Country/currency	Mon in US$	Mon per US$	US$ vs, YTD chg (%)
Americas			
Argentina peso	.0108	92.9134	**10.5**
Brazil real	.1802	5.5494	**6.8**
Canada dollar	.7979	1.2534	**–1.6**
Chile peso	.001427	700.90	**–1.4**
Colombia peso	.000276	3627.00	**6.0**
Ecuador US dollar	1	1	**unch**
Mexico peso	.0505	19.8196	**–0.3**
Uruguay peso	.02258	44.2950	**4.6**
Asia-Pacific			
Australian dollar	.7759	1.2888	**–0.9**
China yuan	.1536	6.5102	**–0.3**
Hong Kong dollar	.1288	7.7661	**0.2**
India rupee	.01336	74.872	**2.5**
Indonesia rupiah	.0000687	14548	**3.5**
Japan yen	.009247	108.14	**4.7**
Kazakhstan tenge	.002322	430.65	**2.2**
Macau pataca	.1250	8.0030	**0.2**
Malaysia ringgit	.2425	4.1235	**2.5**
New Zealand dollar	.7181	1.3926	**0.04**
Pakistan rupee	.00654	152.850	**–4.7**
Philippines peso	.0207	48.368	**0.7**
Singapore dollar	.7518	1.3301	**0.7**
South Korea won	.0008965	1115.51	**2.7**
Sri Lanka rupee	.0052367	190.96	**3.1**
Taiwan dollar	.03553	28.144	**0.2**
Thailand baht	.03204	31.210	**3.9**

Country/currency	Mon in US$	Mon per US$	US$ vs, YTD chg (%)
Vietnam dong	.00004334	23074	**–0.03**
Europe			
Czech Rep. koruna	.04640	21.550	**0.4**
Denmark krone	.1619	6.1785	**1.4**
Euro area euro	1.2038	.8307	**1.5**
Hungary forint	.003333	300.01	**1.0**
Iceland krona	.007935	126.02	**–1.4**
Norway krone	.1206	8.2940	**–3.3**
Poland zloty	.2644	3.7829	**1.3**
Russia ruble	.01309	76.388	**3.2**
Sweden krona	.1191	8.3995	**2.1**
Switzerland franc	1.0927	.9152	**3.4**
Turkey lira	.1235	8.0960	**8.9**
Ukraine hryvnia	.0357	28.0500	**–1.1**
UK pound	1.3985	.7151	**–2.3**
Middle East/Africa			
Bahrain dinar	2.6532	.3769	**–0.04**
Egypt pound	.0637	15.6951	**–0.3**
Israel shekel	.3068	3.2597	**1.5**
Kuwait dinar	3.3207	.3011	**–1.0**
Oman sul rial	2.5974	.3850	**...**
Qatar rial	.2747	3.641	**–0.02**
Saudi Arabia riyal	.2666	3.7504	**–0.03**
South Africa rand	.0703	14.2226	**–3.2**

	Close	Net Chg	% Chg	YTD % Chg
WSJ Dollar Index	85.97	–0.40	–0.46	**1.15**

Sources: Tullett Prebon, Dow Jones Market Data

Commodities

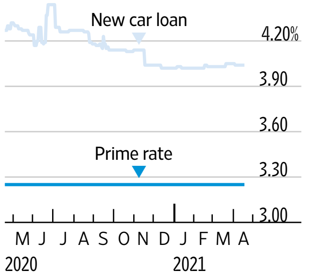
	Close	Monday Net chg	% Chg	52-Week High	Low	% Chg	YTD % chg
DJ Commodity	**835.03**	3.34	**0.40**	836.48	433.70	**76.91**	14.14
Refinitiv/CC CRB Index	**193.98**	0.77	**0.40**	195.13	106.29	**63.33**	15.60
Crude oil, $ per barrel	**63.38**	0.25	**0.40**	66.09	-37.63	**n.a.**	30.63
Natural gas, $/MMBtu	**2.749**	0.069	**2.57**	3.354	1.482	**42.88**	8.27
Gold, $ per troy oz.	**1769.40**	-9.60	**-0.54**	2051.50	1676.20	**3.98**	-6.53

CREDIT MARKETS

Consumer Rates and Returns to Investor

U.S. consumer rates

A consumer rate against its benchmark over the past year



Selected rates

New car loan

Bankrate.com avg†:	**4.04%**
First Command Bank	**2.75%**
Fort Worth, TX	888-763-7600
First Savings Bank of Hegewisch	**2.75%**
Chicago, IL	773-646-4200
Cambridge Savings Bank	**3.24%**
Cambridge, MA	888-418-5626
PNC Bank	**3.37%**
Washington, DC	888-PNC-BANK
Frost Bank	**3.74%**
Houston, TX	800-513-7678

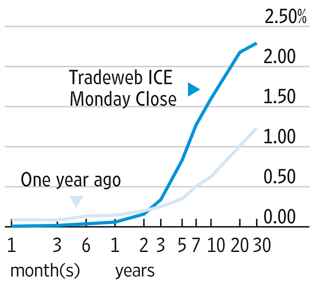
Interest rate	Yield/Rate (%) Last (●)	Week ago	52-Week Range (%) Low	High	3-yr chg (pct pts)
Federal-funds rate target	**0.00-0.25**	0.00-0.25	0.00	0.25	**-1.50**
Prime rate*	**3.25**	3.25	3.25	3.25	**-1.50**
Libor, 3-month	**0.19**	0.19	0.18	1.10	**-2.18**
Money market, annual yield	**0.08**	0.08	0.08	0.32	**-0.28**
Five-year CD, annual yield	**0.47**	0.47	0.44	0.86	**-1.21**
30-year mortgage, fixed†	**3.09**	3.19	2.83	3.62	**-1.34**
15-year mortgage, fixed†	**2.38**	2.46	2.32	3.25	**-1.54**
Jumbo mortgages, $548,250-plus†	**3.08**	3.19	2.85	3.70	**-1.61**
Five-year adj mortgage (ARM)†	**3.14**	3.14	2.85	3.32	**-1.26**
New-car loan, 48-month	**4.04**	4.04	4.02	4.44	**0.18**

Bankrate.com rates based on survey of over 4,800 online banks. *Base rate posted by 70% of the nation's largest banks.† Excludes closing costs.

Sources: FactSet; Dow Jones Market Data; Bankrate.com

Treasury yield curve

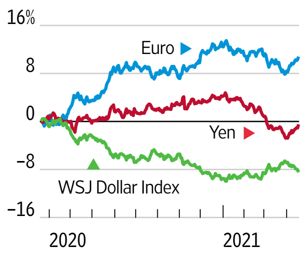
Yield to maturity of current bills, notes and bonds



Sources: Tradeweb ICE U.S. Treasury Close; Tullett Prebon; Dow Jones Market Data

Forex Race

Yen, euro vs. dollar; dollar vs. major U.S. trading partners



Corporate Borrowing Rates and Yields

Bond total return index	Close	Yield (%) Last	Week ago	52-Week High	Low	Total Return (%) 52-wk	3-yr
U.S. Treasury, Barclays	2369.500	**0.950**	0.980	1.030	0.400	**–4.158**	4.644
U.S. Treasury Long, Barclays	4173.480	**2.220**	2.270	2.400	1.090	**–15.223**	7.485
Aggregate, Barclays	2228.900	**1.520**	1.560	1.630	1.020	**–0.066**	5.146
Fixed-Rate MBS, Barclays	2217.810	**1.670**	1.750	1.850	0.980	**0.188**	4.078
High Yield 100, ICE BofA	3365.788	**3.602**	3.671	7.996	3.261	**15.906**	5.594
Muni Master, ICE BofA	598.015	**0.825**	0.912	1.940	0.725	**5.196**	5.049
EMBI Global, J.P. Morgan	909.699	**4.758**	4.880	6.612	4.295	**15.226**	4.791

Sources: J.P. Morgan; S&P Dow Jones Indices; Bloomberg Barclays; ICE Data Services

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COMMODITIES

wsj.com/market-data/commodities

Futures Contracts

Metal & Petroleum Futures

	Open	Contract High	hi lo	Low	Settle	Chg	Open interest
Copper-High (CMX)-25,000 lbs.; $ per lb.							
April	4.1800	4.2700		4.1800	**4.2500**	0.0700	1,482
July	4.1710	4.2830		4.1590	**4.2450**	0.0720	100,167
Gold (CMX)-100 troy oz.; $ per troy oz.							
April	1782.10	1788.50		1771.40	**1769.40**	-9.60	3,868
May	1777.20	1789.40	▲	1766.20	**1769.70**	-9.60	1,697
June	1778.80	1790.40		1766.60	**1770.60**	-9.60	391,140
Aug	1780.10	1791.70		1768.60	**1772.70**	-9.50	39,813
Oct	1785.60	1792.20		1770.90	**1774.60**	-9.60	12,862
Dec	1785.00	1796.30		1773.00	**1776.80**	-9.50	20,739
Palladium (NYM) - 50 troy oz.; $ per troy oz.							
April	...	...		...	**2808.30**	38.90	
June	2777.50	2851.00	▲	2761.00	**2813.60**	38.90	10,745
Platinum (NYM)-50 troy oz.; $ per troy oz.							
April	1218.40	1218.40		1218.40	**1204.00**	-2.20	183
July	1207.40	1231.90		1202.30	**1206.50**	-2.20	61,497
Silver (CMX)-5,000 troy oz.; $ per troy oz.							
April	26.205	26.205		25.900	**25.831**	-0.268	174
May	26.055	26.280		25.670	**25.837**	-0.268	83,284
Crude Oil, Light Sweet (NYM)-1,000 bbls.; $ per bbl.							
May	62.98	63.63		62.63	**63.38**	0.25	54,874
June	63.01	63.69		62.67	**63.43**	0.24	452,692
July	62.93	63.60		62.60	**63.31**	0.22	260,846
Aug	62.66	63.30		62.37	**63.00**	0.19	144,821
Sept	62.34	62.83		61.95	**62.53**	0.15	161,108
Dec	60.76	61.30		60.46	**60.93**	0.08	304,227
NY Harbor ULSD (NYM)-42,000 gal.; $ per gal.							
May	1.8913	1.9028		1.8815	**1.8925**	-.0032	64,979
June	1.8927	1.9047		1.8835	**1.8947**	-.0028	98,269
Gasoline-NY RBOB (NYM)-42,000 gal.; $ per gal.							
May	2.0384	2.0547		2.0292	**2.0445**	.0046	64,019
June	2.0393	2.0572		2.0322	**2.0463**	.0037	115,826
Natural Gas (NYM)-10,000 MMBtu.; $ per MMBtu.							
May	2.707	2.753		2.694	**2.749**	.069	110,149
June	2.773	2.821		2.765	**2.818**	.064	164,666
July	2.843	2.890		2.840	**2.885**	.056	184,730
Aug	2.875	2.918		2.867	**2.912**	.054	69,777
Sept	2.854	2.903		2.853	**2.895**	.052	102,058
Oct	2.873	2.920		2.873	**2.912**	.050	128,413

Agriculture Futures

	Open	Contract High	hi lo	Low	Settle	Chg	Open interest
Corn (CBT)-5,000 bu.; cents per bu.							
May	588.75	596.75		588.25	**592.00**	6.50	323,909
July	576.50	584.50		576.50	**580.50**	6.75	705,249
Oats (CBT)-5,000 bu.; cents per bu.							
May	381.00	384.50		378.75	**380.75**	...	1,333
July	381.75	384.50		380.75	**382.50**	1.50	2,270
Soybeans (CBT)-5,000 bu.; cents per bu.							
May	1439.75	1454.50		1434.75	**1449.75**	16.50	185,947
July	1430.00	1441.75		1423.50	**1436.50**	14.00	316,745
Soybean Meal (CBT)-100 tons; $ per ton.							
May	404.40	408.90		401.70	**407.50**	5.30	67,331
July	408.10	412.60		405.60	**411.30**	4.90	171,750
Soybean Oil (CBT)-60,000 lbs.; cents per lb.							
May	56.65	56.73		55.86	**56.27**	-.06	71,386
July	54.50	54.55		53.68	**53.87**	-.37	194,831
Rough Rice (CBT)-2,000 cwt.; $ per cwt.							
May	12.90	12.96		12.83	**12.85**	-.04	4,705
July	13.16	13.21		13.12	**13.14**	-.02	3,124
Wheat (CBT)-5,000 bu.; cents per bu.							
May	653.00	660.75		651.00	**652.25**	-.25	65,728
July	655.75	663.00		652.50	**653.75**	-1.25	216,120
Wheat (KC)-5,000 bu.; cents per bu.							
May	610.00	618.50		609.50	**612.00**	2.75	36,443
July	617.25	625.75		616.50	**618.75**	2.50	111,702
Cattle-Feeder (CME)-50,000 lbs.; cents per lb.							
April	139.650	139.650		137.150	**137.725**	-1.900	1,635
Aug	154.300	154.300		150.675	**152.775**	-1.775	19,981
Cattle-Live (CME)-40,000 lbs.; cents per lb.							
April	121.025	121.225		119.450	**120.350**	-.500	7,410
June	119.400	119.400		117.550	**118.600**	-.575	143,415
Hogs-Lean (CME)-40,000 lbs.; cents per lb.							
May	102.675	105.975		102.675	**105.650**	3.175	3,058
June	101.200	105.375		101.100	**104.325**	2.625	107,209
Lumber (CME)-110,000 bd. ft., $ per 1,000 bd. ft.							
May	1291.70	1326.70	▲	1287.50	**1326.70**	32.00	1,309
July	1177.30	1199.90	▲	1177.30	**1199.90**	32.00	1,196
Milk (CME)-200,000 lbs., cents per lb.							
April	17.68	17.72		17.66	**17.67**	.03	3,356
May	19.04	19.39		18.82	**19.16**	.12	4,739
Cocoa (ICE-US)-10 metric tons; $ per ton.							
May	2,447	2,489		2,415	**2,437**	29	1,683
July	2,485	2,501		2,469	**2,492**	28	93,738
Coffee (ICE-US)-37,500 lbs.; cents per lb.							
May	129.40	131.55		129.05	**129.85**	.70	16,177
July	131.35	133.60		131.10	**131.90**	.70	100,739
Sugar-World (ICE-US)-112,000 lbs.; cents per lb.							
May	16.67	16.72		16.26	**16.29**	-.43	106,749
July	16.52	16.60		16.18	**16.21**	-.36	398,814
Sugar-Domestic (ICE-US)-112,000 lbs.; cents per lb.							
July	31.60	31.60		31.60	**31.60**	...	3,381
Cotton (ICE-US)-50,000 lbs.; cents per lb.							
May	83.81	85.04		83.12	**83.26**	-.45	14,207
July	85.04	86.48		84.54	**84.71**	-.32	96,676
Orange Juice (ICE-US)-15,000 lbs.; cents per lb.							
May	113.95	114.75		111.80	**113.95**	...	4,679
July	116.00	117.20		114.60	**116.65**	.45	6,514

Interest Rate Futures

	Open	Contract High	hi lo	Low	Settle	Chg	Open interest
Ultra Treasury Bonds (CBT) - $100,000; pts 32nds of 100%							
June	187-130	188-130		186-030	**186-130**	-1-05.0	1,137,279
Treasury Bonds (CBT)-$100,000; pts 32nds of 100%							
June	157-290	158-130		157-070	**157-160**	-16.0	1,182,316
Sept					**155-300**	-16.0	38
Treasury Notes (CBT)-$100,000; pts 32nds of 100%							
June	132-110	132-180		132-015	**132-075**	-4.5	3,898,374
Sept					**131-130**	-4.5	4,284
5 Yr. Treasury Notes (CBT)-$100,000; pts 32nds of 100%							
June	123-292	124-012		123-255	**123-305**	-.2	3,346,107
2 Yr. Treasury Notes (CBT)-$200,000; pts 32nds of 100%							
June	110-115	110-120		110-113	**110-118**	.2	2,270,631
30 Day Federal Funds (CBT)-$5,000,000; 100 - daily avg.							
April	99.9300	99.9325		99.9300	**99.9325**	.0025	153,392
May	99.9150	99.9200		99.9150	**99.9200**	.0050	138,930
10 Yr. Del. Int. Rate Swaps (CBT)-$100,000; pts 32nds of 100%							
June					**91-190**	-7.0	150,352
Eurodollar (CME)-$1,000,000; pts of 100%							
April	99.8150	99.8150		99.8125	**99.8140**	.0015	187,409
June	99.8100	99.8150	▼	99.8100	**99.8100**	...	1,215,862
Dec'22	99.5600	99.5800		99.5550	**99.5750**	.0150	879,809
March'23	99.4750	99.5000		99.4650	**99.4950**	.0200	1,132,116

Currency Futures

	Open	Contract High	hi lo	Low	Settle	Chg	Open interest
Japanese Yen (CME)-¥12,500,000; $ per 100¥							
April	.9189	.9258		.9189	**.9244**	.0052	352
June	.9195	.9263		.9193	**.9255**	.0058	163,146
Canadian Dollar (CME)-CAD 100,000; $ per CAD							
April	.7990	.8018		.7973	**.7981**	-.0019	66
June	.7996	.8020		.7972	**.7982**	-.0019	166,093
British Pound (CME)-£62,500; $ per £							
April	1.3857	1.3968		1.3811	**1.3950**	.0115	356
June	1.3836	1.3996		1.3812	**1.3993**	.0156	153,647
Swiss Franc (CME)-CHF 125,000; $ per CHF							
June	1.0891	1.0971		1.0868	**1.0951**	.0064	42,490
Sept	1.0906	1.0997		1.0896	**1.0978**	.0064	158
Australian Dollar (CME)-AUD 100,000; $ per AUD							
April	.7717	.7784		.7707	**.7761**	.0028	100
June	.7730	.7787		.7708	**.7762**	.0027	135,057
Mexican Peso (CME)-MXN 500,000; $ per MXN							
April	.05002	.05044		.05020	**.05038**	.00018	21
June	.04991	.05022		.04984	**.05015**	.00024	140,985
Euro (CME)-€125,000; $ per €							
April	1.1968	1.2048		1.1943	**1.2018**	.0039	1,183
June	1.1992	1.2063		1.1956	**1.2053**	.0061	644,922

Index Futures

	Open	Contract High	hi lo	Low	Settle	Chg	Open interest
Mini DJ Industrial Average (CBT)-$5 x index							
June	34015	34048		33860	**33958**	-123	95,212
Sept	33917	33960		33758	**33848**	-123	313
S&P 500 Index (CME)-$250 x index							
June	4167.80	4173.90	▲	4156.60	**4155.50**	-20.80	31,478
Mini S&P 500 (CME)-$50 x index							
June	4165.00	4174.75		4141.75	**4155.50**	-20.75	2,619,882
Dec	4150.00	4154.25		4124.00	**4135.00**	-22.50	44,717
Mini S&P Midcap 400 (CME)-$100 x index							
June	2710.00	2719.30		2686.30	**2701.30**	-15.30	45,705
Sept	2702.30	2712.50		2686.30	**2698.90**	-15.40	46
Mini Nasdaq 100 (CME)-$20 x index							
June	13989.00	14052.25		13821.00	**13897.25**	-132.25	210,247
Sept	13978.25	14037.50		13811.00	**13885.00**	-131.75	1,245
Mini Russell 2000 (CME)-$50 x index							
June	2255.20	2256.00		2211.90	**2229.30**	-29.70	454,628
Sept	2245.10	2254.00		2209.00	**2225.40**	-29.60	416
Mini Russell 1000 (CME)-$50 x index							
June	2348.70	2354.30		2334.50	**2340.90**	-14.50	9,366
U.S. Dollar Index (ICE-US)-$1,000 x index							
June	91.58	91.75		91.03	**91.05**	-.49	35,879
Sept	91.57	91.70		91.02	**91.04**	-.49	809

Source: FactSet

Cash Prices | wsj.com/market-data/commodities

Monday, April 19, 2021

These prices reflect buying and selling of a variety of actual or "physical" commodities in the marketplace—separate from the futures price on an exchange, which reflects what the commodity might be worth in future months.

	Monday
Energy	
Coal,C.Aplc.,12500Btu,1.2SO2-r,w	**59.700**
Coal,PwdrRvrBsn,8800Btu,0.8SO2-r,w	**12.100**
Metals	
Gold, per troy oz	
Engelhard industrial	**1769.00**
Handy & Harman base	**1774.50**
Handy & Harman fabricated	**1969.70**
LBMA Gold Price AM	***1766.45**
LBMA Gold Price PM	***1774.45**
Krugerrand,wholesale-e	**1841.53**
Maple Leaf-e	**1859.24**
American Eagle-e	**1859.24**
Mexican peso-e	**2142.93**
Austria crown-e	**1738.64**
Austria phil-e	**1859.24**
Silver, troy oz.	
Engelhard industrial	**25.8000**
Handy & Harman base	**25.8050**
Handy & Harman fabricated	**32.2560**
LBMA spot price	***£18.9600**
(U.S.$ equivalent)	***26.1400**
Coins,wholesale $1,000 face-a	**20970**
Other metals	
LBMA Platinum Price PM	***1199.0**
Platinum,Engelhard industrial	**1226.0**
Palladium,Engelhard industrial	**2826.0**
Aluminum, LME, $ per metric ton	***2308.5**
Copper,Comex spot	**4.2500**
Iron Ore, 62% Fe CFR China-s	**181.2**
Shredded Scrap, US Midwest-s,m	**432**
Steel, HRC USA, FOB Midwest Mill-s	**1420**
Fibers and Textiles	
Burlap,10-oz,40-inch NY yd-n,w	**0.7275**
Cotton,1 1/16 std lw-mdMphs-u	**0.8246**
Cotlook 'A' Index-t	***92.25**
Hides,hvy native steers piece fob-u	**n.a.**
Wool,64s,staple,Terr del-u,w	**n.a.**
Grains and Feeds	
Barley,top-quality Mnpls-u	**n.a.**
Bran,wheat middlings, KC-u	**155**
Corn,No. 2 yellow,Cent IL-bp,u	**5.8800**
Corn gluten feed,Midwest-u,w	**177.3**
Corn gluten meal,Midwest-u,w	**611.4**
Cottonseed meal-u,w	**455**
Hominy feed,Cent IL-u,w	**168**
Meat-bonemeal,50% pro Mnpls-u,w	**345**
Oats,No.2 milling,Mnpls-u	**3.8275**
Rice, Long Grain Milled, No. 2 AR-u,w	**26.88**
Sorghum,(Milo) No.2 Gulf-u	**7.5375**
SoybeanMeal,Cent IL,rail,ton48%-u,w	**396.00**
Soybeans,No.1 yllw IL-bp,u	**14.5600**
Wheat,Spring14%-pro Mnpls-u	**7.8950**
Wheat,No.2 soft red,St.Louis-u	**6.7975**
Wheat - Hard - KC (USDA) $ per bu-u	**6.4200**
Wheat,No.1soft white,Portld,OR-u	**6.7000**
Food	
Beef,carcass equiv. index	
choice 1-3,600-900 lbs.-u	**222.31**
select 1-3,600-900 lbs.-u	**213.37**
Broilers, National comp wtd. avg.-u,w	**0.9995**
Butter,AA Chicago	**1.8700**
Cheddar cheese,bbl,Chicago	**174.25**
Cheddar cheese,blk,Chicago	**180.00**
Milk,Nonfat dry,Chicago lb.	**123.50**
Coffee,Brazilian,Comp	**1.2181**
Coffee,Colombian, NY	**1.7987**
Eggs,large white,Chicago-u	**0.8650**
Flour,hard winter KC	**17.35**
Hams,17-20 lbs,Mid-US fob-u	**0.88**
Hogs,Iowa-So. Minnesota-u	**99.86**
Pork bellies,12-14 lb MidUS-u	**n.a.**
Pork loins,13-19 lb MidUS-u	**1.1294**
Steers,Tex.-Okla. Choice-u	**120.00**
Steers,feeder,Okla. City-u,w	**163.13**
Fats and Oils	
Degummed corn oil, crude wtd. avg.-u,w	**60.2500**
Grease,choice white,Chicago-h	**0.5000**
Lard,Chicago-u	**n.a.**
Soybean oil,crude;Centl IL-u,w	**0.5843**
Tallow,bleach;Chicago-h	**0.5300**
Tallow,edible,Chicago-u	**n.a.**

KEY TO CODES: A=ask; B=bid; BP=country elevator bids to producers; C=corrected; E=Manfra,Tordella & Brookes; H=American Commodities Brokerage Co; M=monthly; N=nominal; n.a.=not quoted or not available; R=SNL Energy; S=Platts-TSI; T=Cotlook Limited; U=USDA; W=weekly; Z=not quoted. *Data as of 4/18

Source: Dow Jones Market Data

Borrowing Benchmarks | wsj.com/market-data/bonds/benchmarks

Money Rates

April 19, 2021

Key annual interest rates paid to borrow or lend money in U.S. and international markets. Rates below are a guide to general levels but don't always represent actual transactions.

Inflation

	March index level	Chg From (%) Feb. '21	March '20
U.S. consumer price index			
All items	**264.877**	0.71	2.6
Core	**271.713**	0.38	1.6

International rates

	Latest	Week ago	52-Week High	52-Week Low
Prime rates				
U.S.	**3.25**	3.25	3.25	3.25
Canada	**2.45**	2.45	2.45	2.45
Japan	**1.475**	1.475	1.475	1.475
Policy Rates				
Euro zone	**0.00**	0.00	0.00	0.00
Switzerland	**0.00**	0.00	0.50	0.00
Britain	**0.10**	0.10	0.10	0.10
Australia	**0.10**	0.10	0.25	0.10
Overnight repurchase				
U.S.	**0.00**	0.00	0.14	-0.04

U.S. government rates

	Latest	Week ago	52-Week High	52-Week Low
Discount	**0.25**	0.25	0.25	0.25
Federal funds				
Effective rate	**0.0700**	0.0700	0.1000	0.0600
High	**0.1000**	0.1000	0.1500	0.0800
Low	**0.0300**	0.0300	0.0600	0.0000
Bid	**0.0600**	0.0600	0.1000	0.0100
Offer	**0.0900**	0.0800	0.1100	0.0500
Treasury bill auction				
4 weeks	**0.010**	0.010	0.150	0.005
13 weeks	**0.025**	0.020	0.175	0.015
26 weeks	**0.040**	0.040	0.185	0.035

Secondary market

	Latest	Week ago	52-Week High	52-Week Low
Fannie Mae				
30-year mortgage yields				
30 days	**2.401**	2.468	2.622	1.751
60 days	**2.430**	2.498	2.674	1.804

Other short-term rates

	Latest	Week ago	52-Week high	52-Week low
Call money	**2.00**	2.00	2.00	2.00
Commercial paper (AA financial)				
90 days	**n.a.**	n.a.	0.26	0.04
Libor				
One month	**0.11375**	0.11225	0.66738	0.10300
Three month	**0.18600**	0.18575	1.09763	0.17525
Six month	**0.22175**	0.21463	1.07588	0.18950
One year	**0.28675**	0.28438	0.98650	0.27588
Euro Libor				
One month	**-0.576**	-0.577	-0.366	-0.607
Three month	**-0.545**	-0.545	-0.142	-0.574
Six month	**-0.525**	-0.528	-0.052	-0.543
One year	**-0.497**	-0.501	0.008	-0.511
Secured Overnight Financing Rate	**0.01**	0.01	0.13	0.01

	Latest	Value Traded	52-Week High	52-Week Low
DTCC GCF Repo Index				
Treasury	**0.008**	57.600	0.151	-0.008
MBS	**0.010**	24.820	0.169	0.002

Notes on data:

U.S. prime rate is the base rate on corporate loans posted by at least 70% of the 10 largest U.S. banks, and is effective March 16, 2020. **Other prime rates** aren't directly comparable; lending practices vary widely by location; **Discount rate** is effective March 16, 2020. **Secured Overnight Financing Rate** is as of April 16, 2021. **DTCC GCF Repo Index** is Depository Trust & Clearing Corp.'s weighted average for overnight trades in applicable CUSIPs. Value traded is in billions of U.S. dollars. **Federal-funds rates** are Tullett Prebon rates as of 5:30 p.m. ET.

Sources: Federal Reserve; Bureau of Labor Statistics; DTCC; FactSet; Tullett Prebon Information, Ltd.

Key Interest Rates

Data are annualized on a 360-day basis. Treasury yields are per annum, on actively traded noninflation and inflation-indexed issues that are adjusted to constant maturities. Data are from weekly Federal Reserve release H.15.

	Week Ended Apr 16	Week Ended Apr 9	52-Week High	52-Week Low
Federal funds (effective)	**0.07**	0.07	0.10	0.04
Commercial paper				
Nonfinancial				
1-month	**0.05**	0.05	0.38	0.05
2-month	**0.05**	0.06	0.58	0.05
3-month	**0.06**	0.05	0.91	0.05
Financial				
1-month	**n.a.**	0.09	0.17	0.08
2-month	**0.10**	0.10	0.23	0.08
3-month	**0.11**	0.11	0.21	0.09
Discount window primary credit	**0.25**	0.25	0.25	0.25
Treasury yields at constant maturities				
1-month	**0.02**	0.02	0.15	0.01
3-month	**0.02**	0.02	0.17	0.02
6-month	**0.04**	0.04	0.21	0.04
1-year	**0.06**	0.06	0.21	0.06
2-year	**0.16**	0.16	0.22	0.11
3-year	**0.35**	0.35	0.35	0.13
5-year	**0.85**	0.88	0.92	0.21
7-year	**1.29**	1.34	1.39	0.39
10-year	**1.62**	1.68	1.72	0.55
20-year	**2.19**	2.25	2.32	0.99
Treasury yields (secondary market)				
1-month	**0.02**	0.02	0.14	0.01
3-month	**0.02**	0.02	0.17	0.02
6-month	**0.04**	0.04	0.21	0.04
TIPS				
5-year	**-1.70**	-1.65	-0.29	-1.84
7-year	**-1.16**	-1.10	-0.40	-1.44
10-year	**-0.71**	-0.65	-0.41	-1.05
20-year	**-0.19**	-0.14	-0.08	-0.70
Long-term avg	**-0.05**	-0.01	0.03	-0.50

Notes on data:
Federal-funds rate is an average for the seven days ended Wednesday, weighted according to rates on broker trades; **Commercial paper rates** are discounted offer rates interpolated from sales by discounted averages of dealer bid rates on nationally traded certificates of deposit; **Discount window primary credit rate** is charged for discounts made and advances extended under the Federal Reserve's primary credit discount window program; **rate** is average for seven days ended Wednesday; **Inflation-indexed long-term TIPS** average is indexed and is based on the unweighted average bid yields for all TIPS with remaining terms to maturity of 10 years or more;

Sources: Federal Reserve; for additional information on these rate data and their derivation, please see, www.federalreserve.gov/releases/h15/data.htm

Bonds | wsj.com/market-data/bonds/benchmarks

Tracking Bond Benchmarks

Return on investment and spreads over Treasurys and/or yields paid to investors compared with 52-week highs and lows for different types of bonds

Total return close	YTD total return (%)	Index	Yield (%) Latest	Low	High
Broad Market Bloomberg Barclays					
2228.90	-2.6	U.S. Aggregate	1.520	1.020	1.630
U.S. Corporate Indexes Bloomberg Barclays					
3327.63	-3.7	U.S. Corporate	2.200	1.740	2.840
3062.04	-1.6	Intermediate	1.500	1.080	2.380
4819.89	-7.1	Long term	3.360	2.730	3.720
669.39	-4.2	Double-A-rated	1.840	1.300	1.990
889.87	-3.2	Triple-B-rated	2.430	2.010	3.460
High Yield Bonds ICE BofA					
504.34	1.8	High Yield Constrained	4.051	3.955	8.476
483.97	5.9	Triple-C-rated	6.920	6.809	18.112
3365.79	1.1	High Yield 100	3.602	3.261	7.996
454.44	1.6	Global High Yield Constrained	4.107	4.037	8.456
345.17	2.2	Europe High Yield Constrained	2.439	2.434	6.011
U.S Agency Bloomberg Barclays					
1845.30	-1.1	U.S Agency	0.750	0.460	0.840
1615.26	-0.7	10-20 years	0.620	0.340	0.710
4056.37	-5.1	20-plus years	2.280	1.290	2.460
2855.70	-2.7	Yankee	1.750	1.370	2.260
Mortgage-Backed Bloomberg Barclays					
2217.81	-0.6	Mortgage-Backed	1.670	0.980	1.850
2164.73	-0.6	Ginnie Mae (GNMA)	1.610	0.290	1.840
1310.19	-0.5	Fannie mae (FNMA)	1.690	1.160	1.860
2009.41	-0.6	Freddie Mac (FHLMC)	1.700	1.140	1.870
598.02	0.4	Muni Master	0.825	0.725	1.940
422.67	0.2	7-12 year	0.858	0.712	1.912
484.90	0.5	12-22 year	1.227	1.095	2.352
474.43	1.2	22-plus year	1.776	1.682	3.262
Global Government J.P. Morgan†					
596.41	-3.1	Global Government	0.930	0.460	0.960
828.02	-4.1	Canada	1.470	0.610	1.520
408.15	-3.0	EMU§	0.399	0.010	411.523
765.52	-3.6	France	0.270	-0.160	0.340
535.85	-3.0	Germany	-0.130	-0.530	-0.120
294.49	-0.2	Japan	0.330	0.190	0.420
596.58	-3.5	Netherlands	-0.020	-0.450	-0.010
1026.43	-6.3	U.K.	1.060	0.410	1.170
909.70	-2.6	Emerging Markets**	4.758	4.295	6.612

*Constrained indexes limit individual issuer concentrations to 2%; the High Yield 100 are the 100 largest bonds † In local currency § Euro-zone bonds

** EMBI Global Index

Sources: ICE Data Services; Bloomberg Barclays; J.P.Morgan

Global Government Bonds: Mapping Yields

Yields and spreads over or under U.S. Treasurys on benchmark two-year and 10-year government bonds in selected other countries; arrows indicate whether the yield rose(▲) or fell (▼) in the latest session

Coupon (%)	Country/ Maturity, in years	Yield (%) Latest		Previous	Month ago	Year ago	Spread Under/Over U.S. Treasurys, in basis points Latest	Prev	Year ago
0.125	**U.S.** 2	**0.159**	▼	0.163	0.149	0.204			
1.125	10	**1.599**	▲	1.571	1.729	0.655			
5.500	**Australia** 2	**0.084**	▼	0.087	0.105	0.214	**-8.1**	-7.1	**1.2**
1.500	10	**1.672**	▼	1.692	1.817	0.855	**7.6**	10.7	**21.2**
0.000	**France** 2	**-0.652**	▼	-0.650	-0.633	-0.495	**-81.7**	-80.7	**-69.7**
0.000	10	**0.018**	▲	-0.007	-0.045	0.022	**-157.8**	-159.1	**-62.2**
0.000	**Germany** 2	**-0.677**	▲	-0.685	-0.692	-0.701	**-84.2**	-84.2	**-90.3**
0.000	10	**-0.234**	▲	-0.260	-0.290	-0.471	**-182.9**	-184.4	**-111.4**
0.050	**Italy** 2	**-0.344**	▼	-0.341	-0.387	0.799	**-50.9**	-49.8	**59.7**
0.900	10	**0.793**	▲	0.754	0.672	1.783	**-80.3**	-83.1	**114.0**
0.005	**Japan** 2	**-0.133**	▼	-0.130	-0.134	-0.140	**-29.8**	-28.7	**-34.2**
0.100	10	**0.086**	▼	0.090	0.116	0.016	**-151.0**	-149.4	**-62.7**
0.000	**Spain** 2	**-0.493**	▼	-0.483	-0.494	0.042	**-65.8**	-64.1	**-16.0**
0.100	10	**0.412**	▲	0.391	0.347	0.802	**-118.4**	-119.3	**15.8**
0.125	**U.K.** 2	**0.039**	▼	0.052	0.098	0.088	**-12.6**	-10.5	**-11.4**
4.750	10	**0.759**	▼	0.767	0.840	0.303	**-83.7**	-81.8	**-34.1**

Source: Tullett Prebon, Tradeweb ICE U.S. Treasury Close

Corporate Debt

Prices of firms' bonds reflect factors including investors' economic, sectoral and company-specific expectations

Investment-grade spreads that tightened the most...

Issuer	Symbol	Coupon (%)	Yield (%)	Maturity	Spread*, in basis points Current	One-day change	Last week
XLIT	...	4.450	1.07	March 31, '25	23	-31	53
ING Groep	INTNED	4.100	0.50	Oct. 2, '23	34	-12	55
Georgia–Pacific	...	7.250	2.25	June 1, '28	66	-10	n.a.
New York Life Global Funding	NYLIFE	2.000	1.00	Jan. 22, '25	16	-5	n.a.
Royal Bank of Canada	RY	2.250	0.75	Nov. 1, '24	41	-4	50
Principal Life Global Funding II	...	3.000	1.42	April 18, '26	59	-3	60
UnitedHealth	UNH	3.450	1.36	Jan. 15, '27	53	-3	n.a.
Volkswagen Group of America Finance	VW	0.875	0.68	Nov. 22, '23	52	-3	53

...And spreads that widened the most

Issuer	Symbol	Coupon (%)	Yield (%)	Maturity	Current	One-day change	Last week
Walt Disney	DIS	2.650	2.31	Jan. 13, '31	72	25	68
Apple	AAPL	2.400	0.29	May 3, '23	13	13	7
Altria	MO	5.375	4.20	Jan. 31, '44	190	11	177
Citigroup	C	5.300	3.59	May 6, '44	129	10	n.a.
Societe Generale	SOCGEN	3.625	3.88	March 1, '41	171	10	160
Verizon Communications	VZ	5.012	3.51	Aug. 21, '54	122	8	n.a.
Bank of America	BAC	4.200	1.20	Aug. 26, '24	86	7	74
Bank of Montreal	BMO	1.850	1.07	May 1, '25	24	7	n.a.

High-yield issues with the biggest price increases...

Issuer	Symbol	Coupon (%)	Yield (%)	Maturity	Bond Price as % of face value Current	One-day change	Last week
Transocean	RIG	7.500	17.86	April 15, '31	52.500	1.00	50.250
Rite Aid	RAD	7.700	8.13	Feb. 15, '27	98.000	0.70	n.a.
Ligado Networks	NEWLSQ	15.500	17.52	Nov. 1, '23	96.000	0.63	101.000
L Brands	LB	9.375	2.52	July 1, '25	127.130	0.47	126.750
Occidental Petroleum	OXY	6.450	5.23	Sept. 15, '36	112.751	0.25	111.500
Ford Motor Credit	...	4.389	2.71	Jan. 8, '26	107.375	0.25	106.750
Springleaf Finance	...	6.875	2.96	March 15, '25	114.300	0.17	114.125
American Airlines	AAL	11.750	4.85	July 15, '25	126.125	0.13	125.375

...And with the biggest price decreases

Issuer	Symbol	Coupon (%)	Yield (%)	Maturity	Current	One-day change	Last week
Teva Pharmaceutical Finance Netherlands	...	3.150	4.29	Oct. 1, '26	94.520	-0.98	97.000
Netflix	NFLX	5.375	2.71	Nov. 15, '29	120.250	-0.75	119.750
CIT	CIT	6.125	2.67	March 9, '28	121.587	-0.66	121.000
Prime Security Services Borrower	PRSESE	5.750	3.73	April 15, '26	109.120	-0.66	108.625
Springleaf Finance	...	7.125	3.39	March 15, '26	116.750	-0.63	117.000
Hughes Satellite Systems	...	6.625	4.33	Aug. 1, '26	110.720	-0.53	111.673
Bombardier	BBDBCN	7.450	7.06	May 1, '34	103.250	-0.50	104.250

*Estimated spread over 2-year, 3-year, 5-year, 10-year or 30-year hot-run Treasury; 100 basis points=one percentage pt.; change in spread shown is for Z-spread.
Note: Data are for the most active issue of bonds with maturities of two years or more

Source: MarketAxess

P2JW110000-0-B00900-1--------XA

BIGGEST 1,000 STOCKS

How to Read the Stock Tables

The following explanations apply to NYSE, NYSE Arca, NYSE American and Nasdaq Stock Market listed securities. Prices are composite quotations that include primary market trades as well as trades reported by Nasdaq BX (formerly Boston), Chicago Stock Exchange, Cboe, NYSE National and Nasdaq ISE.

The list comprises the 1,000 largest companies based on market capitalization.

Underlined quotations are those stocks with large changes in volume compared with the issue's average trading volume.

Boldfaced quotations highlight those issues whose price changed by 5% or more if their previous closing price was $2 or higher.

Footnotes:
†-New 52-week high.
↓-New 52-week low.
dd-Indicates loss in the most recent four quarters.
FD-First day of trading.
h-Does not meet continued listing standards
lf-Late filing
q-Temporary exemption from Nasdaq requirements.
t-NYSE bankruptcy
v-Trading halted on primary market.
vj-In bankruptcy or receivership or being reorganized under the Bankruptcy Code, or securities assumed by such companies.

Wall Street Journal stock tables reflect composite regular trading as of 4 p.m. and changes in the closing prices from 4 p.m. the previous day.

Monday, April 19, 2021

Stock	Sym	Close	Net Chg
A B C			
ABB	ABB	33.24	-0.14
AECOM	ACM	66.99	-0.06
AES	AES	28.34	-0.29
Aflac	AFL	53.56	0.11
AGCO	AGCO	151.72	-0.16
AGNC Invt	AGNC	17.34	-0.14
Ansys	ANSS	364.47	-9.46
ASETech	ASX	7.81	-0.14
ASML	ASML	630.11	-15.58
AT&T	T	29.99	0.04
AbbottLabs	ABT	124.93	0.18
AbbVie	ABBV	108.61	0.70
Abiomed	ABMD	329.42	-1.11
Accenture	ACN	286.54	-0.42
ActivisionBliz	ATVI	96.00	-0.48
Adobe	ADBE	516.17	-8.91
AdvanceAuto	AAP	192.54	-0.38
AdvMicroDevices	AMD	81.11	-1.04
Aegon	AEG	4.63	0.01
AffirmHldgs	**AFRM**	**66.02**	**-3.70**
AgilentTechs	A	133.50	-1.08
AgnicoEagle	AEM	65.60	1.02
AirProducts	APD	284.40	-3.08
Airbnb	ABNB	174.58	-4.11
AkamaiTech	AKAM	105.74	-0.22
AlaskaAir	ALK	68.77	-0.56
Albemarle	ALB	157.50	5.47
Albertsons	ACI	20.39	0.39
Alcon	ALC	73.78	-0.40
AlexandriaRlEst	ARE	176.58	0.93
AlexionPharm	ALXN	165.47	1.79
Alibaba	BABA	234.78	-3.91
AlignTech	ALGN	603.72	-2.61
Alleghany	Y	676.00	-2.21
Allegion	ALLE	132.34	-0.67
AlliantEnergy	LNT	56.19	0.03
Allstate	ALL	122.84	0.64
AllyFinancial	ALLY	48.09	0.38
AlnylamPharm	ALNY	137.40	-1.48
Alphabet C	GOOG	2302.40	4.64
Alphabet A	GOOGL	2289.76	7.01
AlticeUSA	ATUS	34.79	-0.23
Altria	**MO**	**49.08**	**-3.23**
AlumofChina	ACH	12.26	0.06
Amazon.com	AMZN	3372.01	-27.43
Ambev	ABEV	2.86	-0.02
Amcor	AMCR	11.86	-0.09
Amdocs	DOX	76.87	0.76
Amedisys	AMED	281.03	-1.93
Amerco	UHAL	600.88	-11.62
Ameren	AEE	83.79	-0.45
AmericaMovil	AMX	14.41	-0.10
AmericaMovil A	AMOV	14.18	-0.28
AmerAirlines	AAL	21.55	-0.48
AEP	AEP	88.65	0.10
AmerExpress	AXP	148.54	-1.45
AmericanFin	AFG	119.38	-0.04
AmHomes4Rent	AMH	36.69	-0.37
AIG	AIG	46.73	-0.37
AmerTowerREIT	AMT	248.54	-0.08
AmerWaterWorks	AWK	158.72	-1.40
AmericoldRealty	COLD	38.70	-0.54
Ameriprise	AMP	246.71	-2.06
AmerisourceBrgn	ABC	119.50	-0.19
Ametek	AME	132.12	-0.73
Amgen	AMGN	255.97	0.26
Amphenol	APH	67.51	-0.97
AnalogDevices	ADI	156.91	-2.60
Anaplan	PLAN	58.36	-2.15
Angi	ANGI	13.79	-0.01
AngloGoldAsh	AU	22.04	0.40
AB InBev	BUD	68.71	0.57
AnnalyCap	NLY	8.80	-0.06
Anthem	ANTM	379.66	4.04
Aon	AON	235.83	-3.29
ApolloGlbMgmt	APO	51.49	-0.08
Appian	**APPN**	**125.87**	**-9.36**
Apple	AAPL	134.84	0.68
ApplMaterials	AMAT	130.89	-2.84
Applovin	APP	58.86	-2.14
Aptargroup	ATR	149.71	1.63
Aptiv	APTV	140.32	-0.73
Aramark	ARMK	39.50	-0.14
ArcelorMittal	MT	29.87	-0.24
ArchCapital	ACGL	39.70	-0.38
ArcherDaniels	ADM	59.29	-0.16
AresMgmt	ARES	56.01	-0.12
arGEN-X	ARGX	274.80	-6.92
AristaNetworks	ANET	314.81	-1.86
ArrowElec	ARW	117.86	[illegible]
AspenTech	AZPN	149.67	-3.01
Assurant	AIZ	153.24	0.74
AstraZeneca	AZN	51.63	0.89
Athene	ATH	55.53	0.08
Atlassian	TEAM	228.21	-6.55
AtmosEnergy	ATO	101.84	0.02
Autodesk	ADSK	290.20	-9.96
Autohome	ATHM	94.29	0.40
Autoliv	ALV	97.35	-0.22
ADP	ADP	192.75	-0.19
AutoZone	AZO	1504.30	8.46
Avalara	AVLR	143.86	-4.47
Avalonbay	AVB	190.36	0.55
Avangrid	AGR	52.74	0.04
Avantor	AVTR	31.88	-0.32
AveryDennison	AVY	198.60	[illegible]
AxonEnterprise	AXON	150.55	-2.19
BCE	BCE	46.40	-0.06
BHP Group	BHP	74.12	0.37
BHP Group	BBL	62.27	0.34
BP	BP	25.31	0.13
Baidu	BIDU	209.90	-3.66
BakerHughes	BKR	20.03	-0.07
Ball	BLL	90.90	-0.11
BancoBilbaoViz	BBVA	5.42	0.15
BancoBradesco	BBDO	3.74	-0.01
BancodeChile	BCH	24.48	-0.16
BancoSantander	BSBR	6.95	-0.05
BcoSantChile	BSAC	25.71	0.07
BancoSantander	SAN	3.54	0.08
BankofAmerica	BAC	39.17	0.02
BankofMontreal	BMO	90.97	-0.81
BankNY Mellon	BK	46.81	0.74
BkNovaScotia	BNS	61.61	-0.47
Barclays	BCS	10.44	-0.06
BarrickGold	GOLD	22.11	-0.12
BauschHealth	BHC	29.12	-0.91
BaxterIntl	BAX	86.52	-0.04
BectonDickinsn	BDX	258.96	-1.98
BeiGene	BGNE	303.37	-2.17
BentleySystems	BSY	49.93	-0.72
Berkley	WRB	80.76	0.85
BerkHathwy A	BRK.A	406505	-2745.00
BerkHathwy B	BRK.B	270.28	-1.83
BerryGlobal	BERY	62.83	0.03
BestBuy	BBY	118.84	-1.03
BeyondMeat	BYND	135.25	-2.06
Bilibili	BILI	105.72	2.24
Bill.com	BILL	151.39	-2.98
Bio-Techne	TECH	414.51	-4.04
Bio-RadLab A	BIO	629.59	3.47
Biogen	BIIB	269.05	-1.26
BioMarinPharm	BMRN	79.59	0.19
BioNTech	BNTX	149.48	-2.06
BlackKnight	BKI	73.11	-0.77
BlackRock	BLK	811.09	-0.36
Blackstone	BX	79.30	0.02
Boeing	BA	244.15	-4.03
BookingHldgs	BKNG	2456.20	-20.70
BoozAllen	BAH	84.83	0.16
BorgWarner	BWA	49.32	0.36
BostonBeer	SAM	1287.69	-7.24
BostonProps	BXP	106.15	0.71
BostonSci	BSX	40.88	-0.03
BrightHorizons	BFAM	164.66	-2.43
BristolMyers	BMY	65.60	0.43
BritishAmTob	BTI	39.61	-0.90
Broadcom	AVGO	462.00	-16.79
BroadridgeFinl	BR	155.94	-1.06
BrookfieldMgt	BAM	45.01	-0.39
BrookfieldInfr	BIP	54.74	-0.35
BrookfieldRenewPtr	BEPU	18.00	-0.12
BrookfieldRenew	BEPC	46.29	-2.23
Brown&Brown	BRO	49.00	-0.05
Brown-Forman B	BF.B	74.84	0.58
Brown-Forman A	BF.A	70.17	0.26
Bruker	BRKR	66.97	-0.68
BuildersFirst	BLDR	49.81	...
Bunge	BG	83.18	-0.44
BurlingtonStrs	BURL	320.88	-3.85
CBRE Group	CBRE	82.34	0.52
CDW	CDW	182.20	-1.81
CF Industries	CF	46.91	-0.40
CGI	GIB	86.16	-0.87
CH Robinson	CHRW	98.64	-2.12
CME Group	CME	205.59	-1.99
CMS Energy	CMS	64.02	0.16
CNA Fin	CNA	46.70	-0.06
CNH Indl	CNHI	15.38	-0.46
CRH	CRH	48.00	-0.18
CRISPR Therap	CRSP	115.04	-3.52
CSX	CSX	98.71	0.07
CVS Health	CVS	75.75	-0.13
CableOne	CABO	1813.57	2.58
CadenceDesign	CDNS	141.94	-5.32
CAE	CAE	29.30	-0.43
CaesarsEnt	**CZR**	**88.75**	**-4.89**
CamdenProperty	CPT	117.12	1.07
CampbellSoup	CPB	49.66	0.26
CIBC	CM	99.39	-0.38
CanNtlRlwy	CNI	118.13	-0.64
CanNaturalRes	CNQ	30.58	-0.26
CanPacRlwy	CP	365.37	-3.95
Canon	CAJ	23.91	-0.01
CanopyGrowth	CGC	27.46	-0.34
CapitalOne	COF	135.41	-1.27
CardinalHealth	CAH	61.23	-0.08
Carlisle	CSL	177.00	1.89
Carlyle	CG	39.84	0.13
CarMax	KMX	130.10	0.13
Carnival	CCL	26.89	-0.14
Carnival	CUK	23.03	-0.13
CarrierGlobal	CARR	43.88	-0.12
Carvana	CVNA	276.50	1.61
Catalent	CTLT	108.63	-1.97
Caterpillar	CAT	232.39	-0.54
Celanese	CE	158.27	0.35
Cemex	CX	7.34	-0.18
CenovusEnergy	CVE	7.85	-0.12
Centene	CNC	65.38	0.42
CenterPointEner	CNP	23.78	-0.28
CentraisEIBras	EBR	6.38	0.07
CeridianHCM	CDAY	92.14	-1.80
Cerner	CERN	74.68	-0.63
CharlesRiverLabs	CRL	324.59	1.21
CharterComms	CHTR	644.42	0.05
CheckPoint	CHKP	119.18	0.35
Chegg	CHGG	89.98	-2.22
ChemedCorp	CHE	476.45	1.88
ChenereEnerPtrs	CQP	41.36	-0.21
Chevron	CVX	103.26	0.30
Chewy	**CHWY**	**78.98**	**-5.72**
ChinaEastrnAir	CEA	23.13	-0.08
ChinaLifeIns	LFC	10.12	-0.12
ChinaPetrol	SNP	54.88	0.17
ChinaSoAirlines	ZNH	36.35	0.35
Chipotle	CMG	1550.01	14.97
Chubb	CB	161.71	-1.06
ChunghwaTel	CHT	40.63	0.16
Church&Dwight	CHD	87.34	-0.60
ChurchillDowns	CHDN	214.52	-6.14
Ciena	CIEN	54.88	-1.99
Cigna	CI	259.25	1.22
CincinnatiFin	CINF	107.22	0.81
Cintas	CTAS	343.74	-5.78
CiscoSystems	CSCO	52.85	0.05
Citigroup	C	72.13	-0.32
CitizensFin	CFG	44.61	-0.22
CitrixSystems	CTXS	138.85	-1.65
Clarivate	CLVT	25.42	-0.73
Cleveland-Cliffs	CLF	17.39	-0.60
Clorox	CLX	189.96	-0.77
Cloudflare	NET	73.30	-0.94
Coca-Cola	KO	54.00	0.32
Coca-Cola Europ	CCEP	55.17	0.22
Cognex	CGNX	85.69	-0.07
CognizantTech	CTSH	80.40	-0.22
CoinbaseGlbl	COIN	333.00	-9.00
ColgatePalm	CL	80.37	-0.33
Comcast A	CMCSA	54.14	-0.97
Comerica	CMA	73.03	0.17
CommerceBcshrs	CBSH	76.64	-0.50
CiaSiderurgica	SID	8.51	-0.03
CongraBrands	CAG	37.85	0.30
ConocoPhillips	COP	50.89	-0.20
ConEd	ED	78.35	0.14
ConstBrands B	**STZ.B**	**238.00**	**15.35**
ConstBrands A	STZ	237.60	-1.26
ContinentalRscs	CLR	26.53	-0.30
Cooper	COO	399.33	-0.19
Copart	CPRT	121.76	-1.72
Corning	GLW	46.06	0.26
Corteva	CTVA	47.52	0.02
CoStar	CSGP	899.00	-5.93
Costco	COST	369.95	-1.17
CoupaSoftware	COUP	264.59	-6.92
Coupang	CPNG	45.72	-0.18
Credicorp	BAP	134.09	-6.95
CreditSuisse	CS	10.70	-0.15
Cree	CREE	109.69	-2.39
CrowdStrike	CRWD	213.37	-1.83
CrownCastle	CCI	180.72	1.10
CrownHoldings	CCK	108.77	-0.32
CubeSmart	CUBE	41.05	0.44
Cummins	CMI	252.81	-1.54
CureVac	CVAC	113.00	5.71
CyrusOne	CONE	73.64	1.07
D E F			
DISH Network	DISH	37.00	-1.01
DTE Energy	DTE	139.70	-0.98
Danaher	DHR	241.99	-1.07
Darden	DRI	145.96	-0.37
DarlingIngred	DAR	72.10	-0.91
Datadog	DDOG	87.89	-2.45
DaVita	DVA	110.78	-2.33
DeckersOutdoor	DECK	337.26	-3.80
Deere	DE	380.72	-2.35
DellTechC	DELL	103.42	-2.00
DeltaAir	DAL	46.75	-0.18
DentsplySirona	XRAY	65.53	0.11
DeutscheBank	DB	12.52	-0.03
DevonEnergy	DVN	22.03	-0.15
DexCom	DXCM	393.04	-7.00
Diageo	DEO	180.77	0.59
DiamondbkEner	FANG	77.67	0.13
DigitalRealty	DLR	147.76	1.80
DiscoveryFinSvcs	DFS	100.61	-1.66
DiscoveryB	DISCB	83.85	0.20
DiscoveryA	DISCA	36.37	-0.97
DiscoveryC	DISCK	31.20	-0.95
Disney	DIS	187.43	0.17
DocuSign	DOCU	223.30	-8.63
DolbyLab	DLB	101.21	-0.89
DollarGeneral	DG	216.73	-0.61
DollarTree	DLTR	116.95	-0.41
DominionEner	D	78.74	-0.15
Domino's	DPZ	397.96	3.13
DoorDash	DASH	146.67	-2.82
Dover	DOV	140.43	-0.14
Dow	DOW	64.55	0.13
DrReddy'sLab	RDY	66.00	0.99
DraftKings	DKNG	56.68	-1.30
Dropbox	DBX	26.12	-0.26
DukeEnergy	DUK	100.20	-0.47
DukeRealty	DRE	44.83	0.15
Dun&Bradstreet	DNB	23.65	-0.23
DuPont	DD	76.97	0.27
Dynatrace	DT	52.29	-0.82
ENI	E	24.91	0.07
EOG Rscs	EOG	71.29	0.55
EPAM Systems	EPAM	466.94	0.90
EastWestBncp	EWBC	74.65	...
EastmanChem	EMN	113.56	-1.38
Eaton	ETN	140.78	-0.37
eBay	EBAY	62.79	-1.14
Ecolab	ECL	220.31	-2.84
Ecopetrol	EC	12.88	0.03
EdisonInt	EIX	61.12	-0.44
EdwardsLife	EW	88.56	-0.46
ElancoAnimal	ELAN	30.00	0.02
Elastic	ESTC	123.14	-5.31
ElectronicArts	EA	139.63	-1.42
EmersonElec	EMR	91.79	-0.41
Enbridge	ENB	37.38	0.06
EnelAmericas	ENIA	7.82	-0.34
EnergyTransfer	ET	8.04	0.17
EnphaseEnergy	**ENPH**	**141.14**	**-8.87**
Entegris	ENTG	113.15	-4.23
Entergy	ETR	106.58	-0.06
EnterpriseProd	EPD	22.97	0.04
Equifax	EFX	189.59	-1.39
Equinix	EQIX	717.29	9.15
Equinor	EQNR	19.85	0.04
Equitable	EQH	33.62	-0.08
EquityLife	ELS	67.83	0.43
EquityResdntl	EQR	73.03	0.41
ErieIndemnity A	ERIE	224.86	-2.45
EssentialUtil	WTRG	47.36	0.12
EssexProp	ESS	290.57	1.08
EsteeLauder	EL	309.18	-3.11
Etsy	ETSY	213.19	-6.80
EverestRe	RE	264.00	1.90
Evergy	EVRG	63.24	-0.05
EversourceEner	ES	89.34	-0.35
ExactSciences	EXAS	127.53	-2.51
Exelon	EXC	45.50	-0.66
Expedia	EXPE	175.62	1.71
ExpeditorsIntl	EXPD	110.22	-1.01
ExtraSpaceSt	EXR	143.93	1.32
ExxonMobil	XOM	56.48	-0.18
F5Networks	FFIV	208.49	-1.28
FMC	FMC	112.82	-0.82
Facebook	FB	302.24	-3.94
FactSet	FDS	317.34	-1.93
FairIsaac	FICO	529.99	-2.96
Farfetch	FTCH	47.62	-1.97
Fastenal	FAST	50.80	0.26
FederalRealty	FRT	107.05	0.09
FedEx	FDX	283.25	-4.34
Ferguson	FERG	130.70	1.19
Ferrari	RACE	212.20	1.24
FidNatlFin	FNF	44.27	0.09
FidNatlInfo	FIS	152.22	-0.40
FifthThirdBncp	FITB	37.87	-0.33
FirstHorizon	FHN	17.60	0.01
FirstRepBank	FRC	175.64	-3.98
FirstEnergy	FE	35.80	0.11
FirstSolar	FSLR	77.09	-3.71
FiveBelow	FIVE	203.82	0.56
Five9	FIVN	174.53	-2.90
FleetCorTech	FLT	290.00	-0.56
Flex	FLEX	18.38	-0.18
Floor&Decor	FND	112.63	0.04
FomentoEconMex	FMX	79.10	-0.95
FordMotor	F	12.11	-0.12
Fortinet	FTNT	206.14	0.13
Fortis	FTS	44.03	0.06
Fortive	FTV	72.35	-0.03
FortBrandsHome	FBHS	102.61	-0.71
FoxB	FOX	36.59	-0.13
FoxA	FOXA	37.68	-0.27
Franco-Nevada	FNV	136.79	-0.33
FranklinRscs	BEN	29.97	-0.08
FreeportMcM	FCX	37.33	-0.81
FreseniusMed	FMS	38.60	0.47
Futu	**FUTU**	**177.92**	**24.91**
G H I			
GDS Holdings	GDS	78.65	1.52
GFLEnvironmental	GFL	32.17	-0.72
Gallagher	AJG	136.26	-0.54
GameStop	**GME**	**164.37**	**9.68**
Gaming&Leisure	GLPI	44.81	-0.62
Gap	GPS	32.41	-0.28
Garmin	GRMN	133.15	-0.82
Gartner	IT	191.94	-0.04
Generac	GNRC	318.68	-13.55
GeneralDynamics	GD	184.79	0.32
GeneralElec	GE	13.46	0.07
GeneralMills	GIS	61.30	...
GeneralMotors	GM	57.88	-0.83
Genmab	GMAB	35.59	0.36
Genpact	G	44.52	-0.21
Gentex	GNTX	35.85	-0.18
GenuineParts	GPC	119.40	-0.62
Gerdau	GGB	5.86	0.04
GileadSciences	GILD	65.95	-0.92
GlaxoSmithKline	GSK	37.92	0.04
GlobalPayments	GPN	215.90	-1.90
Globant	GLOB	223.61	-2.72
GlobeLife	GL	104.27	-0.14
GoDaddy	GDDY	87.91	-0.24
GoldFields	GFI	9.87	-0.20
GoldmanSachs	GS	343.09	0.78
GoodRx	GDRX	38.20	0.06
Graco	GGG	75.80	0.67
Grainger	GWW	408.98	2.10
Grifols	GRFS	18.40	0.42
GuardantHealth	GH	152.92	-5.58
Guidewire	GWRE	104.00	-1.27
HCA Healthcare	HCA	194.89	-2.04
HDFC Bank	HDB	68.25	-3.56
HP	HPQ	33.70	-0.28
HSBC	HSBC	29.77	0.18
Halliburton	HAL	20.67	-0.02
HartfordFinl	HIG	66.73	0.48
Hasbro	HAS	98.01	0.01
HealthcarePeak	PEAK	33.35	0.10
Heico	HEI	136.50	0.81
Heico A	HEI.A	122.03	-1.24
HenrySchein	HSIC	70.64	-0.53
Hershey	HSY	160.90	-0.01
Hess	HES	72.64	-0.36
HewlettPackard	HPE	15.96	0.01
HighwoodsProp	HIW	43.50	-0.19
Hilton	HLT	125.93	-2.12
Hologic	HOLX	76.68	0.02
HomeDepot	HD	326.85	-1.23
HondaMotor	HMC	30.68	0.01
Honeywell	HON	230.97	-1.14
HorizonTherap	HZNP	93.82	-3.91
HormelFoods	HRL	46.52	-0.32
DR Horton	DHI	95.72	-0.65
HostHotels	HST	17.40	-0.08
HowmetAerospace	HWM	32.57	-0.13
HuanengPower	HNP	14.34	0.17
Huazhu	HTHT	57.49	0.28
Hubbell	HUBB	189.05	-0.23
HubSpot	HUBS	509.94	-11.24
Humana	HUM	439.92	4.64
JBHunt	JBHT	166.93	-5.23
HuntingtonBcshs	HBAN	15.87	-0.31
HuntingtonIngalls	HII	210.00	1.94
HyattHotels	H	82.35	-1.82
IAC/InterActive	IAC	243.34	-5.05
ICICI Bank	IBN	14.95	-0.27
IdexxLab	IDXX	528.58	-6.42
IHS Markit	INFO	103.50	-0.44
II-VI	IIVI	77.03	-4.39
ING Groep	ING	12.56	-0.07
Invesco	IVZ	26.48	-0.09
IPG Photonics	IPGP	222.12	-1.78
IQVIA	IQV	216.22	0.66
IcahnEnterprises	IEP	57.13	0.08
Icon	ICLR	203.64	-0.83
IDEX	IEX	219.85	-0.72
IllinoisToolWks	ITW	223.83	-0.20
Illumina	ILMN	404.18	5.18
ImperialOil	IMO	25.37	-0.17
Incyte	INCY	82.67	-0.01
Infosys	INFY	18.26	0.08
IngersollRand	IR	50.91	0.67
Ingredion	INGR	95.05	0.26
Insulet	**PODD**	**281.51**	**-15.49**
Intel	INTC	63.63	-1.12
InteractiveBrkrs	IBKR	77.36	0.81
ICE	ICE	119.74	-0.99
InterContinentl	IHG	71.78	-0.50
IBM	IBM	133.12	-0.47
IntlFlavors	IFF	142.92	0.06
IntlPaper	IP	57.18	-0.19
Interpublic	IPG	30.44	-0.16
Intuit	INTU	402.29	-13.53
IntuitiveSurgical	ISRG	811.19	-1.38
InvitatHomes	INVH	33.63	0.29
iQIYI	IQ	15.00	-0.22
IronMountain	IRM	38.48	0.30
ItauUnibanco	ITUB	4.96	...
J K L			
JD.com	JD	76.95	-0.09
JPMorganChase	JPM	152.65	-0.65
JackHenry	JKHY	161.15	2.31
JacobsEngg	J	133.72	-0.06
JamesHardie	JHX	33.59	0.17
JazzPharma	JAZZ	167.16	-1.74
J&J	JNJ	162.69	0.45
JohnsonControls	JCI	62.32	-0.17
JonesLang	JLL	179.34	0.16
JuniperNetworks	JNPR	25.92	-0.09
KB Fin	KB	46.92	-0.45
KE Holdings	BEKE	50.42	-1.11
KKR	KKR	53.31	...
KLA	KLAC	324.39	-8.61
KSCitySouthern	KSU	256.40	-1.11
Kellogg	K	63.70	0.35
KeurigDrPepper	KDP	36.13	0.12
KeyCorp	KEY	20.42	-0.26
KeysightTechs	KEYS	143.63	-1.77
KimberlyClark	KMB	138.93	-0.29
KimcoRealty	KIM	19.87	0.15
KinderMorgan	KMI	16.62	0.08
KingsoftCloud	KC	45.29	0.97
KinrossGold	KGC	7.45	-0.05
KirklandLakeGold	KL	37.79	0.04
Knight-Swift	KNX	49.82	-0.37
Kohl's	KSS	59.42	0.01
KoninklijkePhil	PHG	60.63	-0.20
KoreaElcPwr	KEP	10.82	0.12
KraftHeinz	KHC	40.95	-0.05
Kroger	KR	37.43	0.32
L Brands	LB	65.90	-0.94
LKQ	LKQ	44.81	0.13
LPL Financial	LPLA	146.30	-1.30
L3HarrisTech	LHX	205.73	-0.99
LabCorp	LH	260.51	-1.69
LamResearch	LRCX	621.73	-21.98
LamarAdv	LAMR	95.04	-0.95
LambWeston	LW	79.73	-0.08
LasVegasSands	LVS	60.62	-0.38
Lear	LEA	180.36	-1.89
Leidos	LDOS	101.49	0.28
Lennar B	LEN.B	83.40	-1.91
Lennar A	LEN	104.00	-1.88
LennoxIntl	LII	335.80	1.81
LeviStrauss	LEVI	28.27	-0.76
LiAuto	LI	19.25	-0.60
LibertyBroadbandA	LBRDA	150.79	0.42
LibertyBroadbandC	LBRDK	155.62	0.25
LibertyGlobal A	LBTYA	26.37	-0.10
LibertyGlobal B	LBTYB	26.02	-0.47
LibertyGlobal C	LBTYK	26.34	-0.10
LibertyFormOne A	FWONA	40.76	0.84
LibertyFormOne C	FWONK	45.92	0.69
LibertyBraves A	BATRA	28.66	-0.24
LibertyBraves C	BATRK	28.02	-0.29
LibertySirius C	LSXMK	44.75	0.24
LibertySirius A	LSXMA	45.08	-0.31
LightspeedPos	LSPD	64.49	-2.40
EliLilly	LLY	189.64	0.39
LincolnNational	LNC	64.78	-0.23
Linde	LIN	288.45	-1.51
LithiaMotors	LAD	387.32	-0.71
LiveNationEnt	LYV	81.58	0.59
LloydsBanking	LYG	2.41	0.02
LockheedMartin	LMT	391.73	-0.08
Loews	L	54.26	-0.11
LogitechIntl	LOGI	114.06	0.61
Lowe's	LOW	204.01	-4.24
LufaxHolding	LU	13.80	...
lululemon	LULU	322.27	-1.83
Lumentum	LITE	87.84	-1.02
LumenTech	LUMN	12.64	-0.07
LyondellBasell	LYB	107.20	-0.35
M N			
M&T Bank	MTB	154.98	1.12
MGM Growth Prop	MGP	35.15	-0.12
MGM Resorts	MGM	39.75	-0.51
MKS Instrum	MKSI	181.04	-5.78
MPLX	MPLX	26.70	0.09
MSCI	MSCI	487.25	-3.42
MagellanMid	MMP	45.59	0.14
MagnaIntl	MGA	94.00	-1.55
ManulifeFin	MFC	21.59	0.02
MarathonOil	MRO	10.63	0.10
MarathonPetrol	MPC	53.43	-0.83
MaravaiLifeSci	MRVI	36.68	...
Markel	MKL	1211.55	-3.08
MarketAxess	MKTX	533.62	-13.73
Marriott	MAR	147.90	-0.73
Marsh&McLen	MMC	127.15	-0.29
MartinMarietta	MLM	350.62	-0.95
MarvellTech	MRVL	46.65	-1.26
Masco	MAS	64.55	-0.04
Masimo	MASI	242.90	-2.76
Mastercard	MA	382.16	-4.01
MatchGroup	MTCH	146.00	0.70
MaximIntProducts	MXIM	93.89	-1.24
McAfee	MCFE	24.64	0.27
McCormick	MKC	88.85	0.06
McCormickVtg	MKCV	88.78	0.14
McDonalds	MCD	231.81	-1.27
McKesson	MCK	193.69	0.51
MedicalProp	MPW	22.24	0.10
Medtronic	MDT	126.13	0.22
MelcoResorts	MLCO	19.12	-0.24
MercadoLibre	MELI	1570.99	-20.89
Merck	MRK	77.66	0.19
MetLife	MET	63.10	0.03
MettlerToledo	MTD	1277.29	-5.04
MicrochipTech	MCHP	154.03	-4.26
MicronTech	MU	88.41	-2.25
Microsoft	MSFT	258.74	-2.00
MidAmApt	MAA	151.82	0.80
Middleby	MIDD	168.56	-0.82
MiratiTherap	MRTX	154.95	-3.24
MitsubishiUFJ	MUFG	5.42	-0.04
MizuhoFin	MFG	2.87	-0.04
MobileTeleSys	MBT	8.35	-0.06
Moderna	**MRNA**	**161.91**	**-8.90**
MohawkInds	MHK	199.91	-4.90
MolinaHealthcare	MOH	254.67	4.37
MolsonCoorsB	TAP	54.01	0.54
Mondelez	MDLZ	58.69	-0.08
MongoDB	MDB	300.92	-14.93
MonolithicPower	MPWR	369.60	-9.02
MonsterBev	MNST	97.86	-0.31
Moody's	MCO	320.72	-1.28
MorganStanley	MS	80.03	1.04
Morningstar	MORN	237.66	0.42
Mosaic	MOS	32.73	-0.73
MotorolaSol	MSI	187.66	-0.94
NICE	NICE	237.72	-4.52
NIO	NIO	36.78	0.69
NRG Energy	NRG	35.79	0.23
NVR	NVR	4984.42	-0.43
NXP Semi	NXPI	194.76	-4.62
Nasdaq	NDAQ	158.63	-1.54
Natera	NTRA	104.93	-2.03
NationalGrid	NGG	63.21	0.82
NatlRetailProp	NNN	46.93	0.37
NatWest	NWG	5.50	0.01
NetApp	NTAP	77.31	-0.40
NetEase	NTES	106.83	0.03
Netflix	NFLX	544.74	7.90
NewOrientalEduc	EDU	15.18	0.17
NewellBrands	NWL	26.48	-0.28
Newmont	NEM	64.85	-0.56
NewsCorp A	NWSA	25.74	0.04
NewsCorp B	NWS	24.88	-0.02
NextEraEnergy	NEE	79.79	-1.15
NielsenHoldings	NLSN	25.31	-0.38
Nike	NKE	132.57	-1.74
NiSource	NI	25.74	0.12
Nokia	NOK	4.17	-0.01
NomuraHoldings	NMR	5.33	-0.06
Nordson	NDSN	205.93	-0.29
NorfolkSouthern	NSC	270.46	-0.40
NorthernTrust	NTRS	106.23	-0.68
NorthropGrum	NOC	344.60	-1.79
NortonLifeLock	NLOK	22.40	-0.33
NorwegianCruise	NCLH	27.97	-0.35
Novartis	NVS	88.38	0.36
Novavax	NVAX	221.50	-5.85
NovoNordisk	NVO	72.70	0.51
Novocure	NVCR	190.90	-1.60
NuanceComms	NUAN	53.20	-0.14
Nucor	NUE	79.44	-0.06
Nutrien	NTR	53.95	-2.07
NVIDIA	NVDA	614.47	-22.03
O P Q			
ONEOK	OKE	51.78	0.18
OReillyAuto	ORLY	533.77	3.25
OakStreetHealth	OSH	58.55	-0.18
OccidentalPetrol	OXY	24.54	0.16
Okta	OKTA	266.01	-3.97
OldDomFreight	ODFL	247.91	-3.46
OlinKholding	OLN	40.52	-1.57
OmegaHealthcare	OHI	37.29	-0.02
Omnicom	OMC	79.31	-0.34
OnSemi	ON	40.33	-1.06
OpenText	OTEX	49.29	-0.54
OpendoorTech	**OPEN**	**17.40**	**-0.99**
Oracle	ORCL	78.75	-0.20
Orange	ORAN	12.64	0.17
Orix	IX	82.60	-1.06
Oshkosh	OSK	121.93	0.91
OtisWorldwide	OTIS	71.03	0.45
OwensCorning	OC	97.27	0.18
OzonHoldings	OZON	61.20	-1.55
PG&E	PCG	11.20	-0.38
PNC Fin	PNC	177.72	-1.14
POSCO	PKX	78.56	1.50
PPD	PPD	46.20	-0.07
PPG Ind	PPG	168.70	1.37
PPL	PPL	28.88	-0.26
PRA HealthSci	PRAH	161.33	-0.43
PTC	PTC	139.80	-6.36
Paccar	PCAR	93.35	-1.57
PackagingCpAm	PKG	141.12	0.76
PagSeguroDig	PAGS	44.60	-1.71
PalantirTech	PLTR	21.94	-0.53
PaloAltoNtwks	PANW	366.96	0.31
ParkerHannifin	PH	317.52	-3.59
Paychex	PAYX	96.43	-1.07
PaycomSoftware	PAYC	393.18	-5.29
Paylocity	PCTY	190.85	-3.30
PayPal	PYPL	267.91	-1.96
Paysafe	PSFE	13.05	-0.44
Pearson	PSO	11.38	0.03
Pegasystems	PEGA	128.59	-1.30
Peloton	**PTON**	**107.75**	**-8.46**
PembinaPipeline	PBA	29.70	0.20
PennNational	**PENN**	**93.00**	**-6.94**
Pentair	PNR	69.00	0.00
PepsiCo	PEP	144.75	0.59
PerkinElmer	PKI	134.59	1.43
PetroChina	PTR	36.70	0.17
PetroleoBrasil	PBR	8.54	0.42
PetroleoBrasilA	PBR.A	8.68	0.51
Pfizer	PFE	38.93	0.36
PhilipMorris	PM	91.67	-1.24
Phillips66	PSX	77.94	-0.75
Pinduoduo	PDD	132.80	-0.51
PinnacleWest	PNW	84.24	-0.66
Pinterest	PINS	73.91	-2.31
PioneerNatRscs	PXD	148.58	0.17
PlainsAllAmPipe	PAA	9.13	0.01
Playtika	PLTK	26.88	0.95
PlugPower	**PLUG**	**25.24**	**-2.00**
Polaris	PII	144.51	-0.51
Pool	POOL	382.95	0.74
PrincipalFin	PFG	63.26	0.04
Procter&Gamble	PG	136.61	-0.64
Progressive	PGR	99.29	0.53
Prologis	PLD	112.25	-0.31
PrudentialFin	PRU	98.54	-0.34
Prudential	PUK	43.41	0.23
PublicServiceEnt	PEG	63.48	0.13
PublicStorage	PSA	270.38	3.58
PulteGroup	PHM	53.71	-1.51
Qiagen	QGEN	52.44	-0.31
Qorvo	QRVO	188.44	-3.83
Qualcomm	QCOM	135.25	-2.96
QualtricsIntl	XM	33.56	-0.43
QuantaServices	PWR	95.83	0.13
QuantumScape	**QS**	**31.62**	**-3.90**
QuestDiag	DGX	131.09	0.98
R S			
RELX	RELX	26.94	-0.06
RH	RH	641.44	6.94
RLX Tech	RLX	9.28	0.18
RPM	RPM	93.08	-0.39
RalphLauren	RL	122.18	-2.38
RaymondJames	RJF	129.41	-0.35
RaytheonTech	RTX	78.59	0.37
RealtyIncome	O	67.34	0.32
RealPage	RP	88.59	0.02
RegencyCtrs	REG	59.76	0.30
RegenPharm	REGN	499.69	-2.91
RegionsFin	RF	20.90	-0.30
ReinsGrp	RGA	131.47	-0.60
RelianceSteel	RS	155.30	-0.71
RenaissanceRe	RNR	171.09	1.24
Repligen	RGEN	212.04	-1.26
RepublicSvcs	RSG	104.67	0.35
ResMed	RMD	205.66	-1.85
RestaurantBrands	QSR	66.11	-0.24
RingCentral	RNG	319.07	-6.31
RioTinto	RIO	86.30	1.51
RobertHalf	RHI	81.48	-1.82
Roblox	**RBLX**	**72.00**	**-3.85**
RocketCos.	RKT	22.01	-0.11
Rockwell	ROK	267.10	1.25
RogersComm B	RCI	49.20	0.78
Roku	ROKU	361.15	-15.37
Rollins	ROL	35.29	-0.17
RoperTech	ROP	425.46	2.17
RossStores	ROST	127.49	-2.42
RoyalBkCanada	RY	94.04	-0.67
RoyalCaribbean	RCL	83.78	-1.44
RoyalDutchA	RDS.A	39.43	0.05
RoyalDutchB	RDS.B	37.56	0.05
RoyaltyPharma	RPRX	41.77	-0.10
Ryanair	RYAAY	106.67	-0.82
SAP	SAP	139.53	0.23
S&P Global	SPGI	376.44	-1.63
SBA Comm	SBAC	288.09	-0.24
SEI Investments	SEIC	62.51	-0.65
SK Telecom	SKM	29.78	-0.17
SS&C Tech	SSNC	72.70	-0.21
StoreCapital	STOR	35.10	0.35
SVB Fin	SIVB	519.26	0.32
Salesforce.com	CRM	230.50	-1.41
Sanofi	SNY	51.82	0.52
SantanderConsUS	SC	31.24	0.07
Sasol	SSL	16.48	0.20
SchlumbergerSLB	SLB	26.51	0.24
SchwabC	SCHW	65.88	1.14
ScottsMiracleGro	SMG	233.27	-4.96
Sea	SE	250.00	-2.42
Seagate	STX	82.33	0.26
SeagenInc	SGEN	144.01	-1.69
SempraEnergy	SRE	138.24	0.10
SensataTechs	ST	58.18	-0.37
ServiceCorp	SCI	51.36	-0.93
ServiceNow	NOW	549.37	-7.54
SherwinWilliams	SHW	265.60	-1.32
ShinhanFin	SHG	33.04	-0.32
Shopify	**SHOP**	**1165.78**	**-62.02**
SibanyeStillwater	SBSW	20.00	-0.56
SignatureBank	SBNY	227.84	0.28
SimonProperty	SPG	116.56	0.56
SiriusXM	SIRI	6.28	-0.03
Skyworks	SWKS	185.87	-3.89
SlackTech	WORK	42.30	0.07
SmithAO	AOS	67.87	-0.36
Smith&Nephew	SNN	39.46	-0.94
Smucker	SJM	132.15	0.43
Snap	SNAP	60.44	-0.81
SnapOn	SNA	236.01	0.49
Snowflake	SNOW	229.07	-3.67
SQUOMICH	SQM	55.66	0.56
SolarEdgeTech	SEDG	244.86	-13.85
Sony	SONY	109.98	-1.12
Southern	SO	64.92	-0.09
SoCopper	SCCO	74.51	-1.69
SouthwestAir	LUV	62.03	-0.36
Splunk	SPLK	132.90	-1.35
Spotify	SPOT	280.37	-11.65
Square	SQ	245.33	-10.77
StanleyBlackDck	SWK	205.89	0.51
Starbucks	SBUX	117.60	-0.74
StateStreet	STT	80.89	0.46
SteelDynamics	STLD	51.19	-0.31
Stellantis	STLA	17.82	-0.15
Steris	STE	208.63	0.49
STMicroelec	STM	38.42	-0.56
StoneCo	STNE	66.20	-2.07
Stryker	SYK	256.75	-0.38
SumitomoMits	SMFG	7.14	-0.05
SunComms	SUI	159.02	0.91
SunLifeFinancial	SLF	52.41	0.15
SuncorEnergy	SU	20.89	...
SunRun	**RUN**	**48.54**	**-3.62**
Suzano	SUZ	12.98	0.20
SynchronyFin	SYF	40.73	-0.66
SynopsysHealth	SYNH	85.23	-1.02
Synopsys	SNPS	250.64	-10.13
Sysco	SYY	81.08	-0.52
T U V			
TAL Education	TAL	60.76	1.40
TC Energy	TRP	47.60	-0.05
TE Connectivity	TEL	130.35	-3.05
Telus	TU	20.54	-0.30
TJX	TJX	69.00	-0.99
T-MobileUS	TMUS	131.99	-1.06
TRowePrice	TROW	177.04	-0.78
TaiwanSemi	TSM	115.40	-3.44
TakedaPharm	TAK	16.96	-0.12
Tapestry	TPR	45.23	-1.33
Target	TGT	208.65	0.10
TataMotors	TTM	20.02	-0.49
TeckRscsB	TECK	22.45	0.22
TeladocHealth	TDOC	184.09	-6.01
TeledyneTech	TDY	429.20	-0.05
Teleflex	TFX	431.79	-0.77
Ericsson	ERIC	13.74	-0.31
TelefonicaBras	VIV	7.86	-0.08
Telefonica	TEF	4.58	0.01
TelekmIndonesia	TLK	23.90	-0.33
10xGenomics	TXG	186.97	-7.13
Tenaris	TS	22.09	0.12
TencentMusic	TME	17.83	-0.21
Teradyne	TER	126.34	-3.16
Tesla	TSLA	714.63	-25.15
TevaPharm	TEVA	10.28	-0.47
TexasInstruments	TXN	187.06	-4.87
TexasPacLand	TPL	1546.00	-34.00
Textron	TXT	59.06	0.52
ThermoFisherSci	TMO	487.64	-5.28
ThomsonReuters	TRI	90.43	-0.63
3M	MMM	198.59	0.01
Toro	TTC	112.96	0.16
TorontoDomBk	TD	65.48	-0.59
Total	TOT	45.92	0.56
ToyotaMotor	TM	154.61	0.56
TractorSupply	TSCO	183.08	2.09
TradeDesk	TTD	695.48	-23.38
Tradeweb	TW	79.69	-0.02
TraneTech	TT	172.28	0.32
TransDigm	TDG	606.00	-11.49
TransUnion	TRU	96.86	0.51
Travelers	TRV	154.38	-1.57
Trex	TREX	104.35	-0.63
Trimble	TRMB	80.97	-1.00
Trip.com	TCOM	37.01	0.50
TruistFinl	TFC	57.40	-0.44
Tuya	**TUYA**	**18.00**	**-2.28**
Twilio	TWLO	367.46	-17.78
Twitter	TWTR	67.94	-2.18
TylerTech	TYL	445.96	-2.24
TysonFoods	TSN	78.50	0.49
UBS Group	UBS	15.94	-0.17
UDR	UDR	45.13	0.27
UGI	UGI	43.80	-0.34
US Foods	USFD	38.70	-0.09
UWM	UWMC	7.50	0.01
Uber	UBER	57.85	-2.50
Ubiquiti	UI	280.64	-6.73
UltaBeauty	ULTA	328.26	-2.45
UnderArmour C	UA	18.07	-0.35
UnderArmour A	UAA	21.69	-0.36
Unilever	UL	57.68	0.11
UnionPacific	UNP	223.47	0.76
UnitedAirlines	UAL	54.99	-0.88
UnitedMicro	UMC	9.47	-0.01
UPS B	UPS	178.06	-1.65
UnitedRentals	URI	324.59	-3.55
US Bancorp	USB	57.72	-0.14
UnitedTherap	UTHR	203.84	0.11
UnitedHealth	UNH	389.84	-1.17
UnitySoftware	U	97.93	-2.81
UnivDisplay	OLED	226.69	-2.56
UniversalHealthB	UHS	146.04	-0.10
Upstart	**UPST**	**97.55**	**-7.10**
VEREIT	VER	40.75	0.17
VF	VFC	83.98	-0.76
VICI Prop	VICI	29.87	-0.07
VailResorts	MTN	313.61	-6.18
Vale	VALE	19.43	-0.10
ValeroEnergy	VLO	70.85	-1.65
Vedanta	VEDL	12.10	-0.29
VeevaSystems	VEEV	270.38	-2.69
Ventas	VTR	54.80	-0.61
VeriSign	VRSN	225.79	-0.92
VeriskAnalytics	VRSK	184.53	-0.93
Verizon	VZ	58.39	0.11
VertxPharm	VRTX	219.18	-0.21
ViacomCBS B	VIAC	38.40	-0.95
ViacomCBS A	VIACA	43.20	-1.22
Viatris	VTRS	13.25	-0.15
Vipshop	VIPS	28.94	0.51
Visa	V	225.79	-0.62
Vistra	VST	17.86	0.06
VMware	VMW	170.03	5.93
Vodafone	VOD	19.04	0.09
VornadoRealty	VNO	45.47	0.51
VulcanMatls	VMC	176.74	1.07
W X Y Z			
WEC Energy	WEC	96.85	-0.11
WEX	WEX	226.34	-2.68
W.P.Carey	WPC	73.12	1.02
WPP	WPP	67.94	0.14
Wabtec	WAB	81.20	0.59
WalgreensBoots	WBA	53.79	0.49
Walmart	WMT	139.71	-0.90
WarnerMusic	WMG	36.57	-0.38
WasteConnections	WCN	116.40	-0.38
WasteMgt	WM	134.43	-0.62
Waters	WAT	298.81	-1.09
Watsco	WSO	283.11	-1.57
Wayfair	W	315.33	-6.31
Weibo	WB	49.16	-0.32
WellsFargo	WFC	43.83	-0.86
Welltower	WELL	74.88	-0.81
WestFraserTimber	WFG	84.43	-0.61
WestPharmSvcs	WST	316.79	2.96
WestAllianceBcp	WAL	102.14	1.88
WesternDigital	WDC	68.31	-0.58
WesternUnion	WU	26.15	0.26
WestlakeChem	WLK	95.52	-2.18
WestpacBanking	WBK	19.05	-0.13
WestRock	WRK	54.17	-0.46
Weyerhaeuser	WY	38.88	-0.44
WheatonPrecMet	WPM	42.56	0.19
Whirlpool	WHR	235.27	0.46
Williams	WMB	23.69	0.07
Williams-Sonoma	WSM	168.94	-5.37
WillisTowers	WLTW	238.01	-2.39
Wipro	WIT	6.96	...
Wix.com	WIX	289.06	-6.19
Workday	WDAY	254.51	-1.84
WynnResorts	WYNN	126.28	-1.00
XP	XP	38.41	-0.46
XPO Logistics	XPO	135.41	-1.71
XcelEnergy	XEL	70.49	0.12
Xilinx	XLNX	126.90	-1.74
XPeng	XPEV	31.20	0.28
Xylem	XYL	108.21	-0.40
Yandex	YNDX	61.06	-0.87
YumBrands	YUM	117.71	-0.35
YumChina	YUMC	59.53	-0.57
ZTO Express	ZTO	29.99	0.42
ZaiLab	ZLAB	164.33	0.04
ZebraTech	ZBRA	509.63	-3.86
Zendesk	ZEN	147.96	-2.37
Zillow C	Z	133.00	-1.61
Zillow A	ZG	134.59	-1.55
ZimmerBiomet	ZBH	172.53	0.65
ZionsBancorp	ZION	56.00	-0.12
Zoetis	ZTS	168.10	0.47
ZoomVideo	ZM	324.33	-5.62
ZoomInfoTech	ZI	47.38	-0.53
Zscaler	ZS	190.94	-1.55
Zynga	ZNGA	10.59	0.03

Dividend Changes

Dividend announcements from April 19.

Company	Symbol	Yld %	Amount New/Old	Frq	Payable / Record
Increased					
Ames National	ATLO	4.1	.26 /.25	Q	May14/Apr29
Cal-Maine Foods	CALM	0.3	.034 /.00	Q	May13/Apr28
NuSTAR 7.625% Nts 2043	NSS	7.1	.4372 /.43595	Q	Jul15/Jul01
Value Line	VALU	2.8	.22 /.21	Q	May11/Apr26
Initial					
JPM Chase Pfd. Series JJ	JPMpK	3.6	.23382		Jun01/May03
Stocks					
MyMD Pharmaceuticals	MYMD		1:2		/Apr19
Foreign					
Aon	AON	0.8	.51	Q	May14/May03
Ferrari	RACE		1.03862	A	May05/Apr20
QIWI ADR	QIWI	9.5	.34	Q	May05/Apr27
Shaw Communications B	SJR	3.2	.0788	M	Aug30/Aug13
Turkcell Iletisim ADR	TKC	3.5	.1212	A	May10/May03

KEY: A: annual; M: monthly; Q: quarterly; r: revised; SA: semiannual; S2:1: stock split and ratio; SO: spin-off.

Exchange-Traded Portfolios | WSJ.com/ETFresearch

Largest 100 exchange-traded funds, latest session

Monday, April 19, 2021

ETF	Symbol	Closing Price	Chg (%)	YTD (%)
ARKInnovationETF	ARKK	120.44	-3.17	-3.3
CommSvsSPDR	XLC	76.41	-0.56	13.2
CnsmrDiscSelSector	XLY	177.85	-1.12	10.6
EnSelectSectorSPDR	XLE	48.35	-0.10	27.6
FinSelSectorSPDR	XLF	35.30	-0.28	19.7
HealthCareSelSect	XLV	121.51	0.02	7.1
IndSelSectorSPDR	XLI	100.72	-0.42	13.7
InvscQQQI	QQQ	338.88	-0.92	8.0
InvscS&P500EW	RSP	146.46	-0.47	14.8
iShCoreDivGrowth	DGRO	49.95	-0.34	11.4
iShCoreMSCIEAFE	IEFA	75.36	-0.12	9.2
iShCoreMSCIEM	IEMG	65.51	-0.27	5.6
iShCoreMSCITotIntl	IXUS	72.78	-0.32	8.3
iShCoreS&P500	IVV	416.84	-0.49	11.0
iShCoreS&P MC	IJH	269.93	-0.53	17.4
iShCoreS&P SC	IJR	109.65	-1.01	19.3
iShS&PTotlUSStkMkt	ITOT	95.70	-0.56	11.0
iShCoreUSAggBd	AGG	114.45	-0.08	-3.2
iShSelectDividend	DVY	117.20	-0.47	21.9
iShESGAwareUSA	ESGU	95.23	-0.57	10.7
iShEdgeMSCIMinUSA	USMV	71.98	-0.30	6.0
iShEdgeMSCIUSAMom	MTUM	172.54	-1.39	7.0
iShEdgeMSCIUSAQual	QUAL	127.03	-0.44	9.3
iShEdgeMSCIUSAVal	VLUE	104.18	-0.67	19.0
iShGoldTr	IAU	16.87	-0.24	-6.9
iShiBoxx$InvGrCpBd	LQD	130.73	-0.26	-5.4
iShiBoxx$HYCpBd	HYG	87.16	-0.16	-0.2
iShJPMUSDEmgBd	EMB	111.14	-0.07	-4.1
iShMBSETF	MBB	108.61	0.02	-1.4
iShMSCI ACWI	ACWI	99.27	-0.41	9.4
iShMSCI EAFE	EFA	79.15	-0.18	8.5
iShMSCI EAFE SC	SCZ	75.60	-0.01	10.6
iShMSCIEmgMarkets	EEM	54.15	-0.37	4.8
iShMSCIJapan	EWJ	69.29	-0.96	2.6
iShNatlMuniBd	MUB	116.94	-0.02	-0.2
iSh1-5YIGCorpBd	IGSB	54.71	-0.04	-0.8
iShPfd&Incm	PFF	38.72	-0.39	0.5
iShRussell1000Gwth	IWF	259.31	-0.80	7.5
iShRussell1000Val	IWD	156.13	-0.34	14.2
iShRussell2000	IWM	221.73	-1.30	12.9
iShRussell2000Val	IWN	160.95	-0.80	22.2
iShRussellMid-Cap	IWR	76.88	-0.77	12.2
iShRussellMCValue	IWS	112.92	-0.39	16.5
iShS&P500Growth	IVW	69.49	-0.66	8.9
iShS&P500Value	IVE	145.09	-0.35	13.3
iShShortTreaBd	SHV	110.51	...	0.0
iShSilver	SLV	23.98	-0.46	-2.4
iShTIPSBondETF	TIP	126.26	-0.17	-1.1
iSh1-3YTreasuryBd	SHY	86.25	-0.01	-0.2
iSh7-10YTreasuryBd	IEF	114.17	-0.10	-4.8
iSh20+YTreasuryBd	TLT	138.86	-0.29	-12.0
iShRussellMCGrowth	IWP	107.44	-1.23	4.7
iShUSTreasuryBdETF	GOVT	26.36	-0.04	-3.2
JPM UltShtIncm	JPST	50.73	0.01	-0.1
PIMCOEnhShMaturity	MINT	101.99	-0.01	-0.1
SPDRBloomBarl1-3MTB	BIL	91.49	-0.01	0.0
SPDR Gold	GLD	165.89	-0.28	-7.0
SchwabIntEquity	SCHF	39.23	-0.25	8.9
Schwab US BrdMkt	SCHB	101.03	-0.60	11.0
SchwabUS Div	SCHD	74.85	-0.35	16.6
SchwabUS LC	SCHX	100.79	-0.57	10.8
SchwabUS LC Grw	SCHG	139.47	-0.76	8.6
SchwabUS SC	SCHA	98.77	-1.01	13.6
SchwabUS TIPs	SCHP	61.55	-0.16	-0.9
SPDR DJIA Tr	DIA	340.75	-0.32	11.4
SPDR S&PMdCpTr	MDY	493.25	-0.54	17.9
SPDR S&P 500	SPY	415.21	-0.49	11.1
SPDR S&P Div	SDY	121.42	-0.42	16.4
TechSelectSector	XLK	142.11	-0.83	9.3
VanEckGoldMiner	GDX	35.79	-0.67	-0.6
VangdInfoTech	VGT	382.84	-0.94	8.2
VangdSC Val	VBR	169.65	-0.56	19.3
VangdExtMkt	VXF	181.77	-1.08	10.4
VangdSC Grwth	VBK	281.09	-1.52	5.0
VangdDivApp	VIG	152.37	-0.46	7.9
VangdFTSEDevMk	VEA	51.22	-0.29	8.5
VangdFTSE EM	VWO	52.67	-0.21	5.1
VangdFTSE Europe	VGK	66.71	0.06	10.7
VangdFTSEAWxUS	VEU	62.78	-0.27	7.6
VangdGrowth	VUG	274.16	-0.82	8.2
VangdHlthCr	VHT	236.89	-0.38	5.9
VangdHiDiv	VYM	103.16	-0.41	12.7
VangdIntermBd	BIV	89.03	-0.08	-4.1
VangdIntrCorpBd	VCIT	93.56	-0.07	-3.7
VangdLC	VV	194.36	-0.56	10.6
VangdMC	VO	229.30	-0.74	10.9
VangdMC Val	VOE	138.39	-0.46	16.3
VangdMBS	VMBS	53.57	-0.02	-0.9
VangdRealEst	VNQ	96.31	0.20	13.4
VangdS&P500ETF	VOO	381.74	-0.49	11.1
VangdST Bond	BSV	82.26	...	-0.4
VangdSTCpBd	VCSH	82.56	...	-0.8
VangdSC	VB	219.37	-1.01	12.7
VangdTotalBd	BND	85.17	-0.06	-3.4
VangdTotIntlBd	BNDX	57.07	-0.02	-2.1
VangdTotIntlStk	VXUS	64.95	-0.31	8.0
VangdTotalStk	VTI	215.73	-0.65	10.8
VangdTotWrld	VT	101.37	-0.45	9.5
VangdValue	VTV	135.02	-0.24	13.5

New Highs and Lows | WSJ.com/newhighs

The following explanations apply to the New York Stock Exchange, NYSE Arca, NYSE American and Nasdaq Stock Market stocks that hit a new 52-week intraday high or low in the latest session. % CHG-Daily percentage change from the previous trading session.

Monday, April 19, 2021

Stock	Sym	52-Wk Hi/Lo	% Chg
Highs			
Aflac	AFL	53.71	0.2
AG Mortgage PfdA	MITTpA	25.07	0.2
AGNC Invt	AGNC	17.50	-0.8
AGNC InvtPfdE	AGNCO	25.04	0.5
AXIS Capital	AXS	54.12	0.7
Azek	AZEK	49.64	-1.1
AcadiaHealthcare	ACHC	62.71	0.2
AcuityBrands	AYI	173.91	1.5
AdvanceAuto	AAP	196.17	-0.2
AdvantageSolns	ADV	11.89	0.9
AdvantageSolnsWt	ADVWW	3.51	-0.9
AffinityBncshs	AFBI	12.40	0.2
AgileGrowth	AGGRU	10.02	0.2
AlaskaAir	ALK	36.54	1.1
AldelFin	ADF.U	10.10	0.3
AlexionPharm	ALXN	167.52	1.1
Allstate	ALL	122.96	0.5
AlphaCapA	ASPC	9.89	0.5
Alphabet C	GOOG	2318.45	0.2
Alphabet A	GOOGL	2304.09	0.3
AmerEagle	AEO	33.14	1.8
AmHomes4Rent	AMH	36.90	-1.0
AmRvrBksh	AMRB	21.08	21.7
Ameriprise	AMP	249.67	-0.8
AmerisourceBrgn	ABC	120.80	-0.2
Anthem	ANTM	379.84	1.1
Aptargroup	ATR	149.79	1.1
ArcherDaniels	ADM	59.74	-0.3
ArctosNorth A	ANAC	10.15	-0.5
AresCapital	ARCC	19.76	-0.3
ArlingtonAssetPfB	AAICpB	24.45	0.5
ArmadaHofferPfA	AHHpA	28.86	2.2
ArmstrongWorld	AWI	98.50	0.4
AshfordHospPfdD	AHTpD	24.10	5.0
AshfordHospPfdH	AHTpH	24.43	2.1
AshfordHospPfdI	AHTpI	24.40	0.9
AshfordHospPfdF	AHTpF	22.70	1.9
Assurant	AIZ	154.19	0.5
AssuredGuaranty	AGO	46.05	-0.5
AstroNova	ALOT	16.60	7.8
Athene	ATH	56.00	0.1
Atlanticus	ATLC	35.74	8.0
AtriCure	ATRC	69.68	2.4
AuthenticEquityA	AEAC	9.87	-0.6
AutoNation	AN	98.37	0.4
AutoZone	AZO	1516.59	0.6
AveryDennison	AVY	200.94	0.4
Avnet	AVT	44.92	-0.8
AxaltaCoating	AXTA	31.77	0.2
BCE	BCE	46.75	-0.1
BGC Partners	BGCP	5.98	1.4
B RileyFin	RILY	70.00	1.0
BallantyneStrong	BTN	3.76	11.7
BcoSantMex	BSMX	6.56	1.3
BankofCommerce	BOCH	13.54	5.0
Barclays	BCS	10.57	-0.6
BeazerHomes	BZH	22.88	-0.1
BerkHathwy A	BRK.A	410748	-0.7
BerkHathwy B	BRK.B	273.68	-0.7
BioNTech	BNTX	165.95	-1.4
BoiseCascade	BCC	65.99	3.9
BostonBeer	SAM	1308.03	-0.6
Braskem	BAK	19.90	-0.2
BrightHorizons	BFAM	168.50	-1.4
BrookfieldInfr	BIP	55.54	-0.6
Brooks Auto	BRKS	104.40	-4.3
BuildersFirstSrc	BLDR	50.48	1.1
Bunge	BG	83.80	-0.5
BurgundyTechWt	BTAQW	1.02	-0.6
CBRE Group	CBRE	82.52	0.6
CDW	CDW	183.95	-1.0
CM Life II Wt	CMIIW	2.11	6.7
CSW Industrials	CSWI	142.46	-1.2
CamdenProperty	CPT	117.15	0.9
CanNtlRlwy	CNI	119.47	-0.5
Cantaloupe	CTLP	12.99	6.9
CapitalBancorp	CBNK	19.32	2.4
CapitalaFinNts22	CPTAG	25.08	0.2
CarecloudPfdA	MTBCP	29.00	0.1
Carlisle	CSL	177.98	1.1
Carlyle	CG	40.08	0.3
CarrierGlobal	CARR	44.55	-0.3
CasellaWaste	CWST	67.42	3.7
CaseysGenStores	CASY	224.68	0.4
CastleBiosci	CSTL	75.24	8.9
CharlesRiverLabs	CRL	324.96	0.4
ChinaGreenAg	CGA	17.73	28.3
ChunghwaTel	CHT	40.84	0.4
CtznCmntyBcp	CZWI	14.79	2.6
CityOfficePfdA	CIOpA	25.80	-0.2
Coca-Cola Euro	CCEP	55.34	0.4
ComfortSystems	FIX	81.52	0.4
CiaSiderurgica	SID	8.59	0.4
Concentrix	CNXC	157.79	1.1
ConcretePumping	BBCP	8.09	3.2
ConEd	ED	78.71	0.2
Corning	GLW	46.63	0.6
Cricut	CRCT	24.60	16.7
CrossAmericaPtrs	CAPL	20.16	0.6
CrownCastle	CCI	180.96	0.6
CubeSmart	CUBE	41.16	1.1
DRDGOLD	DRD	13.78	3.2
DaVita	DVA	114.09	-2.1
Delek	DK	24.00	0.8
DellTechC	DELL	105.89	-1.9
Diageo	DEO	181.00	0.3
Dick's	DKS	83.87	-0.4
Domtar	UFS	40.33	1.0
DonegalGroup B	DGICB	16.36	6.3
DonegalGroup A	DGICA	16.36	3.7
DoverMotor	DVD	3.19	7.0
DukeRealty	DRE	44.85	0.3
DynagasLNG PfdB	DLNGpB	25.60	0.5
DynexCapital	DX	19.93	0.6
EagleBulkShip	EGLE	41.12	9.7
EastenanBankshares	EBC	20.52	0.8
EastGroup	EGP	151.66	2.9
eBay	EBAY	63.39	-1.8
Enbridge	ENB	37.58	0.2
EnerTransferPfdD	ETpD	23.82	2.0
EnerTransferPfdE	ETpE	23.50	1.1
Ennis	EBF	21.97	0.5
EnovaIntl	ENVA	37.93	1.9
EntergyNts66	ELC	25.28	0.3
EntergyNts66	EMP	25.45	0.6
EquityLife	ELS	68.52	0.6
EquityResdntl	EQR	73.62	0.6
EssexProp	ESS	291.79	0.5
EvoRT	EVO	24.60	0.2
EvolentHealth	EVH	21.91	-1.9
EVOlutionPtrs	EVOL	19.49	1.2
EXR	EXR	144.43	0.9
ExtraSpaceSt	EXR	144.12	0.9
FedExPfdA	FDSPA	25.42	0.7
FMC	FMC	113.38	-0.7
FRP	FRPH	50.65	0.5
FS KKR Cap	FSK	20.93	-0.1
FabrinetGrowth	FBN	88.50	0.1
Ferguson	FERG	131.11	0.9
FidNatlFin	FNF	44.44	0.2
FifthThirdBncp	FITB	37.93	-0.8
FirstHorizon	FHN	17.93	-0.9
FirstBanCorp	FBNC	47.67	0.2
FirstCitizBcshs	FCNCA	848.89	0.3
FirstEagleAltCap	FEO	4.93	1.0
FirstIntBksh	IBCP	23.04	0.3
FirstRepBank	FRC	183.74	-2.2
FirstMerchants	FRME	48.84	1.2
FirstSavingsFin	FSFG	72.00	0.1
FirstService	FSV	158.51	0.3
FiveStarBncp	FSBC	24.50	0.7
FlexLNG	FLNG	12.15	3.1
FlexShopper	FPAY	3.40	1.1
FlexSystems	FLS	41.96	0.6
Floor&Decor	FND	114.41	0.0
FortressTechPfdB	FTAIpB	27.26	0.4
FortressTransPfC	FTAIpC	27.31	0.5
FortressValueIV	FVIV	10.68	0.5
FullerHB	FUL	66.92	0.1
GencoShipping	GNK	12.63	7.4
GeneralFinNts25	GFNSZ	27.38	0.9
GeneralMills	GIS	62.08	1.1
Gerdau	GGB	5.94	0.7
GladstoneCap	GLAD	11.05	0.5
GladstoneInv	GAIN	15.53	0.2
GladstoneLand	LAND	21.78	0.3
GlbNetLeasePfdB	GNLpB	25.62	0.3
GlobalPtrsPfdA	GLPpA	26.28	1.0
GlobalPtrsPfdB	GLPpB	27.17	1.8
GlobeLife	GL	105.01	0.1
GoldenOcean	GOGL	6.94	6.7
GoldenbridgeAcqn	GBRGU	10.57	0.9
GoldenbridgeAcqn	GBRG	10.04	0.9
GoresVII Wt	GSEVW	10.09	-13.4
GrandCanyonEduc	LOPE	115.60	-0.4
GreatAjaxNts24	AJXA	25.41	0.2
Greenhill	GHL	19.37	1.5
GuarantyBncshrs	GNTY	38.98	1.5
GulfIslandFab	GIFI	3.49	2.5
HCA Healthcare	HCA	197.25	-1.0
HarborOneBncp	HONE	15.07	7.6
HealthcareRealty	HR	30.82	0.7
HealthpeakProp	PEAK	33.50	0.3
HighlandGlblAlloc	HGLB	9.65	0.8
HighPeakEner	HPK	10.43	2.3
HomeDepot	HD	328.83	-0.4
DR Horton	DHI	96.91	-0.7
HoughtonMifflin	HMHC	9.07	12.0
Huazhu	HTHT	61.06	0.5
Huntingdln	HDSN	18.58	1.6
ICL Group	ICL	6.53	3.5
IHS Markit	INFO	104.50	-0.4
iStar	STAR	19.00	3.6
Identiv	INVE	15.94	5.3
IndepRealty	IRT	16.56	0.1
Ingredion	INGR	95.92	0.3
InstalledBldg	IBP	133.23	0.2
IntegralLifeSci	IART	73.38	0.9
IntlPaper	IP	57.67	-0.3
IntlFlavors	IFF	143.18	0.0
InvitatHomes	INVH	33.85	0.9
JMP 6.875% Nts	JMPNZ	25.68	0.2
JacksonFin	JXN	30.71	2.2
JamesHardie	JHX	33.72	0.5
Jefferies	JEF	32.78	-0.8
KKR Pfd C	KKRpC	80.70	2.2
KenonHoldings	KEN	34.54	3.3
KeurigDrPepper	KDP	36.41	0.3
Knoll	KNL	23.46	35.2
KnotOffshore	KNOP	19.25	1.8
KoninklijkePhil	PHG	60.97	-0.3
KontoorBrands	KTB	64.49	-0.2
KronosWorldwide	KRO	17.30	2.2
LGI Homes	LGIH	170.47	0.8
LSB Inds	LXU	6.62	2.6
LabCorp	LH	262.67	0.6
LargoResources	LGO	17.37	6.7
LennoxIntl	LII	336.50	0.5
LeviStrauss	LEVI	29.23	-1.3
LifeStorage	LSI	93.31	1.8
LiveOakBcshs	LOB	72.64	0.5
LloydsBanking	LYG	2.44	0.8
LouisianaPacific	LPX	69.02	1.2
MDU Rscs	MDU	33.61	0.5
MainStreetCap	MAIN	42.94	0.7
MarlinBusSvcs	MRLN	22.90	50.7
MaverickMetals	MMS	98.50	0.4
Medtronic	MDT	127.09	0.2
MercuryGeneral	MCY	66.38	-0.3
MetLife	MET	63.57	0.0
MettlerToledo	MTD	1306.29	-0.4
Microsoft	MSFT	261.48	-0.8
MidAmApt	MAA	152.31	0.5
MohawkInds	MHK	211.98	-2.4
MonarchCasino	MCRI	75.04	4.7
MonsterBev	MNST	98.49	-0.3
MorganStanley	MS	80.47	1.3
Moody's	MCO	324.04	-0.4
NatlStorage	NSA	41.87	0.8
NatWest	NWG	5.56	0.2
Navient	NAVI	15.67	0.6
NewGenIvf	NGIV	10.01	0.3
Newhome	NWHM	6.47	2.9
NexPointResidential	NXRT	45.62	1.8
NextierOil	NEX	4.08	2.2
OReillyAuto	ORLY	539.23	0.6
OasisPetrol	OAS	72.15	5.4
OneWater	ONEW	45.66	6.9
OppenheimerA	OPY	45.33	1.7
Oracle	ORCL	79.43	-0.3
OwensCorning	OC	98.65	0.2
POSCO	PKX	79.50	1.9
PPD	PPD	46.50	-0.2
Pentair	PNR	69.68	0.0
PetIQ	PETQ	40.72	3.0
PhilipMorris	PM	93.01	-1.3
PortlandGenElec	POR	48.90	0.8
PostHoldings	POST	111.53	0.6
PotlatchDel	PCH	56.61	1.0
PreferredBankLA	PFBC	67.92	0.4
PrimericaCorp	PRI	153.08	0.9
ProspectCapital	PSEC	8.15	0.4
PrudentialFin	PRU	99.87	-0.3
PublicStorage	PSA	270.52	1.3
RELX	RELX	27.06	-0.2
RH	RH	643.97	1.1
RR Donnelley	RRD	5.50	6.4
RYAM	RYAM	10.16	3.2
RealtyIncome	O	67.44	0.5
ResoluteForest	RFP	16.67	7.8
RexfordIndlRealty	REXR	55.25	0.8
RmRevTrust	RMBI	14.60	1.3
Rogers	ROG	202.39	-0.1
RyanSpecialty	RY	95.14	0.1
RyersonHolding	RYI	18.50	5.7
SLR Sr Invt	SUNS	16.41	0.7
SVB Fin PfdA	SIVBP	27.33	1.1
SafeBulkersPfdC	SBpC	25.28	0.3
SantanderConsUS	SC	31.49	0.2
Sasol	SSL	16.76	0.8
Schwab(C)	SCHW	66.79	1.8
SempraEnergy	SRE	139.57	0.1
SendasDistrib	ASAI	14.68	1.9
SilganHoldings	SLGN	43.42	0.2
SimonProp A	SPG	116.89	0.5
SimonPropPfdJ	SPGpJ	73.62	0.5
SimpsonMfg	SSD	110.58	1.6
SnapOn	SNA	237.54	0.2
SpartanAcqnIII	SPAQ	10.00	0.1
StanleyBlackDck	SWK	207.45	0.2
Starbucks	SBUX	118.09	-0.6
SteelPtrsPfdA	SPLPpA	21.90	0.9
SteelPartners	SPLP	20.90	1.0
StewartInfo	STC	57.99	-0.1
SunComms	SUI	159.40	0.6
SunlifeFinancial	SLF	52.65	0.3
Sunoco	SUN	34.00	1.9
SwissHelvetia	SWZ	9.90	1.0
SynchronyFin	SYF	41.67	-1.6
TAL Education	TAL	60.64	2.3
TC Pipelines	TCP	33.30	-0.8
Tegna	TGNA	21.22	0.1
TELUS	TU	21.03	-1.2
TJX	TJX	70.60	-1.4
TPI Composites	TPIC	56.42	...
Textron	TXT	60.00	0.9
TimberlandBncp	TSBK	28.00	0.8
TrueBlue	TBI	23.04	0.7
TractorSupply	TSCO	184.49	1.1
TranslateBio	TBIO	20.35	5.1
TriNetGroup	TNET	81.69	1.3
TritonIntlPfdE	TRTNpE	27.30	0.3
TrueBlue	TBI	23.44	...
TysonFoods	TSN	79.27	0.6
UDR	UDR	45.15	0.6
UFP Inds	UFPI	81.90	1.2
UMH Prop	UMH	20.62	0.6
UMH PropPfdD	UMHpD	25.93	0.3
UnionBankshares	UNB	37.38	2.0
UniversalHealthB	UHS	147.28	-0.1
UnvlInsurance	UVE	15.77	3.3
Unum	UNM	28.80	0.9
Vale	VALE	19.86	-0.5
Valhi	VHI	26.70	-0.1
Valvoline	VVV	28.71	4.2
Vericel	VCEL	63.54	-6.6
VillageBank&Tr	VBFC	64.00	15.4
VMware	VMW	172.00	3.6
VulcanMatls	VMC	177.66	0.6
WPP	WPP	68.34	0.2
WasteConnections	WCN	117.13	-0.3
WasteMgt	WM	135.04	-0.5
Watsco	WSO	286.94	-0.6
WestFraserTimber	WFG	88.48	-0.7
WestPharmSvcs	WST	317.19	0.9
WestAllianceBcp	WAL	102.54	1.9
WesternUnion	WU	26.23	1.0
WestRock	WRK	54.99	-0.8
Weyerhaeuser	WY	38.99	-1.1
Wiley A	JW.A	57.63	1.9
Wiley B	JW.B	57.43	1.8
WinmarkCp	WINA	199.65	-1.9
ZimIntlShipping	ZIM	23.98	6.9
ZebraTech	ZBRA	518.66	-0.8
Zhihu	ZH	9.83	-0.7
Lows			
ADMA Biologics	ADMA	1.56	-0.6
AST Space	ASTS	7.12	-4.9
AVROBIO	AVRO	9.58	-6.7
AdaptImmune	ADAP	3.96	-2.5
AffirmHldgs	AFRM	65.10	-5.3
Akoustis	AKTS	8.22	-3.8
AlkamiTech	ALKT	40.03	-5.5
AltimarAcqnIIWt	ATMRW	0.92	-10.2
AmericanTechWt	ATWW	1.68	-4.8
ApolloStratII Wt	APGB.WS	0.91	-3.2
Appian	APPN	125.29	-6.9
ArctosNorthStarA	ANAC	9.85	-0.5
AresAcqnWt	AAC.WS	1.13	-11.1
ArgusCapital	ARGU	9.21	-0.3
AscendisPharma	ASND	119.71	-0.8
AssemblyBiosci	ASMB	3.50	-1.9
AtlasCrestInvtWt	ACIC.WS	1.07	-3.0
AuburnNatlBncp	AUBN	37.22	-1.3
Audacy	AUD	4.41	-0.7
AuriniaPharm	AUPH	11.09	-2.0
BM Technologies	BMTX	11.37	-3.8
BeyondSpring	BYSI	9.95	-4.4
BreezeHldgsWt	BREZW	0.55	-6.7
BridgetownHlds	BTWN	11.20	-4.0
BrooklineCapWt	BCACW	0.62	-0.6
CF Acqn VI Wt	CFVIW	0.70	-6.8
CONX Wt	CONXW	0.91	-9.0
COVA Acqn Wt	COWW	0.77	-1.2
CRISPR Therap	CRSP	114.44	-3.0
CYREN	CYRN	0.76	3.3
CapitolFdsV Wt	CAP.WS	1.26	-4.9
CheckmatePharm	CMPI	6.12	2.5
ChemoCentryx	CCXI	44.37	-3.7
ChurchillVII	CVII.U	9.75	-0.8
ChurchillVII Wt	CVII.WS	1.02	-6.1
CloopenGroup	RAAS	12.89	-6.4
CognyteSoftware	CGNT	23.32	1.2
ConcertPharm	CNCE	4.77	-2.0
ContextLogic	WISH	11.60	-2.3
ContraFect	CFRX	3.84	-6.3
Cuentas	CUEN	2.75	-4.4
DecarbonizPlusA	DCRB	9.96	-0.7
DecibelTherap	DBTX	9.29	-0.5
DelwinterRes	DWIN	9.58	-0.5
EQ Health Wt	EQHA.WS	0.79	-3.2
EdgewiseTherap	EWTX	23.56	-1.2
EdocAcqnWt	ADOCW	0.26	-11.9
EnvilmpactWt	ENVIW	0.73	-10.0
EsportsTech	EBET	18.65	-20.7
FangddNetwork	DUO	4.80	0.2
FemasysAcqn	FEMY	12.40	-0.6
FinServAcqnWt	FSRXW	0.88	-0.7
FlameAcqnWt	FLME.WS	0.99	-4.5
ForgeHealthTherap	FHTX	20.42	0.1
FreelineTherap	FRLN	10.53	-3.2
FutureHealthESG	FHLT	9.87	-0.2
FuturisnPharma	FUSN	11.04	-0.5
GBS	GBS	4.11	-10.3
GenieEnergy	GNE	6.64	-2.8
GigCapital3 Wt	GIK.WS	1.18	-0.5
GigCapital3	GIK	8.40	-7.0
GlobalInfoTech	GIFT	5.35	-5.7
GlobeNet	GNHR	8.79	-0.9
GoldenbridgeWt	GBRGW	0.20	-16.7
GrowthCapWt	GRCYW	0.80	-3.2
Gyrodyne	GYRO	13.70	-3.6
Hancock	HAFC	8.90	-1.8
HeplionAcqn	HCIC	10.20	-1.8
HomologyMed	FIXX	6.10	-1.5
HorizonTechFin	HZON	17.75	-5.0
HothTherap	HOTH	2.18	-4.0
Hylion	HYLN	8.37	-1.8
iMara	IMRA	6.61	-4.0
InhibikaseTherap	IKT	4.2	-3.0
InMedPharma	INM	2.74	-8.4
IonisPharma	IONS	39.17	-2.1
KinsTechWt	KINZW	0.60	-6.2
KaryopharmTherap	KPTI	9.22	-4.9
KronosBio	KRON	19.87	-6.7
Lannett	LCI	4.29	-0.6
LefterisAcqnWt	LFTRW	0.91	-6.2
LixteBiotech	LIXT	3.55	0.0
LongboardPharm	LBPH	10.86	-1.8
LordstownMotors	RIDE	8.54	-4.9
LucirahHealth	LHDX	14.31	-3.7
MDH Acqn Wt	MDH.WS	1.09	-0.6
MMTec	MTC	1.16	-4.4
MedicNova	MNOV	4.32	-2.1
MedicusSciWt	MSACW	0.52	-4.7
Metacrine	MTCR	4.07	-4.3
MillendoTherap	MLND	0.96	-2.0
MontaukRenew	MNTK	9.26	-4.5
MotionAcqnWt	MOTNW	0.70	-12.1
NGL Energy	NGL	1.92	-3.4
NeuBaseTherap	NBSE	5.78	-2.3
NeuroBoPharm	NRBO	4.00	-1.7
NewVistaAcqnWt	NVSAW	0.77	-9.4
Nikola	NKLA	10.20	-6.2
NovusCapII Wt	NXU.WS	1.01	-6.0
NuvveHolding	NVVE	8.24	-4.2
NuZee	NUZE	3.17	1.2
Odonate	ODT	2.77	-5.5
OmegaAlphaSPAC	OMEG	9.81	-0.4
OscarHealth	OSCR	22.50	-3.9
PainReform	PRFX	2.85	0.7
Pathfinder Wt	PFDRW	0.72	-10.3
PluristemTherap	PSTI	4.03	-5.5
PrimeImpactWt	PIAIW	0.75	-6.2
Progenity	PROG	3.95	-6.2
PropSolnsII Wt	PSAGW	0.87	-6.4
Quhuo	QH	4.90	-0.4
RADMedicalSys	RADI	13.88	-0.2
ReproMedSys	KRMD	2.70	-6.3
RevolutionAccelWt	RAACW	1.40	-3.3
RexahnPharm	REXN	3.17	-1.4
Root	ROOT	10.05	-8.2
RosecliffAcqnWt	RCLFW	0.66	-4.0
SOC Telemed	TLMD	5.54	-3.6
SkillfulCrafts	EDTK	2.31	-5.4
SlamA	SLAM	9.89	-0.6
SportsTekAcqnWt	SPTKW	0.40	-6.5
SpringValleyWt	SVSVW	0.76	-6.3
SteelPharm	STEL	4.65	-0.2
SteelBioTher	MITO	1.07	-0.9
SunlandsTech	STG	7.10	-3.6
SupernovaPtrsA	SPNV	9.86	-0.4
Switchback II Wt	SWBK.WS	1.50	-3.7
TFF Pharma	TFFP	12.11	-3.0
TCV Acqn	TCVA	9.75	-1.5
TD Holdings	GLG	1.33	-4.9
TSinnovA	TSIA	9.77	-0.4
TailwindIntlWt	TWNI.WS	0.95	-1.9
TelemarGenTech	TEO	10.51	-0.6
10XCapVentureA	VCVC	9.80	-3.0
TribeRes	MVOP	0.25	-6.5
VynesTherap	VYNE	4.64	-3.2
Vaxcyte	PCVX	17.41	-3.5
VectorAcqnWt	VACQW	1.15	-9.2
VinciPartnersInv	VINP	11.96	-0.3
VirpaxPharm	VRPX	3.96	0.5
VirtuosoAcqnWt	VOSOW	0.85	-3.2
VisionMarineTech	VMAR	6.05	-3.0
VistaGenTherap	VTGN	2.17	-1.0
WindtreeTherap	WINT	5.98	-0.3
XL Fleet	XL	6.19	-0.2
Zymeworks	ZYME	27.25	-9.5

BANKING & FINANCE

Launder Case Hits Banks

By Patricia Kowsmann

PETER BOER/BLOOMBERG NEWS

ABN Amro Group settled charges of legal violations for $575 million. Its headquarters in Amsterdam.

Failures to police money laundering procedures hit two major banks in Europe, dealing a further setback to a region that has struggled to stop financial institutions from serving as conduits for illicit transactions.

ABN Amro Group NV said Monday that it had agreed to pay around $575 million to settle a criminal case accusing the Dutch lender of violating money-laundering and terrorism-financing regulations repeatedly for several years.

Also Monday, the head of Denmark's largest bank, **Danske Bank** AS, resigned after he was named as a suspect in the ABN Amro case. Chris Vogelzang was an ABN Amro board member before Danske hired him in 2019. He held various positions at ABN Amro from 2000 to 2017, including as head of global retail and private banking.

In stepping down from Danske Bank, Mr. Vogelzang said he didn't want speculation about his role at ABN Amro to get in the way of the Danish bank's cleanup. Danske hired him following a massive money-laundering scandal of its own, disclosing in 2018 that its tiny Estonian branch had moved more than $230 billion from Russia and other former Soviet states over several years, undetected.

"I left ABN Amro more than four years ago and am comfortable with the fact that I managed my management responsibilities with integrity and dedication," Mr. Vogelzang said.

In Monday's settlement, Dutch prosecutors listed a series of problems it found between 2014 and 2020 at ABN Amro, which is more than 50% owned by the Dutch government. The prosecutors said three former managers were under investigation in its probe, but didn't disclose their names.

Prosecutors said the bank failed to conduct proper diligence of its clients and the origin of their money and that documents and data on customers were missing and incomplete. It also said the bank paid little attention to cash transactions, which tend to have higher risk of money laundering.

In one instance, ABN Amro allowed a person to open a bank account in 2014—and gave the account a low-risk rating—even though it knew the customer had been involved in fraud since 1995. Prosecutors said movements on the account didn't fit the clients' alleged business activities, and there were cash deposits using €500 notes, which were a risk factor for money laundering. Police suspect the client worked for criminal groups.

"ABN Amro must have missed many signs of money laundering and other forms of financial and economic crime over a number of years," a prosecutor said.

In a statement, ABN Amro said it was taking measures to improve its controls, including by increasing the number of employees working to detect risk. The bank said it "deeply regrets the situation and recognizes the seriousness of the matter."

Europe's overlapping jurisdictions have made it prone to money-laundering mishaps. It has often fallen to U.S. prosecutors and regulators to enforce changes. The U.S. used its purview over dollar transactions globally to effectively shut down Latvian bank ABLV in 2018 after it became a haven for dirty money.

European authorities have tried to boost the continent's power to fight money laundering, which is currently mostly dealt with on a domestic level. Discussions, however, have taken a back seat because of the pandemic.

Dutch authorities have been particularly tough regarding anti-money-laundering enforcement. In 2018, prosecutors fined ING Groep NV over $900 million for its money-laundering failings. That case is still hanging over the new chief at UBS Group AG, Ralph Hamers, after a Dutch court ordered a probe into his role in the scandal. Mr. Hamers was ING's CEO before moving to UBS in November.

Amsterdam-listed shares of ABN Amro closed up over 2% Monday on the settlement. Danske shares listed in Copenhagen fell more than 2%. The Danish bank said it had appointed its chief risk officer, Carsten Egeriis, as chief executive, replacing Mr. Vogelzang.

Whitehorse Raises $4 Billion for Fund

By Preeti Singh

Secondary investor **Whitehorse Liquidity Partners** has collected $4 billion for its fourth fund, blowing past its target of $3 billion.

The fund, Whitehorse Liquidity Partners IV LP, is double the size of its predecessor, which closed on $2 billion in October 2019. Of the new fund's 112 investors, 66 are new to Whitehorse, according to Yann Robard, the firm's founder and managing partner.

Toronto-based Whitehorse invests in preferred equity secondary deals, purchasing preferred securities in an underlying private-equity asset or portfolio, according to a document from the **Pennsylvania Public School Employees' Retirement System**, which pledged $200 million to the latest fund.

During disruptions from the coronavirus pandemic, preferred-equity transactions became "mainstream" and accounted for 14% of all secondary transactions last year, up from 9% in 2019, according to a report from advisory firm Campbell Lutyens & Co. Buyers in these deals got greater downside protection while borrowers took advantage of the speed and flexibility provided by preferred equity, the report said.

"The pandemic educated the market in terms of the different solutions available in the secondary markets, giving tailwinds to where this market can go in the future," Mr. Robard said.

Whitehorse had a busy year in 2020, deploying $3 billion in deals while more than doubling the size of the firm, in terms of the number of people on board, to 85 professionals, Mr. Robard said.

Mr. Robard founded Whitehorse in 2015 and spent 13 years at the Canada Pension Plan Investment Board, where he led secondaries and co-investments when he left. Since its inception, Whitehorse has raised more than $7.5 billion and deployed $6.3 billion across 75 transactions, according to a news release.

The firm has raised successively larger funds in quick succession. It collected $402 million for Whitehorse Liquidity Partners I LP by the time it closed in 2017, followed by $1 billion for Whitehorse Liquidity Partners II LP, which it wrapped up in 2018, and then doubled that amount with Whitehorse Liquidity Partners III.

As of Dec. 31, 2019, Whitehorse funds I, II and III produced a blended net internal rate of return of 18.4%, according to the Pennsylvania pension system document.

Whitehorse is targeting 10 to 15 transactions for the new Fund, ranging from $100 million to $500 million, mainly in North America or Europe, the Pennsylvania pension document shows.

Other investors in previous Whitehorse funds include the Minnesota State Board of Investment and the Alaska Permanent Fund Corp.

Libor Alternative Gains Strength

By Julia-Ambra Verlaine

LYNDON FRENCH FOR THE WALL STREET JOURNAL

Richard Sandor

Financial-industry pioneer Richard Sandor is ramping up his efforts to compete in the race to replace the London interbank offered rate, which helps set borrowing costs on everything from mortgages to business loans.

Mr. Sandor—who helped create interest-rate futures in the 1970s and launched his own replacement for the scandal-marred short-term interest-rate benchmark in 2019—is expanding offerings to include one-month and three-month borrowing rates. Ameribor is set on the American Financial Exchange, which was founded by Mr. Sandor, and is where banks lend to each other through mutual lines of credit. Some small and medium-size lenders favor Ameribor because it changes with their funding costs.

The benchmark poses a challenge to the Secured Overnight Financing Rate, the Libor alternative preferred by many Wall Street banks and regulators and which currently only offers an overnight rate. Major U.S. corporations and regional banks have been clamoring for longer-term rates before they choose a new benchmark.

Linked over decades to trillions of dollars of financial products such as mortgages and corporate loans, Libor is slated for replacement by the end of 2021. Finding a substitute poses a major challenge for the financial industry. Banks and companies want a reference rate that reflects the risks from short-term lending, supported by a market that behaves in a predictable manner, to ensure that loans are affordable for borrowers and profitable for lenders.

The Alternative Reference Rates Committee, a group of large banks and investment firms convened by the Federal Reserve to find a substitute, selected SOFR in 2017. But corporations and banks have been slow to switch.

Loans tied to Libor have grown over the past year instead of dwindling, sparking warnings from regulators. Around $223 trillion worth of contracts now reference Libor, compared with $199 trillion at the end of 2016, according to a report from ARRC.

Chief financial officers and lenders said they need one- and three-month options, like those offered by Libor, to mirror existing contracts and avoid complex calculations. Mr. Sandor said his new Ameribor Term-30 rate fits within existing bank models, giving it an edge over SOFR.

The new Ameribor rate is based on short-term funding data collected by the Depository Trust and Clearing Corporation, which processes trades for Wall Street. That data includes commercial paper—a market that reflects the costs for companies to access money for periods ranging from 30 to 270 days.

"Ameribor Term-30 is designed to be a 'plug-in and play' replacement for one-month Libor, fostering an easy transition for operations and accounting departments," said Mr. Sandor.

Meanwhile, the committee of banks and regulators behind SOFR said in March that it wouldn't recommend longer-term SOFR rates for now because the derivatives market hasn't grown enough to support a robust forward-looking benchmark.

SOFR is based on the cost of transactions in the market for overnight repurchase agreements, or repos, where large banks and hedge funds borrow or lend to one another using U.S. Treasurys as collateral. Analysts and officials said SOFR proved resilient during the pandemic-fueled market swings last year, when swings in the bond market forced Fed intervention. But some worry that without a large secondary market for futures and swaps, the new benchmark could be prone to the same manipulation that upended Libor.

J. Christopher Giancarlo, former chairman of the Commodity Futures Trading Commission, said in a webinar hosted by Mr. Sandor that he was surprised regulators were pushing a single benchmark, especially one reflecting Wall Street's borrowing costs instead of Main Street's.

"The lack of choice is somewhat striking—I find it odd there is official sanction to move to one benchmark, especially for a market as diverse and complex as the U.S. banking industry," said Mr. Giancarlo. "The problem with Libor is that we had one rate. Don't we hazard the same risk?"

Pressure to make the switch is mounting. The Fed recently warned banks that they could face regulatory consequences if plans aren't in place to move away from the benchmark before it expires for some shorter-dated dollar rates on Dec. 31. Smaller banks said they favor Ameribor because it reflects the cost of funds trading in financial markets for banks that aren't among the Fed's exclusive trading partners—also known as primary dealers. These smaller banks typically don't have access to repo markets.

Consulate Health Unit Seeks Buyer, Payout

By Soma Biswas

A bankrupt unit of nursing-home operator **Consulate Health Care** won court approval to put itself up for sale, along with the rights to try to collect on a $258 million whistleblower judgment against its other nonbankrupt corporate affiliates.

CMC II LLC, a back-office manager for Consulate-run nursing homes, filed for bankruptcy in March along with two affiliated nursing homes, saying they couldn't pay a $258 million judgment they faced for overbilling government health programs. CMC is now seeking to sell itself out of bankruptcy, and has named a Consulate affiliate as the lead bidder after it offered $3 million.

The assets up for sale include CMC's legal rights to seek compensation from its solvent corporate affiliates over the judgment that bankrupted it. Litigation financiers have expressed interest in purchasing the legal claims, according to testimony by CMC's top restructuring officer.

Lawyers for unsecured creditors, including the whistleblower who won the judgment, Angela Ruckh, are wary of the legal claims ending up in the hands of the lead bidder. In court hearings on Thursday and Friday, they said that putting CMC in the hands of a Consulate affiliate that has not filed for bankruptcy would simply bury the judgment, which could otherwise be asserted against other Consulate units.

By Friday, the only concession won by Ms. Ruckh and other unsecured creditors was a two-month delay in the sale deadline, from May to July.

Unsecured creditors, including Ms. Ruckh, have accused her former employer of overbilling Medicare and Medicaid, were unable to alter the direction of the bankruptcy case. CMC II is planning to sell itself and its litigation claims tied to the whistleblower judgment to an affiliate of Consulate, which is offering $3 million for the assets as well as providing a $5 million bankruptcy loan.

Judge John Dorsey of the U.S. Bankruptcy Court in Wilmington, Del., on Friday approved the company's procedures for a competitive sale process for CMC II, the litigation claims and two nursing homes that are part of the bankruptcy. Maitland, Fla.-based Consulate, officially named La-Vie Care Centers, and its other 138 healthcare facilities aren't part of the chapter 11.

Litigation financiers have expressed interest in buying the legal claims.

The judge allowed CMC to keep a May deadline for wrapping up the sale of the two bankrupt nursing-home operators to the third-party bidder, Assisted 4 Living Inc.

Unsecured creditors argued that the goal of the sale of CMC II and the litigation claims is to shield Consulate affiliates that aren't in bankruptcy from having claims asserted against them as well.

Mutual Funds

Data provided by LIPPER

Top 250 mutual-funds listings for Nasdaq-published share classes by net assets.

e-Ex-distribution. **f**-Previous day's quotation. **g**-Footnotes x and s apply. **j**-Footnotes e and s apply. **k**-Recalculated by Lipper, using updated data. **p**-Distribution costs apply, 12b-1. **r**-Redemption charge may apply. **s**-Stock split or dividend. **t**-Footnotes p and r apply. **v**-Footnotes x and e apply. **x**-Ex-dividend. **z**-Footnote x, e and s apply. **NA**-Not available due to incomplete price, performance or cost data. **NE**-Not released by Lipper; data under review. **NN**-Fund not tracked. **NS**-Fund didn't exist at start of period.

Monday, April 19, 2021

Fund	NAV	Net Chg	YTD %Ret
American Century Inv			
Ultra	81.32	-0.65	7.1
American Funds Cl A			
AmcpA p	42.76	-0.37	9.3
AMutlA p	49.32	-0.19	11.0
BalA p	32.02	-0.16	6.4
BondA p	13.43	-0.01	-2.2
CapIBA p	67.45	-0.14	7.7
CapWGrA	64.26	-0.20	8.5
EupacA p	71.48	-0.19	3.1
FdInvA p	76.18	-0.57	10.4
GwthA p	72.63	-0.72	7.5
ICAA p	49.12	-0.26	10.9
IncoA p	25.43	-0.07	8.7
N PerA p	64.82	-0.43	7.2
NEcoA p	62.60	-0.49	5.2
NwWrldA	91.69	-0.26	4.3
SmCpA p	86.22	-0.68	8.4
TxExA p	13.66	...	0.9
WshA p	55.98	-0.31	12.0
Artisan Funds			
IntlVal Inst	44.91	+0.01	NA
Baird Funds			
AggBdInst	11.42	...	-2.5
CorBdInst	11.79	-0.02	-2.4
BlackRock Funds			
HiYBlk	7.83	-0.01	1.8
HiYldBd Inst	7.82	-0.01	1.8
BlackRock Funds A			
GlblAlloc p	22.58	-0.06	5.3
BlackRock Funds Inst			
EqtyDivd	23.29	-0.04	15.1
StratIncOpptyIns	10.35	-0.02	0.5
Bridge Builder Trust			
CoreBond	10.47	-0.01	-2.4
CorePlusBond	10.34	-0.01	-1.9
Intl Eq	14.45	-0.05	8.2
LargeCapGrowth	22.39	-0.16	8.8
LargeCapValue	16.88	-0.06	15.1
Calamos Funds			
MktNeutI	14.17	-0.02	2.0
Columbia Class I			
DivIncom I	28.76	-0.15	11.9
Dimensional Fds			
5GlbFxdInc	10.91	...	0.2
EmgMktVa	31.92	+0.08	11.6
EmMktCorEq	26.17	-0.06	7.9
IntlCoreEq	16.12	-0.02	10.8
IntSmCo	22.54	+0.02	11.3
IntSmVa	21.57	+0.01	12.8
LgCo	31.23	-0.17	11.3
TAUSCoreEq2	26.14	-0.16	14.0
US CoreEq1	33.58	-0.21	13.5
US CoreEq2	30.83	-0.19	14.6
US Small	46.30	-0.44	20.8
US SmCpVal	44.38	-0.33	29.1
US TgdVal	30.09	-0.20	28.0
USLgVa	43.99	-0.17	17.7
Dodge & Cox			
Balanced	112.77	-0.03	12.7
GblStock	15.39	-0.01	15.7
Income	14.24	-0.01	-1.7
Intl Stk	48.37	+0.08	10.7
Stock	228.80	-0.16	20.1
DoubleLine Funds			
TotRetBdI	10.54	...	NA
Edgewood Growth Instituti			
EdgewoodGrInst	56.44	-0.39	9.0
Fidelity			
500IdxInstPrem	144.50	-0.77	11.3
Contrafund K6	20.39	-0.15	8.0
ExtMktIdxInstPre	87.12	-1.10	10.8
FidSerToMarket	14.30	-0.10	11.2
IntlIdxInstPrem	49.17	+0.01	8.0
MidCpInxInstPrem	30.38	-0.22	12.5
SAIUSLgCpIndxFd	21.85	-0.12	11.3
SeriesBondFd	10.44	-0.01	-2.7
SeriesOverseas	13.31	-0.02	7.3
SmCpIdxInstPrem	28.31	-0.39	13.3
TMktIdxInstPrem	119.66	-0.80	11.2
USBdIdxInstPrem	12.04	-0.01	-2.8
Fidelity Advisor I			
NwInsghtI	39.94	-0.35	8.4
Fidelity Freedom			
FF2020	17.93	-0.05	4.5
FF2025	16.26	-0.05	5.2
FF2030	20.46	-0.08	6.1
FF2035	17.91	-0.09	8.1
FF2040	12.86	-0.07	9.4
Freedom2025 K	16.23	-0.06	5.3
Freedom2030 K	20.45	-0.08	6.2
Freedom2035 K	17.89	-0.08	8.1
Freedom2040 K	12.86	-0.07	9.4
Fidelity Invest			
Balanc	30.44	-0.18	7.9
BluCh	177.03	-2.22	8.6
Contra	17.77	-0.14	8.4
ContraK	17.81	-0.14	8.4
CpInc r	11.22	-0.04	5.6
GroCo	35.52	-0.48	8.1
GrowCoK	35.62	-0.48	8.1
InvGrBd	11.61	-0.01	-2.0
LowP r	57.24	-0.15	17.7
Magin	13.92	-0.14	6.7
NASDAQ r	174.97	-1.73	8.1
OTC	19.15	-0.21	9.3
Puritn	28.09	-0.17	8.2
SrsEmrgMkt	25.97	-0.18	4.0
SrsGlobal	15.38	-0.02	7.3
SrsGroCoRetail	24.68	-0.33	8.4
SrsIntlGrw	18.85	-0.10	6.0
SrsIntlVal	11.27	-0.01	11.7
TotalBond	11.04	-0.01	-1.9
Fidelity SAI			
TotalBd	10.50	-0.01	-1.7
Fidelity Selects			
Softwr r	28.88	-0.28	8.1
Tech r	27.10	-0.41	6.7
First Eagle Funds			
GlbA	66.10	-0.28	7.9
Franklin A1			
CA TF A1 p	7.80	...	0.5
IncomeA1 p	2.48	...	9.6
FrankTemp/Frank Adv			
IncomeAdv	2.46	...	9.7
FrankTemp/Franklin A			
Growth A p	144.97	-1.43	7.0
RisDv A p	86.79	-0.33	8.4
Guggenheim Funds Tru			
TotRtnBdFdClInst	28.68	-0.08	-2.6
Harbor Funds			
CapApInst	107.95	-1.53	3.6
Harding Loevner			
IntlEq	29.51	-0.17	3.8
Invesco Funds Y			
DevMktY	55.55	-0.41	3.9
John Hancock Instl			
DispValMCI	27.39	-0.11	17.5
JPMorgan I Class			
CoreBond	11.96	-0.01	-2.1
EqInc	22.11	-0.08	12.6
JPMorgan R Class			
CoreBond	11.98	-0.01	-2.1
Lord Abbett A			
ShtDurIncmA p	4.21	...	0.7
Lord Abbett F			
ShtDurIncm	4.21	...	0.8
Metropolitan West			
TotRetBdI	10.90	-0.01	-2.1
TRBdPlan	10.22	-0.01	-2.2
MFS Funds Class I			
Growth I	173.55	-1.68	7.3
ValueI	50.50	-0.15	12.4
MFS Funds Instl			
IntlEq	32.51	+0.08	6.1
Northern Funds			
StkIdx	46.59	-0.25	11.3
Old Westbury Fds			
LrgCpStr	18.48	-0.11	7.8
Parnassus Fds			
ParnEqFd	59.83	-0.47	11.6
PGIM Funds Cl Z			
HighYield	5.56	-0.01	2.5
TotalReturnBond	NA	...	NA
PIMCO Fds Instl			
AllAsset	13.06	...	NA
TotRt	10.30	-0.01	-2.2
PIMCO Funds A			
IncomeFd	12.05	-0.01	NA
PIMCO Funds I2			
Income	12.05	-0.01	NA
PIMCO Funds Instl			
IncomeFd	12.05	-0.01	NA
Price Funds			
BlChip	177.34	-1.41	7.1
DivGro	65.46	-0.23	9.3
EqInc	36.38	-0.11	16.8
Growth	105.27	-0.73	8.6
HelSci	101.18	-0.62	2.4
LgCapGow I	67.39	-0.44	10.1
MidCap	120.81	-1.02	6.8
NHoriz	84.82	-0.89	3.1
R2020	24.00	-0.07	5.5
R2025	20.61	-0.07	6.4
R2030	30.57	-0.12	7.5
R2035	23.03	-0.10	8.4
R2040	33.25	-0.16	9.3
PRIMECAP Odyssey Fds			
AggGrowth r	57.75	-0.73	7.6
Schwab Funds			
1000 Inv r	92.52	-0.59	NA
S&P Sel	63.92	-0.34	NA
TSM Sel r	73.92	-0.49	NA
VANGUARD ADMIRAL			
500Adml	384.49	-2.05	11.3
BalAdml	46.41	-0.20	5.5
CAITAdml	12.32	+0.01	0.3
CapOpAdml r	198.63	-1.59	11.9
DivAppIdxAdm	41.33	-0.20	8.2
EMAdmr	43.65	-0.15	4.9
EqIncAdml	89.02	-0.22	13.0
ExplrAdml	132.00	-1.80	10.3
ExtndAdml	137.77	-1.74	10.8
GNMAAdml	10.69	+0.01	-0.3
GrwthAdml	141.11	-1.20	8.3
HlthCareAdml r	92.13	+0.05	2.9
HYCorAdml r	5.95	...	0.8
InfProAd	28.09	-0.03	-0.6
IntlGrAdml	166.79	-1.29	4.1
ITBondAdml	12.07	-0.01	-3.2
ITIGradeAdml	10.07	-0.01	-2.5
LTGradeAdml	10.75	-0.04	-7.6
MidCpAdml	283.70	-2.16	11.0
MuHYAdml	12.05	...	1.7
MuIntAdml	14.84	...	0.5
MuLTAdml	12.23	...	0.8
MuLtdAdml	11.26	...	0.4
MuShtAdml	15.95	...	0.2
PrmcpAdml r	174.78	-1.41	13.6
RealEstatAdml	136.49	+0.33	14.0
SmCapAdml	105.09	-1.02	13.0
SmGthAdml	98.77	-1.54	5.1
STBondAdml	10.78	...	-0.4
STIGradeAdml	10.95	...	-0.2
TotBdAdml	11.23	...	-2.7
TotIntBdIdxAdm	22.83	-0.01	-2.2
TotIntlAdmIdx r	34.85	-0.09	7.6
TotStAdml	105.00	-0.70	11.2
TxMCapAdml	219.12	-1.29	11.2
TxMIn r	16.45	-0.04	8.5
USGroAdml	178.56	-2.64	5.1
ValAdml	52.63	-0.16	14.0
WdsrIIAdml	79.47	-0.37	15.7
WellsIAdml	69.98	-0.08	2.7
WelltnAdml	81.53	-0.18	7.1
WndsrAdml	83.16	-0.19	16.5
VANGUARD FDS			
DivdGro	35.77	-0.10	8.3
INSTTRF2020	27.20	-0.07	3.6
INSTTRF2025	28.71	-0.09	4.6
INSTTRF2030	29.68	-0.11	5.5
INSTTRF2035	30.59	-0.12	6.5
INSTTRF2040	31.53	-0.14	7.4
INSTTRF2045	32.39	-0.15	8.4
INSTTRF2050	32.52	-0.15	8.5
INSTTRF2055	32.60	-0.16	8.5
IntlVal	43.86	-0.12	9.0
LifeCon	23.11	-0.06	2.2
LifeGro	43.15	-0.19	7.2
LifeMod	33.13	-0.12	4.7
PrmcpCor	33.54	-0.20	15.7
STAR	32.78	-0.16	5.5
TgtRe2015	16.06	-0.03	2.1
TgtRe2020	35.52	-0.09	3.6
TgtRe2025	22.52	-0.08	4.5
TgtRe2030	42.79	-0.15	5.5
TgtRe2035	26.85	-0.11	6.5
TgtRe2040	47.55	-0.20	7.4
TgtRe2045	30.55	-0.14	8.4
TgtRe2050	49.30	-0.23	8.5
TgtRet2055	53.52	-0.25	8.5
TgtRetInc	15.14	-0.03	1.7
TotIntBdIxInv	11.42	...	-2.2
USGro	68.93	-1.01	5.0
WellsI	28.89	-0.03	2.6
Welltn	47.21	-0.11	7.1
WndsrII	44.79	-0.20	15.7
VANGUARD INDEX FDS			
ExtndIstPl	339.97	-4.30	10.8
IdxIntl	20.83	-0.06	7.6
MdCpVlAdml	71.71	-0.27	16.9
SmValAdml	72.89	-0.39	19.8
TotBd2	11.07	-0.01	-2.9
TotIntlInstIdx r	139.36	-0.36	7.6
TotItlInstPlId r	139.40	-0.36	7.6
TotSt	104.98	-0.69	11.2
VANGUARD INSTL FDS			
BalInst	46.42	-0.20	5.5
DevMktsIndInst	16.47	-0.04	8.5
DevMktsInxInst	25.75	-0.06	8.6
ExtndInst	137.76	-1.74	10.8
GrwthInst	141.11	-1.21	8.3
InPrSeIn	11.44	-0.01	-0.6
InstIdx	363.84	-1.94	11.3
InstPlus	363.85	-1.94	11.3
InstTStPlus	81.99	-0.54	11.2
MidCpInst	62.67	-0.48	11.0
MidCpIstPl	309.08	-2.36	11.0
SmCapInst	105.09	-1.02	13.0
SmCapIstPl	303.32	-2.94	13.0
STIGradeInst	10.95	...	-0.2
STIPSIxins	25.96	...	1.5
TotBdInst	11.23	...	-2.7
TotBdInst2	11.07	-0.01	-2.8
TotBdInstPl	11.23	...	-2.7
TotIntBdIdxInst	34.26	-0.02	-2.2
TotStInst	105.02	-0.70	11.2
ValueInst	52.63	-0.15	14.0
WCM Focus Funds			
WCMFocIntlGrwIns	25.82	-0.19	4.3
Western Asset			
CoreBondI	13.15	-0.01	NA
CorePlusBdI	12.05	-0.01	NA

Stocks Finish Lower Across the Board

By Anna Hirtenstein And Akane Otani

Stocks were dragged down by losses across everything from technology shares to retail stocks.

Investors started the week on a somewhat cautious note. A string of blue-chip companies are scheduled to report earnings this week and offer a view on businesses' expectations for the pace of economic revival. Money managers are looking to gauge whether stocks' high valuations are justified after the Dow and S&P 500 hit closing records last week.

MONDAY'S MARKETS

"After a big move, you get a pause of breath and a bit of a reassessment," said Caroline Simmons, U.K. chief investment officer at UBS Asset Management. "People are reassessing, waiting for news flow that might indicate that growth and inflation remain on track."

The Dow Jones Industrial Average fell 123.04 points, or 0.4%, to 34077.63, backing away from Friday's record close.

The S&P 500 lost 22.21 points, or 0.5%, to 4163.26 and the Nasdaq Composite declined 137.57 points, or 1%, to 13914.77.

Peloton fell $8.46, or 7.3%, to $107.75 after a federal safety agency said over the weekend that people with young children or pets shouldn't use the connected-fitness company's treadmills.

Tesla declined $25.15, or 3.4%, to $714.63 after two men died in a Tesla vehicle that crashed into a tree Saturday. Authorities believe the vehicle was operating without anyone in the driver's seat.

Meanwhile, **GameStop** rose $9.68, or 6.3%, to $164.37 after it said its chief executive would step down.

Harley-Davidson shares jumped $3.91, or 9.7%, to $44.29 after the motorcycle maker reported better-than-expected sales results for the first quarter and raised its forecast for motorcycle revenue for the year.

On the earnings front, companies including **Procter & Gamble**, **Netflix** and **Lockheed Martin** are scheduled to post results this week.

As of Friday, 81% of S&P 500 companies that had posted results exceeded analysts' expectations for earnings, according to FactSet. Meanwhile, 84% beat analysts' expectations for sales.

Investors hoping the stock market's climb will continue say they are counting on earnings results to continue impressing to the upside.

"I expect the earnings picture is going to remain very buoyant across the picture and for the momentum to stay very positive," said Fahad Kamal, chief investment officer of Kleinwort Hambros. "As long as earnings meet what are very heightened expectations, the rally can keep going."

Late in the day, bitcoin stabilized at $56,175.38 after plunging almost 12% over the weekend, according to data from CoinDesk. Turkey's central bank said Friday it would ban the use of cryptocurrencies for payments.

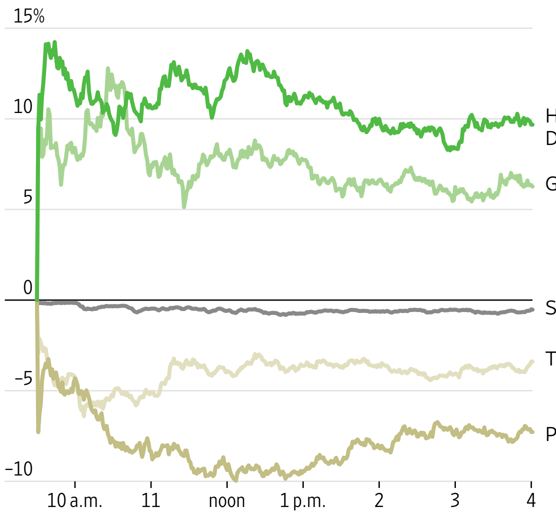
"The [cryptocurrency market] is really on edge right now," said Joel Kruger, a currency strategist at LMAX. "There were concerns over the weekend after Turkey came out with the news of major regulatory restrictions coming into force."

Some traders were speculating that the U.S. Treasury could make a similar decision, he said.

Overseas, the pan-continental Stoxx Europe 600 inched down 0.1%, snapping a four-session winning streak.

Early Tuesday in Asia, Japan's Nikkei Stock Average was down 1.8%, Hong Kong's Hang Seng Index was down 0.1% and South Korea's Kospi was up 0.2%. S&P stock futures were up 0.2%.

Share-price and index performance, Monday



Source: FactSet

MICHAEL LOCCISANO/GETTY IMAGES

Peloton fell 7.3% after a federal agency's warning about the connected-fitness company's treadmills.

Investors Cool on Bonds

Continued from page B1

Longer term, however, Mr. Yao expects global fund managers to increase their holdings, since they are very underweight compared with bond indexes they track, such as the Bloomberg Barclays Global Aggregate Index and benchmarks calculated by JPMorgan Chase & Co.

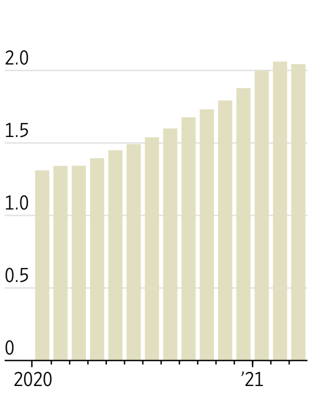
A third index provider, FTSE Russell, said recently it plans to add China to its World Government Bond Index over three years, a longer time frame than many investors and analysts expected. FTSE Russell is a unit of London Stock Exchange Group PLC.

Mr. Yao said further inflows into Chinese sovereign debt could reach $160 billion over the next three years. Similarly, Mr. Pang at J.P. Morgan Asset Management expects foreign holdings could total 15% of the Chinese government-bond market within three to five years. The current figure is about 10%.

So far, overseas investors have largely stuck to buying debt issued by China's central government and by a handful of state-owned lending institutions known as policy banks. They have been slower to buy yuan-denominated corporate debt.

In total, their holdings of all sorts of onshore debt totaled 3.56 trillion yuan at the end of March, the equivalent of $546 billion, according to figures compiled by Bond Connect Co.

Foreign holdings of Chinese government bonds



Note: 1 trillion yuan = $153.4 billion
Source: China Central Depository & Clearing Co.

AUCTION RESULTS

Here are the results of Monday's Treasury auctions. All bids are awarded at a single price at the market-clearing yield. Rates are determined by the difference between that price and the face value.

	13-Week	26-Week
Applications	$157,473,442,400	$180,899,578,700
Accepted bids	$63,723,248,000	$60,369,110,200
" noncomp	$590,296,600	$443,758,300
" foreign noncomp	$244,000,000	$300,000,000
Auction price (rate)	99.993681	99.979778
	(0.025%)	(0.040%)
	0.025%	0.041%
Bids at clearing yield accepted	3.48%	64.95%
	912796C49	912796G60

Both issues are dated April 22, 2021. The 13-week bills mature on July 22, 2021; the 26-week bills mature on Oct. 21, 2021.

Chinese Asset Manager's Bonds Recover

By Xie Yu And Chong Koh Ping

A steep selloff affecting tens of billions of dollars of offshore debt from a major Chinese financial institution has partially reversed, after comments from the banking regulator helped reassure investors.

However, **China Huarong Asset Management** Co.'s international bonds were still trading considerably below face value on Monday. Some market participants said a further rally would require more clarity on Huarong's financial health and any potential restructuring.

The bonds tumbled after Huarong unexpectedly missed a March deadline to release its 2020 financial results, pending what it called a "relevant transaction," and with little more information from Huarong or Chinese authorities. Investment-grade offshore bonds from other Chinese companies had also come under pressure.

On Friday, Chinese regulators broke their earlier silence, in a statement that investors said was positive because it showed authorities were engaged with the issues, even if it was brief and broad.

"From the current situation, the operation of several financial asset-management companies is stable, the main operating indicators, regulatory indicators are in a reasonable range. Please rest assured," said Xiao Yuanqi, vice chairman of the China Banking and Insurance Regulatory Commission.

In China, the term asset-management companies can refer to a quartet of firms that were created in the late 1990s to help handle the problematic debts of China's biggest state-owned banks. Huarong is the largest of these bad-debt managers.

Huarong's dollar bonds rebounded late Friday and rallied further Monday. One 4.25% bond maturing in 2027 climbed in price to about 81 cents on the dollar, according to Tradeweb. The bonds had hit an intraday low of 53.8 cents on the dollar Thursday.

Chinese authorities also may be trying to calm offshore market jitters in other ways. Last week, the Hong Kong branch of a state-backed bank was told by its head office in Beijing not to sell any more of its holdings of Huarong's offshore bonds, a person familiar with the matter said.

Chang Wei Liang, a macro strategist at DBS Bank, said a full recovery in Huarong's bond prices was unlikely. He said market pricing suggested investors might eventually be forced to accept repayments of 10% to 20% less than they were owed. "There remains significant uncertainty over Huarong's long-term position. Restructuring plans could be a prolonged exercise given the complexity of its books, and possible need for recapitalization," Mr. Chang said.

But Jefferies analysts led by Shujin Chen wrote in a note to clients Sunday that market worries were probably overdone, given this was a systemically important state-owned enterprise, or SOE, backed by the central government. "Market is likely overly concerned on Huarong, as we expect no default for a normal operating central SOE that is too big to fail," they said.

Huarong has sufficient liquidity, its operations are stable and it has paid off maturing bonds this year as scheduled, the company said Friday after a management meeting. It added that it was working with its auditor and would publish its 2020 annual report in due course. The company has yet to publish full-year results or an annual report.

Defaults by state-backed Chinese companies have become more common in recent years, as China has tried to dispel the idea that it will always make creditors whole. But Huarong's size and its direct ownership by the central government set it apart from companies that have failed to repay creditors.

Huarong had 1.73 trillion yuan of assets as of mid-2020, the equivalent of about $265 billion, and has some $22 billion of international bonds outstanding. The company is majority owned by the Ministry of Finance.

One concern for investors is whether international bonds could be at a disadvantage, given most were issued by offshore units and aren't directly guaranteed by the parent company, but are instead covered by weaker pledges known as keepwell agreements. More than three-quarters of Huarong's global bonds are covered by keepwells, said Charles Chang, Greater China country lead at S&P Global Ratings.

Source: Tradeweb

U.S. Sanctions Squeeze Russia's Government Debt

By Matt Wirz

Russia's markets reacted modestly to U.S. sanctions last week, but the country's bonds have been weakening for months, indicating that for investors, geopolitical pressure is outweighing the country's economic strength.

The sanctions announced April 15 bars U.S. banks and institutional investors from buying new Russian government ruble-denominated bonds at auction. The response to Russia's alleged cyberattacks and election interference is part of a broader strategy by the Biden administration to pressure Russia financially. The U.S. in March released an intelligence report on the alleged election meddling and has stepped up trade sanctions for Russia's alleged use of chemical weapons.

The new measures stopped short of prohibiting purchases of Russian government bonds in the open market, a step investors and analysts said would have had a much greater chilling effect. Still, the diplomatic campaign has coincided with an increase in Russian bond yields and a relatively modest decline in the ruble, boosting the Russian government's funding costs.

The deterioration of Russia's bonds and its currency bucked the expectations of some Wall Street banks, which had predicted that Russia's strong balance sheet would help it outperform other emerging-market countries in 2021. Russia had low net debt relative to its gross domestic product, according to data from S&P Global Ratings, and analysts took comfort in the government's commitment to conservative fiscal policy.

"The only reason any of the bonds trade with a risk premium is because of the risk of sanctions and the possibility they'll escalate from here," said Grant Webster, a portfolio manager who helps invest about $4.5 billion in emerging-market debt at **Ninety One PLC**. One of the mutual funds Mr. Webster co-manages reduced its allocation to Russian government bonds to 3.65% in February from 4.54% in January, according to data from Morningstar Inc.

The yield on Russia's 10-year government debt was just above 7% last week, relatively unchanged from before the new sanctions but about 1.1 percentage points higher than at the start of the year, according to data from FactSet. The rise in short-term rates has been more pronounced, with the two-year yield hovering around 5.49%, compared with approximately 4.42% at the end of December. A spokesperson for the Russian finance ministry couldn't be reached for comment.

Russia has slid to the 18th-largest component of a widely followed BlackRock Inc. exchange-traded fund invested in emerging-market local-currency bonds, from fifth in October, according to marketing materials for the fund.

Demand for the ruble might be waning as a result of the sanctions. Heightened risk in Russia could have prompted investors to sell the currency last week to buy the South African rand, according to research by Morgan Stanley. Analysts at the bank changed their recommendation on Russian interest-rate trades to "neutral" from "like" based on expectations of a rate increase later this month.

Investment banks were bullish on Russia coming into 2021, in large part because of actions its government had taken to defend against financial pressure from the U.S. and Europe. Bank of America ranked Russia as the best of the big emerging-market countries in a December report, citing its "large positive net foreign assets, the lowest public debt, a small fiscal deficit and even a current account surplus—despite low oil prices."

Oil is Russia's biggest export, and the price of Brent crude has risen about 29% this year. Yet the country's bonds have underperformed. That is primarily because of potential U.S. sanctions, said Tim Ash, a bond strategist at London-based investment firm BlueBay Asset Management. The new restrictions set the stage for a further ban on U.S. institutions' trading Russian debt in secondary markets if tension between Moscow and Washington intensifies, he said. "You have to expect more sanctions," he said.

The U.S. has gradually restricted investors' trading in Russian debt. The Trump administration imposed sanctions in 2018 barring U.S. entities from buying debt of some companies and individuals with ties to the Kremlin in retaliation for alleged election interference and hacking. The following year the ban was expanded to purchases of new Russian government bonds issued in foreign currencies, such as the dollar or euro.

The next step would be to start limiting trading of existing debt, Mr. Webster said. "I don't think chances of that are very high right now, but it's totally still on the table," he said.

SERGEI KARPUKHIN/TASS/ZUMA PRESS

The U.S. has gradually restricted investors' trading in Russian debt.

10-year Russian government bond yields

Note: Data as of Friday
Source: FactSet

HEARD ON THE STREET

FINANCIAL ANALYSIS & COMMENTARY

Investors Look Beyond Pandemic

Stocks rise across the board, but sectors exceeding expectations the most aren't doing particularly well

ADREES LATIF/REUTERS

U.S. retail sales for March were the strongest in 10 months. Customers at a Gucci store in Houston last year.

It is shaping up to be a stellar earnings season for stocks, particularly cyclical ones such as banks and retailers. The problem is that the market may already be moving on.

Because the U.S. economy is emerging from the Covid-19 crisis, most analysts thought first-quarter numbers would be good. So far, they have been much better than good: By the end of Friday, S&P 500 companies that had reported had beaten profit expectations by a combined 30%, according to FactSet, compared with a five-year average of 7%.

Were the earnings season to maintain this trend, it would be the highest number on record. The largest surprises have come from Wall Street's big banks, which are the first blue chips to report—**Morgan Stanley** shrugged off a $911 million loss from the Archegos implosion—as well as consumer-goods firms such as **Lennar**.

Optimism is reinforced by the latest economic data. In the U.S., retail sales for March were the strongest in 10 months. Even in Europe, where there has been less fiscal support for the economy, figures are coming in strong. This bodes well for the earnings season there as well.

But something strange is happening: While stocks are up across the board, those sectors beating expectations the most aren't doing particularly well. The most glaring example is the KBW Bank Index, which actually fell last week.

This may have to do with a lending slump that is worrying some analysts. Many also fear that the bar for cyclical sectors will still prove too high to clear: Profits in the consumer-discretionary sector are forecast to rise 96% and 141% from a year earlier in the U.S. and Europe, respectively. Historically, though, even optimistic profit expectations tend to be comfortably surpassed in recovery years.

There may be something broader at play. Around the middle of March, undercurrents that had driven markets since October suddenly shifted: Discounted stocks started underperforming, as did smaller ones, and "quality" firms—those with a lot of cash and less debt—staged a comeback. Meanwhile, Treasury yields have headed down a bit, and enthusiasm for public listings and special-purpose acquisition vehicles has waned.

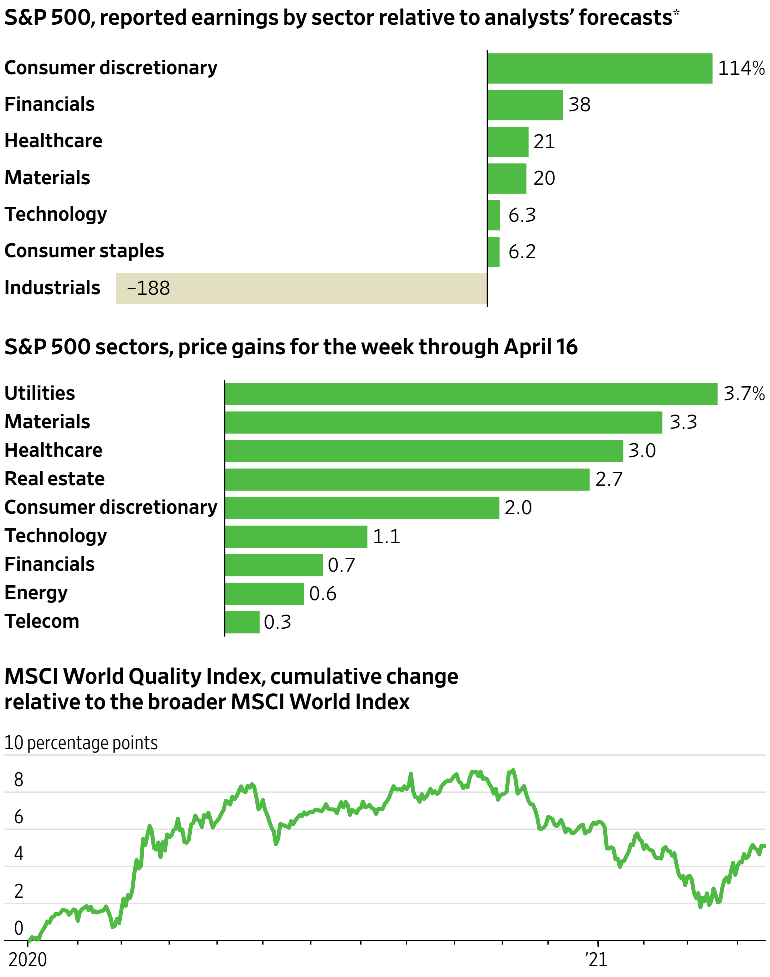
Why is this happening? One possibility ventured by professional investors is that the market is worried about cost increases putting pressure on profit margins further down the line.

The worry is likely premature. Yet it is a testament to the fact that, during the pandemic, investors have anticipated the future earlier than usual. Last year's bear market was both the fastest and shortest-lived ever; investors—perhaps thinking of the 2009 recovery rally—jumped back into equities after barely a month. By the fall, they were already starting to price in a post-lockdown consumer boom.

Now, they could be looking way past the immediate reopening. When compared with 2022 earnings expectations, share prices of consumer-facing firms appear more stretched than those in other industries. More generally, quality stocks tend to do better in later stages of an economic expansion, which the market may already be anticipating. "Old economy" sectors are underrepresented in this category.

While markets are always forward looking, the nature of the Covid-19 crisis may have stretched their discounting mechanism to a new extreme. This doesn't mean "reopening" shares have run out of road, but investors need to think well beyond a vintage quarter for profits.

—Jon Sindreu



*Data for the first quarter of 2021, surprises measured through April 16
Source: FactSet

Coca-Cola Issues Alert Over Global Virus Cases

Coca-Cola threw a cold bottle of Dasani water on multinationals' hopes for a rapid global recovery.

The beverage company on Monday reported decent quarterly earnings, saying organic revenue that strips out currency moves and portfolio changes rose 6% from a year earlier in the quarter ended April 2. However, this was against a miserable quarter in 2020 when the coronavirus pandemic was spreading from Asia and Europe to the U.S. The resulting lockdowns have been punishing for Coca-Cola as they continue to curtail out-of-home sales in places such as restaurants and sporting venues.

Global unit case volume in March of this year finally caught up with the same month in the pre-Covid-19 era of 2019, the company said. For all of 2021, the company left its prior forecast unchanged for high-single-digit organic revenue growth. Yet Chief Executive James Quincey warned analysts on a conference call Monday not to expect a straight-line recovery from this point, noting that confirmed Covid-19 cases globally hit a high last week.

While some countries such as the U.S. and the U.K. are making rapid progress on vaccinations and beginning to reopen, Mr. Quincey said, "you've got countries that are going in the exact opposite direction with cases shooting up and more levels of lockdowns."

Mr. Quincey didn't name any specific countries, but cases are surging in huge markets including Brazil and India.

This is especially concerning for multinationals such as Coca-Cola, which last year derived only one-third of total revenue from North America. The one saving grace for such companies is that the U.S. dollar remains weak relative to many global currencies, making their overseas earnings worth more in dollar terms. Coca-Cola said this would result in a considerable tailwind of 5 to 6 percentage points to earnings-per-share growth in the second quarter. If the U.S. recovery continues to dramatically outpace the rest of the world, though, then even that may not last.

—Aaron Back

MARK KAUZLARICH/BLOOMBERG NEWS

The apparatus of testing, treatments and vaccines for Covid-19 should be an opportunity for the industry in the years ahead.

After Crisis, Don't Forget Healthcare Stocks

The business of healthcare looks as strong as ever. But lately, health stocks are a very different story.

Through Monday, health stocks have returned about 7% so far this year. That lags behind the S&P 500 by about 4 percentage points. A broad index of small biotechnology shares is down so far this year, as other similarly speculative assets have surged. That underperformance belies the reality that the health economy, which accounts for nearly 18% of gross domestic product, is largely back to normal after a year of pandemic-driven disruption.

The first-quarter earnings season is off to a strong start. **UnitedHealth Group**, the largest publicly traded U.S. insurer and an industry bellwether, said Thursday that revenue grew 9% from a year earlier in the first quarter and increased its 2021 earnings forecast. The company now expects to earn between $18.10 and $18.60 a share on an adjusted basis this year, good for roughly 9% growth from 2020. That forecast includes a pandemic-related hit to earnings of about $1.80 a share, resulting from factors such as extra Covid-19 testing and treatment costs, higher unemployment and the impact to patients of having deferred routine care in 2020.

Deal activity is still fairly strong: Life-science supplier **Thermo Fisher Scientific** announced last week a deal to purchase the pharmaceutical-testing company **PPD** for $17.4 billion in cash and stock, a roughly 24% premium. U.S. regulators gave the green light to drugmaker **AstraZeneca**'s planned acquisition of **Alexion Pharmaceuticals**, which was earlier than investors had expected. Alexion shares shot higher in response.

Healthcare investors should always be wary of changes to regulations governing insurance coverage, drug pricing and other key business factors. There is some uncertainty there—for instance, the Biden administration has yet to nominate a permanent commissioner of the Food and Drug Administration. Still, any wholesale change to the status quo seems unlikely in the near term, as the administration has focused on other priorities. Meanwhile, long-run industry tailwinds, such as an aging population, remain intact.

The onset of the pandemic caused significant financial losses throughout the industry, as hospitals had to halt elective procedures in some cases and some patients chose to defer nonemergency care. But the backlog created by those delays should shrink steadily as the pandemic moderates. Meanwhile, Covid-19 is likely to linger well after the pandemic is over: The public-health apparatus of testing, treatments and vaccines should be an additional steady business opportunity for the industry in the years ahead. For example, **Pfizer** Chief Executive Albert Bourla has said it is likely that people who receive Covid-19 vaccines will need booster shots.

Meanwhile, valuations are fairly reasonable, especially in a market characterized by wild speculation in story stocks and cryptocurrencies. UnitedHealth trades at about 21 times this year's forecast, while Pfizer shares can be had for about 12 times. Both multiples are in line with historical valuations in recent years.

Should the currently boundless enthusiasm for speculation diminish, these stocks will look more like a portfolio tonic than an affliction.

—Charley Grant

China's Digital Yuan Is No Threat to the Dollar

Excitable commentators who say China's digital yuan is a threat to the dollar should take the word of Chinese central bank deputy governor Li Bo, who said on Sunday that the country's digital yuan isn't an effort to displace the greenback.

The yuan's digitization is fascinating in terms of its political implications and regarding the new economic levers it might give the government domestically. But it offers relatively little as a tool to boost the yuan's limp international presence, let alone as a weapon to challenge the dollar's supremacy.

As the currency of the world's largest trading economy, the yuan punches below its weight. According to an International Monetary Fund study published in 2019, data from 2016 suggests that around 93% of China's imports and 95% of its exports were denominated in dollars.

Not much seems to have changed. In February, the yuan's share of global payments was 2.2%, compared with February 2016's 2.45%, according to data from the Society for Worldwide Interbank Financial Telecommunication. Even that overstates its international use: A consistent three-quarters of its total global payments are conducted in Hong Kong.

Speaking to the U.S.-China Economic and Security Review Commission last week, Martin Chorzempa, senior fellow at the Peterson Institute for International Economics, said that he has yet to see a convincing argument of how digitization really promotes global use.

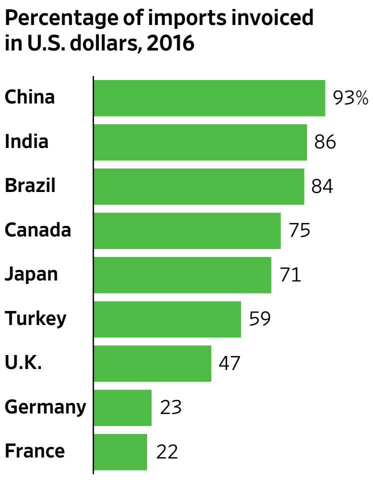
Transactions may be faster than traditional bank transfers. But for major global corporations, immediacy is far from the foremost concern. They would have to acquire yuan to make the transactions in the first place. Digitization could skirt U.S. sanctions, but most international businesses will have no desire to do so, and sanctions aren't a major factor in the limited use of the yuan abroad.

The yuan's global usefulness as a unit of account or a medium of exchange—two of the three traditional functions of money—might one day be improved with broader international use. But its function as a store of value, the third leg of the stool, is almost totally severed by China's capital controls.

The range of options to foreigners who find themselves with a pile of yuan is minimal, compared with a pile of dollars, euros or yen. China has far fewer high-quality assets, and the government's squeamishness about outflows of capital make the risk of not being able to retrieve funds far higher.

Digitization may speed up transactions and remove some of the friction involved in international payments. But it won't transform currencies people don't want to hold into currencies that they do. For most international business, the yuan still sits in the former camp and shows little sign of moving out.

—Mike Bird



Source: International Monetary Fund

A special report by *Barron's* magazine, a Dow Jones publication

What to Know Before Trying To Catch the Bitcoin Wave

The cryptocurrency has reached a tipping point that investors can no longer ignore. But plenty of vexing questions remain—including whether the price run-up reflects a bubble.

By Daren Fonda

Most of us like the dollar. It has lasted for centuries, survived two world wars, the Great Depression, and a siege by inflation. It works pretty well as a de facto global currency. Do we really need a purely digital alternative—one that isn't backed by the Federal Reserve, lives only on a computer network, consumes vast quantities of electricity, and has no intrinsic value?

That profile describes Bitcoin, of course, and it is having a moment.

With Bitcoin's market value topping $1 trillion—following a 1,000% surge in the past year alone—it may be reaching an economic tipping point. Brokerages such as Morgan Stanley (ticker: MS) say that investors should add it to their portfolios. Companies like Tesla (TSLA) and MassMutual have bought large sums. A few taps on your phone can plop it in a digital wallet on PayPal (PYPL), where it can be converted to cash to make a purchase. If you'd like to trade it, Square (SQ) and Robinhood will oblige. Bitcoin debit cards are coming from Visa (V) and Coinbase Global (COIN).

Yet if you're wondering what Bitcoin is—and whether you should own it—you're not alone. Bitcoin and other cryptocurrencies aren't intuitively grasped—they're "mined" from a digital storage depot and pumped into circulation through a decentralized computer network called a blockchain. Prices for Bitcoin, which sits atop an expanding crypto ecosystem, may be rising as retail and institutional investors snap up relatively thin supplies. In a climate of fear over inflation and monetary debasement, proponents say that Bitcoin will hold its value more than "fiat" currencies like the dollar, yen, or euro. Eventually, they argue, it will live in harmony with paper currencies in the global economy.

While the Bitcoin genie may be out of the bottle, it's far from omnipresent. Obstacles include technological hurdles, price instability, taxation policies, and governments that don't want a freewheeling digital token usurping their monetary policies or financial regulations. Illicit uses of Bitcoin, including money laundering and tax evasion, abound. Authoritarian governments have already cracked down. China, for instance, has become a leader in blockchain technology

Continued on the next page

Illustration by Kyle Bean

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Continued from the previous page

and mining, but Bitcoin itself poses a threat: Beijing has banned banks and other financial firms from transacting in it, and shut down domestic crypto exchanges. Beijing is now rolling out a digital yuan, controlled by its central bank, partly to try and offset Bitcoin's appeal.

Another hurdle for Bitcoin is finding ways to mine it without turning it into another global smokestack. The global Bitcoin network now emits 60 million tons of carbon dioxide into the atmosphere annually, roughly equivalent to countries such as Greece, estimates BofA Securities. Some analysts argue that most Bitcoin is mined with clean energy such as wind and solar. But reporting on Bitcoin energy consumption relies on questionable assumptions about electricity generation and usage. And as the price rises and trading volume increases, so does the environmental toll; BofA estimates that every $1 billion of inflow into Bitcoin is like putting 1.2 million cars on the road (and not the Tesla kind).

Perhaps the most vexing question is whether it's a trillion-dollar bubble. Bitcoin's market value has pushed it past that of Mastercard (MA), Home Depot (HD), and Exxon Mobil (XOM) combined. Cryptos overall are worth the entire high-yield bond market, according to Morgan Stanley. Yet Bitcoin acts more like a thinly traded stock than a liquid large-cap; most of the Bitcoin that has been mined is owned by long-term HODLers—or those who "hold on for dear life"—and doesn't actually circulate, and the price may be inflated by large purchases. Indeed, 95% of all Bitcoin is controlled by 2.4% of the accounts, according to BofA, and 20% of the supply may be sitting in lost or stranded digital wallets, according to Chainalysis.

"How bubbly is this market? I think it's very bubbly," says Carmen Reinhart, chief economist of the World Bank. "It may not take any melodrama in a thin market to reverse most or all of the price gains. It's not like the Treasury market. We have to expect huge price volatility in Bitcoin."

Other economists argue that while Bitcoin is an innovative technology with compelling uses, it lacks any intrinsic value to support its price. "Bitcoin is simply a word," says Willem Buiter, the former chief economist for the European Bank for Reconstruction and Development. "It's not something you can eat or touch, use as a consumer or producer for manufacturing." Even gold, the closest analogy, has uses for jewelry and manufacturing. Worries about inflation and paper currencies losing value are legitimate, he says, and investors may want a hedge. "I'm just arguing that Bitcoin isn't it. It's purely a speculative bubble."

What is Bitcoin? The story starts with Satoshi Nakamoto, a mysterious figure—or group—who developed a digital currency that anyone could send and receive through a decentralized computer network. Transactions are validated and recorded by independently operated computers, known as miners, who compete to solve cryptographic puzzles, known as "proof of work" (hence the term cryptocurrency).

The miner who solves the puzzle first shares the results across the network. Other miners verify if the solution is correct, and once a consensus is reached, transactions are bundled together in digital "blocks" and added to an electronic record, or ledger, called a blockchain, which no one controls and anyone can see.

In return for running the network, miners earn newly minted Bitcoin and a share of transaction fees. The higher the price, the more profitable mining can be, depending on electricity costs and computing power.

To transact in Bitcoin, you'll need to open an account through an exchange or app, and store it in a digital wallet. Companies like PayPal and Square have made it a snap to buy through their apps; Coinbase is another popular platform for custody and trading.

The beauty of the system, launched in 2009, arises from a few key features. One is decentralization: No person or authority controls the blockchain. Transactions are recorded only after all of the computer nodes, operating independently, prove their validity—enhancing security over ledgers overseen by humans. Indeed, it would take a massive mining hack to alter the blockchain, which is improbable but not impossible. As a peer-to-peer network, the system offers pseudo-anonymity, though transactions and accounts are traceable.

Bitcoin's scarcity is also a key attraction. The global supply can never exceed 21 million Bitcoins, according to the system's design. About 18.6 million have been created through mining. But the amount of new Bitcoin that's issued is designed to halve every four years. New coins are now minted at a rate of 6.25 every 10 minutes, indicating that the mint will run dry in the year 2140.

While Bitcoin has kicked around for more than a decade, it's now rapidly going mainstream. Trading in Bitcoin futures and related stocks is gaining momentum as Wall Street and financial-technology companies invent new ways for investors to gain exposure. Banks, brokerages, exchanges, and advisory firms are building the infrastructure to turn Bitcoin into an asset like stocks or bonds, anticipating that it will work its way into 401(k)s and other retirement accounts. Fidelity Investments, VanEck, and other fund sponsors are trying to persuade regulators to approve a Bitcoin exchange-traded fund, following Canada's approval of Bitcoin ETFs.

Coinbase has been one of the most anticipated public offerings this year. Its market cap of $86 billion at the end of its first day of trading on April 14 values the crypto exchange more than the Nasdaq, Cboe Global Markets, or Intercontinental Exchange, parent of the New York Stock Exchange.

Bitcoin is also getting votes of legitimacy from some influential investors. Elon Musk bought $1.5 billion for Tesla's treasury. Hedge fund icons Paul Tudor Jones and Stanley Druckenmiller have invested. Howard Marks, co-chairman of Oaktree Capital Management, wrote recently that his skepticism about Bitcoin "has not borne out," adding that his son "thankfully owns a meaningful amount for our family." A representative for Oaktree declined to comment.

Whether this will all crash isn't known, of course, which may explain some reticence to discussing it publicly. Indeed, a variety of factors could take the wind out of Bitcoin.

For one, there's competition. Bitcoin is one of thousands of cryptocurrencies, many of them "forked" off the Bitcoin blockchain. Ether, on the Ethereum network, offers some advantages. The currency can be programmed with "smart contracts," meaning that transactions between parties can include conditions: A shipment of goods from China to the U.S. might cross the ocean at a preset GPS coordinate, for instance, at which point the goods may change ownership, along with a chunk of ether.

Central banks are also eying digital currencies built on blockchain technology. China's move to create a digital yuan may be the first of several central-bank digital currencies. CBDCs are pegged to paper currencies and would fluctuate with standard exchange rates; they wouldn't be a substitute for Bitcoin and other cryptos that function independently of central authorities. But they could compete against cryptos as a medium of exchange, used for international money transfers, for instance, potentially at lower costs.

The Bitcoin network itself is rather slow, handling just 14,000 transactions per hour, compared with 236 million for Visa's network, according to BofA. Efforts are under way to accelerate Bitcoin processing with second layers of processing, including new "lightning" protocols, but it's still far behind card networks and automated clearing houses, or ACHs.

People transact in dollars, yen, and euros, which are stable, widely accepted, and woven into the financial fabric. Bitcoin's volatility makes it unsuitable for large-scale purchases or contracts, and rising transaction fees create economic friction. Selling your Bitcoin to buy something may also be a taxable event, since the Internal Revenue Service classifies Bitcoin as property, not a currency.

Its quasi-legality might eventually be its undoing, says Harvard economist Kenneth Rogoff, author of *The Curse of Cash*. Governments throughout history have consistently quashed challenges to their currencies and monetary policies, he says. Bitcoin poses a threat because it can also be used for criminal activity and may be tough for law enforcement to monitor. "I view the financial innovation as very promising," Rogoff says, "but governments aren't going to sit on their hands forever in the face of methodologies where transactions can't easily be detected."

Another obstacle, less widely discussed, may be Bitcoin's rising environmental toll. Bitcoin's annualized energy consumption has surged to 135 terawatt hours, doubling in the past year, according to the Cambridge Bitcoin Electricity Consumption Index. That is more electricity than countries such as Sweden or Ukraine consume in a year.

Some, or perhaps most, of that electricity may be generated by renewable resources such as wind, solar, hydro, and geothermal activity. Much of the world's mining takes place in China (65%), along with Iceland, Canada, and other countries with relatively inexpensive energy. Indeed, renewables account for 73% of the energy mix in the mining network, according to CoinShares, a Bitcoin asset manager.

But the math looks fuzzy. In China, miners migrate seasonally: They set up shop in regions where hydro is cheap and plentiful in the summer and then decamp as the generators produce less, packing up for places like Inner Mongolia, where electricity comes largely from coal. But how much mining is actually generated by renewables isn't known. "Mining in China is predominately renewable, but it's very difficult to get exact numbers," says Christopher Bendiksen, head of research at CoinShares.

Even if mining is relatively green in China, it's far less clean in other hubs, including Kazakhstan and Iran. The industrial opportunity cost of all of the energy consumed by Bitcoin isn't known—though electricity isn't entirely fungible across regions. And as the price rises, the electricity toll does, too. If the price were to reach $1 million, up from $58,000, Bitcoin would become the world's fifth-largest carbon emitter, passing Japan, according to BofA.

Bitcoin's proponents don't view any of these issues as deal breakers. For one thing, crypto momentum is now self-perpetuating. The higher the price, the more capital gets pumped into developing a financial ecosystem that can handle larger transactions and broaden the appeal to institutions. Bitcoin has become the North Star of the crypto universe, says Citigroup, which also views it at a tipping point.

Custody services, security, and liquidity still aren't close to mainstream finance, but they're improving as firms like BNY Mellon and Fidelity get involved. Bitcoin exchanges have become more secure, following several large-scale hacks and thefts. Over-the-counter trading desks can handle large order sizes, while prime brokerages—used by institutions—are providing best-execution practices and obtaining insurance against theft. Derivatives trading is also flourishing, creating more liquidity for exposure. The system is becoming "increasingly professionalized," says Citi.

Bitcoin may never become legal tender—but it could continue working its way into the system, assuming the financial police can keep tabs on it. Bank regulators don't want to stifle innovative blockchain technology, saying in January that banks could participate in blockchain networks and use "stablecoins," or digital tokens that can smooth transfers between crypto and standard currencies. Stablecoins such as USD Coin are collateralized at a 1-to-1 ratio with a standard currency. Some $20 billion in stablecoins are now in circulation.

Even if Bitcoin doesn't take off as a transaction currency, it could gain appeal as an alternative asset. As digital gold, it may already be pressuring prices for the real yellow metal. One way to value Bitcoin is in relation to the total gold held by the private sector, which amounts to about $2.5 trillion. By that measure, one Bitcoin should be worth $146,000, according to J.P. Morgan, nearly triple the current price.

Proponents argue that Bitcoin could work better than gold as a hedge against inflation. Morgan Stanley wrote recently that a 2.5% position in crypto could improve portfolio returns. But its benefits hinge on correlations to assets like stocks and bonds. And its correlation to cyclical assets appears to be rising as it goes mainstream, wrote J.P. Morgan.

Rival cryptos could coexist. Investors could hold Bitcoin as an investment or inflation hedge, while using other, more-stable cryptos as a transaction currency. Ether may be better for transactions as a programmable currency, but it's less appealing as a store of value, partly because it's scarcity isn't known. "No one can tell you how many ether exist, and the Ethereum network changes all the time," says Adam Pokornicky, a Bitcoin entrepreneur and registered investment advisor for digital assets.

Even those who say that Bitcoin is a bubble think it's likely to stay. The World Bank's Reinhart points out that Bitcoin's price is being fueled by several trends: the search for yield, government stimulus payments, demographic shifts, and technology. Some are long-term trends. And while we might not think of using Bitcoin as a substitute for the dollar in the U.S., it's far more appealing in places like Lebanon, Nigeria, and Venezuela, which have unstable currencies, hyperinflation, or potential for savings to be confiscated. "If you live in a country with capital controls, where you have uncertainty about the future of the currency, that is the heart of the story," she says.

Rogoff agrees: "There are always going to be pockets of the world where it can be used," he says, though he adds that "current valuations go far beyond those end uses."

Worried about inflation or the dollar losing value? Some advisors still say it's best to avoid Bitcoin. Mike Klein, an advisor to high-net-worth clients with Baird, recommends commodities, real estate, and the stock market itself—assets that would gain value in an inflationary climate. "If you want an asset that isn't correlated with anything but speculation, this is it," he says.

Indeed, while stocks follow earnings and bonds track interest rates, Bitcoin's prices may simply be supported by the belief that it will one day give the dollar a strong run. In other words, there's no good reason to buy, unless you think the price is going up.

Above: Bitcoin-mining machines line the shelves at a server farm in Guizhou, China.

Photo by Gilles Sabrie/The New York Times/Redux

$1 M

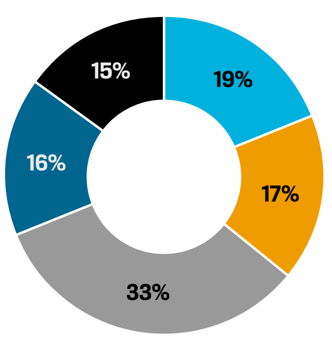
The price that Bitcoin would have to reach to become the world's fifth-largest carbon emitter

95%

of all the Bitcoin that has been produced is controlled by 2.4% of the accounts. Bitcoin acts more like a thinly traded stock than a liquid large-cap.

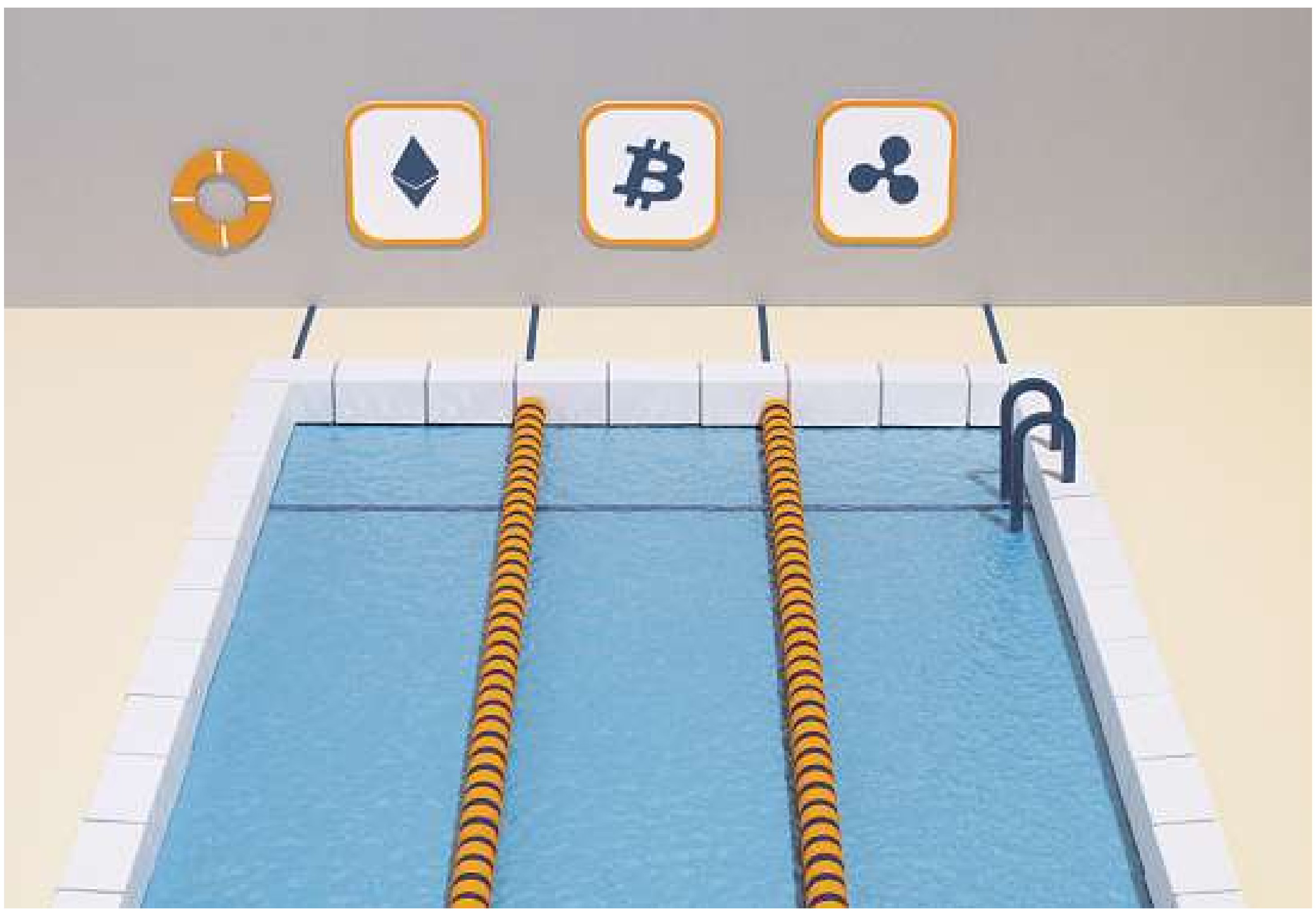
To the Moon

Bitwise Asset Management asked financial advisors to predict where Bitcoin is headed in five years.



Source: Bitwise Asset Management

BARRON'S SPECIAL SUPPLEMENT



The Smart Way to Wade Into Bitcoin

Crypto will play a bigger role in client portfolios as its popularity grows. But diving straight in can be risky.

By Nicholas Jasinski

It's harder than ever to dismiss Bitcoin as a fad or a fraud, and even longtime skeptics have come around to at least a grudging acknowledgment that cryptocurrency isn't going away. Digital assets are rapidly entering the mainstream, and financial advisors are fielding myriad questions from clients about this rapidly growing asset class.

Big-name investors like Paul Tudor Jones and Stanley Druckenmiller revealed Bitcoin allocations in 2020, while institutions including Fidelity Investments and Morgan Stanley have made it possible for advisors and wealth management clients to purchase Bitcoin on their platforms.

But for all the hype, adoption by professional investors remains in the early stages. According to a recent Bitwise Asset Management survey, about 9% of financial advisors currently have an allocation to crypto assets in client portfolios, while 24% said they owned them in their personal portfolios. Four in five financial advisors said their clients asked them about crypto assets in 2020, and 17% said they planned to invest via client portfolios in 2021.

"We are approaching the tipping point," says Ric Edelman, a longtime advisor who now runs the RIA Digital Assets Council, a resource for educating advisors about blockchain technologies and cryptocurrencies. "In the past several years, the question was, 'Why are you investing in Bitcoin?' The question is now becoming, 'Why aren't you?' " Edelman says.

Snappy comebacks aside, there are many reasons to invest in Bitcoin—and some reasons not to. The rationale for investing is the beginning of the road map for how to approach incorporating Bitcoin and other cryptocurrencies into a portfolio.

Some buyers think of Bitcoin as a venture capital–like bet on an emerging technology that will transform the way people pay for goods and services and transfer money internationally—like buying an upstart Visa (ticker: V) or PayPal Holdings (PYPL) in the early days of the credit-card or digital-payments boom. Others see it as more similar to inflation-countering "digital gold," while some are looking to increase their portfolio's diversification with an uncorrelated asset. Whatever the reason, a few things to keep in mind are:

START SMALL. No matter the rationale for buying cryptocurrency, starting with an allocation of 3% or less gets investors ready to stomach some volatility. Swings of 10% or 20% or more in the span of a week are hardly uncommon for Bitcoin. For an asset that volatile, it doesn't take a large allocation to have a significant impact on a portfolio's return. And in a worst-case scenario, should Bitcoin's value fall to zero, an allocation of a few percentage points won't ruin the investor or client.

The upside, meanwhile, could be much, much greater. The return of more than five million percent since Bitcoin's inception in 2009 won't be repeated, but bulls' long-term targets are still exponentially higher than today's price. Whereas forecasts of long-term stock returns are given in terms of single- or double-digit percentage growth per year, Bitcoin forecasts tend to be quoted as a "5x" or "10x" return.

IEQ Capital is a California-based asset manager and financial advisor with $12 billion in assets under management. The firm recently started adding a 1% to 3% allocation to Bitcoin for clients who can afford the risk and are comfortable with holding crypto assets. IEQ now has $80 million in Bitcoin across all of its portfolios, which its co-CEO Eric Harrison anticipates will double or triple in the not-too-distant future.

Harrison is bullish on Bitcoin's price continuing to rise as more institutions and investors adopt the cryptocurrency. He notes that total supply is capped, and that a large proportion of Bitcoins haven't been exchanged in over a year. "The total number of Bitcoins that actually trade—what you can consider the float—is a fairly small number," Harrison says. "As institutions, corporates, and [money managers] step up their Bitcoin purchases, you end up with a supply/demand mismatch that's potentially pretty sizable."

A net inflow of $93 million into Bitcoin can cause a 1% increase in its price, according to a BofA Securities analysis in March. That's less than 1/20th of the inflow required to move gold by the same amount.

Institutional acceptance doesn't mean there won't be another crash in the price of Bitcoin. It's still a risky asset with an uncertain future, due to a bevy of potential pitfalls—not limited to government regulation or technological obsolescence.

CONSIDER BITCOIN'S NON-CORRELATION. Without cash flows or other fundamentals to derive value, Bitcoin's future price trajectory will remain a topic of debate. But outside of periods of intense cross-market stress like in March 2020, its price should remain uncorrelated to whatever stocks, bonds, or commodities are doing. In other words, there's a potential portfolio-risk-reducing, and Sharpe-ratio-increasing, diversification benefit to having a Bitcoin allocation, even if its future returns can't match its past trajectory.

Versus the stock market, Bitcoin had a correlation of just 0.11 from the start of 2018 through November 2020, according to data from Leuthold Group's chief investment strategist, Jim Paulsen. That compares with bonds' and stocks' -0.24 correlation and gold's and stocks' 0.31. (1 is a perfectly positive correlation, -1 is a perfectly inverse relationship, and 0 means no correlation whatsoever.) Bitcoin also had a correlation with bonds of under -0.01 in that same period.

EMBRACE VOLATILITY. Bitcoin's immense volatility has kept many investors away from crypto assets in general, but there's another way to think about that volatility.

"Many people look at the volatility of Bitcoin and think, 'I don't want that.' I disagree," says Paulsen. "Because it's so dramatically volatile, you can exploit it [by rebalancing often]."

Paulsen and Edelman both advise having a hard-and-fast rule about keeping a portfolio's Bitcoin allocation on target. Take a portfolio with a target 2% position as an example. When Bitcoin's price drops and its weight in the portfolio falls to 1.5%, an investor should buy back up to 2%—and likewise sell back down to 2% when Bitcoin rallies and its portfolio weight rises to 2.5%. As long as Bitcoin's overall trend remains up, it's a decent strategy to win over the long term. It takes advantage of the volatility of Bitcoin, rather than treating it solely as a risk. The downside is that the strategy may require trading often, and commissions could add up.

Investors can also take a dollar-cost-averaging approach: Rather than investing the full 2% of their portfolios in Bitcoin in one trade, build up that allocation over three, six, or 12 months to smooth out the volatility that's likely to occur over that span.

As the asset class matures, Edelman says its volatility will decline. "As there's greater institutional ownership of Bitcoin and the price rises, it is reasonable to expect that volatility will be reduced," he says. "That is true of any asset class or emerging investment you care to look at. Its neophyte elements will begin to smooth out."

CHOOSE YOUR PRODUCTS. In the meantime, there's still a logistical hurdle for advisors looking to get into crypto-asset investing on behalf of their clients. Adding Bitcoin to client portfolios, charging fees on it, and fulfilling back-office record-keeping and tax-reporting requirements isn't as simple as buying a given stock or bond. But things are moving in that direction.

Fidelity was the first major institution to offer Bitcoin on its platform for advisors and money managers—supporting custody, trade execution, and reporting functions—and it plans to add ether, the coin based on Ethereum blockchain technology, later this year. It also recently filed with the Securities and Exchange Commission to launch a Bitcoin exchange-traded fund.

"Our core focus is to provide institutions with the ability to safely store and transact digital assets of all types," says Tom Jessop, president of Fidelity Digital Assets. "It's a very familiar experience for a traditional institution.... Most of the interest now is on Bitcoin, and that's where we started, but our long-term view is that we're agnostic as to what the assets are."

Morgan Stanley recently made Bitcoin funds available to certain wealth management clients, while JPMorgan Chase (JPM) is reportedly planning new crypto-related services. Bank of New York Mellon (BK) said in February that it would soon offer custody of Bitcoin and other crypto assets for its clients, following a similar move by Northern Trust (NTRS). The newly public cryptocurrency exchange Coinbase has also offered a regulated crypto custodian service for institutional investors since 2018. Many other upstart crypto-only exchanges won't meet the compliance and custody requirements of most advisors.

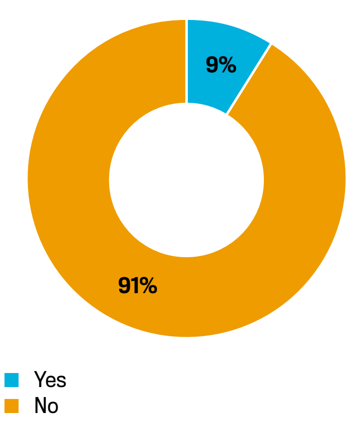
And there are existing over-the-counter options for advisors whose mandates allow them to buy assets not listed on traditional exchanges. Grayscale offers a number of publicly traded trusts, the two largest being the Grayscale Bitcoin Trust (GBTC) and the Grayscale Ethereum Trust (ETHE)—while Bitwise offers a fund that tracks a basket of the top 10 cryptocurrencies by capitalization, the Bitwise 10 Crypto Index fund (BITW). Those should be available in most brokerage accounts like almost any other security, with daily liquidity. But their structure resembles mutual funds more than ETFs, and it's worth noting that Grayscale's 2% management fee on its cryptocurrency trusts is meaningfully higher than most passive vehicles on the market.

Some advisors can also take on crypto exposure via separately managed accounts or turnkey asset management programs, while high-net-worth or accredited investor clients have a variety of other options available to them, as well. "There's really no reason for an advisor to say, 'I have to wait for an ETF,' " says Edelman. "Because they don't anymore." B

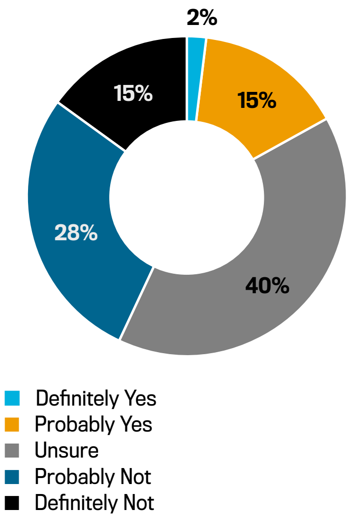
How Advisors Are Approaching Crypto

For all the hype about cryptocurrencies, adoption by professional investors remains in the early stages. That could soon change.

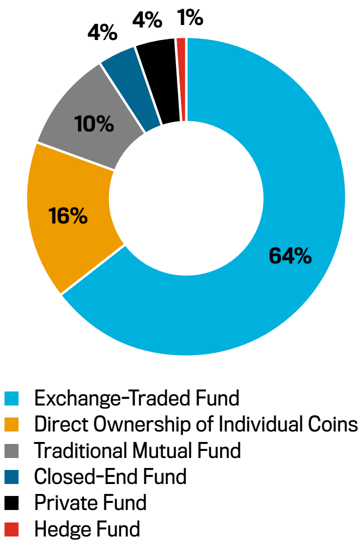
Do you currently allocate to crypto in client accounts?



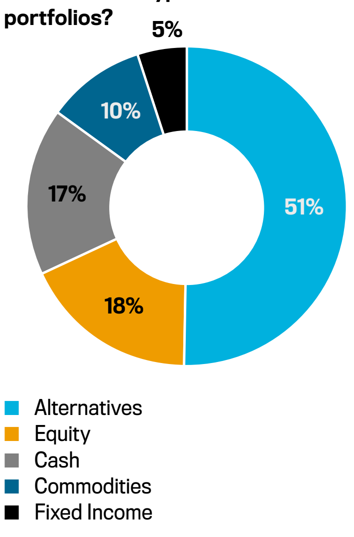
If not, do you plan to allocate to crypto in client accounts in 2021?



What is the preferred vehicle for investing in crypto?



From where would you fund an allocation to crypto in client portfolios?



Source: Bitwise Asset Management

Illustration by Kyle Bean

GUIDE TO WEALTH

Why Companies Are Buying Bitcoin

Companies are beginning to see value in owning crypto as an asset and using it as a currency. Expect more to jump on board soon.

By Avi Salzman

A year ago, Bitcoin was just a curiosity for many companies. That's starting to change.

More than two dozen public companies now own some cryptocurrencies on their balance sheets. Many more are starting to offer services to people interested in buying Bitcoin or to companies that want to hold it or accept it for payments. PayPal (ticker: PYPL) made a particularly big splash last month when it started allowing some users to pay at checkout with their crypto holdings, as smoothly as they would with a Mastercard.

Helping to push Bitcoin further into the mainstream have been traditional Wall Street institutions that are figuring out how to update their current systems to offer the same services for crypto that they do for cash.

Bank of New York Mellon (BK), the nation's oldest bank, announced in February that it would soon give customers the same access to and protection for cryptocurrencies that they get for stocks and other assets.

"Our view is that digital assets are the future; they are here to stay," says Mike Demissie, who is leading the bank's efforts. The financial "rails" now being built for cryptocurrencies will one day be used for other assets, such as bonds and funds, he predicts. "The larger trend will continue to grow, and that's why we have this conviction and commitment behind it."

Because owning Bitcoin directly comes with security risks, financial institutions can charge for services, like custody, that they already provide for other assets. By developing systems to help clients hold and trade cryptocurrencies, they can earn the same kinds of fees that they do on other investments—and perhaps more.

Demissie expects that Bank of New York Mellon may charge a premium to its traditional custody services when it launches later this year. "The actual service fees are yet to be determined, but I wouldn't be surprised if they come in higher because of the risk that this asset class represents, including the additional technology requirements," he says.

For these institutions, the roster of potential corporate clients is growing. Among the companies that have embraced Bitcoin are payments company Square (SQ) and electric-vehicle maker Tesla (TSLA), whose chief financial officer recently took the title of Master of Coin. Both companies have purchased Bitcoin for their corporate treasuries.

Some financial companies are also buying in directly. Insurance giant MassMutual—known more for annuities and other less-flashy fare—announced in December that it had purchased $100 million worth of Bitcoin. A spokeswoman called it part of "our broader strategy to capitalize on evolving opportunities," while noting that the investment makes up just 0.04% of the company's general investment account.

The companies with the largest investments in Bitcoin tend to be run by people with a personal affinity for cryptocurrencies. Square's Jack Dorsey, Tesla's Elon Musk, and business-software company MicroStrategy's (MSTR) Michael Saylor fall into this category. All three companies own substantial amounts of Bitcoin, and are experimenting with using it in novel ways.

Tesla now allows people to buy vehicles directly with Bitcoin. Square, meanwhile, has an in-house team contributing to an open-source project designed "to help the entire industry benefit from the promise of a native internet currency like Bitcoin, not just Square," a representative tells *Barron's*.

"The ones that have done it are companies where the founder or the CEO is the largest shareholder and still in charge," says Michael Venuto, chief investment officer for Toroso Investments, which created an exchange-traded fund called Amplify Transformational Data Sharing (BLOK) to track companies involved in cryptocurrencies and blockchain technology.

The growing prominence of financial firms in Bitcoin is reflected in Toroso's ETF. About a quarter of its investments are in financial players like PayPal; another quarter is in publicly traded Bitcoin miners; about 10% is invested in companies that make chips used in crypto mining, like Nvidia (NVDA) and Taiwan Semiconductor Manufacturing (TSM); and a similar portion is in investment firms that bet on the wider crypto ecosystem, such as Galaxy Digital (GLXY.Canada).

Corporate America's embrace of cryptocurrencies is a major shift. The original Bitcoin white paper, which explained how software known as blockchains could allow for peer-to-peer payments, was specifically designed to bypass both corporate and government gatekeepers. Some of the companies getting involved today are exactly the kinds of middlemen that Bitcoin was supposed to eliminate.

Still, the purist view of Bitcoin has been supplanted with a more flexible ethos—and the beginnings of a regulatory structure—that has made the space more welcoming to corporations.

Coming out of the crisis, corporations that have embraced crypto are banding together to lobby lawmakers on future regulations. Fidelity, Square, and Coinbase Global are part of a new Crypto Council for Innovation that launched in early April.

"You're going to see a great convergence over the course of the next few years between the cryptocurrency financial system and the traditional financial system," says Zac Prince, CEO of BlockFi, which sits in the middle of that convergence.

BlockFi operates like a crypto bank, paying interest on deposits from Bitcoin owners and lending it to hedge funds and family offices. Prince says that Covid-19 accelerated the shift to corporate adoption, because financial institutions "want to see how something does through an economic shock of sorts that we have roughly once a decade." And crypto "not only did not die, it's performed very well."

There are limits to the corporate embrace of Bitcoin. Most public companies that own it are crypto-focused, and aren't household names. A Gartner survey of 77 financial executives taken in February found that only 5% plan to buy it for their treasuries this year. Another 84% don't expect to ever own it on their balance sheets.

And most companies that are incorporating it into their business models are taking baby steps for now. Square lets users of its Cash App buy and sell Bitcoin, but merchants who use Square can't accept it, and it isn't clear when they will. The company experimented with allowing Bitcoin purchases back in 2014, but abandoned the project when few merchants wanted to use it. A Square spokeswoman says that Bitcoin's infrastructure wasn't ready to be used at scale for purchases.

Left: a Bitcoin ATM in Poland

PayPal's decision to bring crypto directly to the cash register was monumental. But the payments will be converted into cash before they hit the merchants' accounts. The same goes for Mastercard (MA), which is similarly planning to allow people to buy things at stores with their crypto holdings. For people who do so, there's a catch: Under Internal Revenue Service rules, each purchase would be considered a taxable capital gain if the Bitcoin has appreciated in value.

Despite the obstacles, Visa (V) and Mastercard are positioning themselves as major players in the crypto ecosystem. A true Bitcoin network would supplant the credit-card networks entirely, because people could transact directly over the internet. Visa, however, sees many other uses for cryptocurrencies that will allow it to play a part. The company has begun allowing crypto-focused companies to settle payments with Visa using digital assets rather than having to convert them into traditional currencies first. It has built widgets that allow banks to give customers the option of buying cryptocurrencies from their websites. And it has teamed up with crypto-focused financial firms to help them issue Visa cards to customers, and has even backed a credit card that gives customers rewards in cryptocurrency. Crypto-backed credit-card customers can then spend their earnings at merchants, who don't have to worry about the tricky part—handling and converting the Bitcoin.

"The value of that is merchants don't need to upgrade their terminals and figure out how to integrate with a blockchain," says Cuy Sheffield, who leads crypto efforts at Visa.

Corporate adoption has sped up, and with it, the price of cryptocurrencies. It has been a virtuous circle, where corporate adoption has helped spur the price, and the rising value then persuades more corporations to jump on board. The real test may come in the next Bitcoin downturn.

Until then, the parlor game continues: Who will be next to buy Bitcoin?

"It's most likely that the ones that do it next are going to be other owner-operators," says Toroso's Venuto. "If you think about the most forward-thinking major corporations in the tech space, the ones likely to go next are a Facebook [FB] or an Oracle [ORCL], more than an Apple [AAPL], right? I mean, if Steve Jobs was still at Apple, it probably would be done already. Tim Cook is a different guy; he's a hired CEO, not a founder CEO." B

Bitcoin on the Balance Sheet

Several public companies have been buying Bitcoin for their corporate treasuries.

Company / Ticker	Market Value (bil)	YTD Price Change	Bitcoins Purchased	Total Bitcoin Cost Basis (mil)	Current Bitcoin Value (mil)
MicroStrategy / MSTR	$6.3	69%	91,579	$2,226	$5,284
Tesla / TSLA	644.0	-5	48,000	1,500	2,580
Square / SQ	111.4	13	8,027	220	463
Marathon Digital Holdings / MARA	4.6	343	5,263	162	304
Riot Blockchain / RIOT	4.1	185	1,175	7	68

Sources: Bitcoin Treasuries; Bloomberg

Illustration by Kyle Bean; Photo by NurPhoto via Getty Images

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BARRON'S SPECIAL SUPPLEMENT

How Advisors Are Investing In—And Coping With—Crypto

More and more financial advisors are interested in owning cryptocurrencies for themselves and their clients. But there are many complicating factors when trying to work them into your practice. What to know.

By Steve Garmhausen

There are many reasons advisors might dismiss Bitcoin and other cryptocurrencies. They're largely unregulated. To say they're volatile is an understatement. And the fintech infrastructure for accessing, custodying, reporting, and billing on digital assets is still in its early stages.

But crypto is here, like it or not. Investors, having seen Bitcoin's price rocket past $61,000 after starting 2020 at just $7,300, are asking their advisors about it—or buying it without asking them. Financial institutions are increasingly accommodating Bitcoin: PayPal will let customers make purchases with it, while Fidelity Investments now accepts it as loan collateral for certain customers, lets wealthy customers access the asset, and is among many firms with plans to launch a Bitcoin exchange-traded fund.

Last month, Morgan Stanley and Goldman Sachs announced that they will offer cryptocurrency exposure for their wealthy clients—becoming the first two big U.S. banks to do so.

In November, Mariner Wealth Advisors became the largest independent registered investment advisor to offer access to, and advise on, Bitcoin. "We know it's not for every client," says Marty Bicknell, CEO of Overland Park, Kan.–based Mariner, "but we feel it's strategic for our advisors to be educated on the topic and to be able to help clients with an investment when it makes sense."

The bottom line: Cryptocurrencies such as Litecoin and Ethereum, but particularly Bitcoin, which dominates the digital currency market, can't be ignored. Even if advisors don't (or won't) advise on them, they need to recognize that competitors may soon be doing so—or are already.

Only a small fraction of advisors allocate to crypto assets, which include Ripple, Stellar, and many others. In a 2021 survey of 994 advisors by Bitwise Asset Management and ETF Trends, 9% said they did so. Of those allocating to crypto, 58% are independent RIAs. The survey respondents' top reasons for allocating to crypto were its low correlation with other asset classes, cited by 54%, and "high potential returns," cited by 38%.

Some of the advisors who provide guidance on Bitcoin are enthusiasts, while others are pragmatists. Bicknell is a little of both. He says he has been intrigued by Bitcoin because it unites his passions for innovation, disruption, and investing. But he also says that each of the firm's 350 advisors had clients ask about it, and many clients had already invested in it prior to November. Bicknell wanted to be sure that those clients had the guidance of an advisor.

Mariner announced a partnership late last year with Washington, D.C.–based Eaglebrook Advisors, which offers Bitcoin and digital-asset separately managed accounts. So far, Mariner has trained 30 of its advisors on crypto. Each advisor must obtain company approval before putting a client in the asset.

It's easy to understand why firms like Mariner are the exceptions when it comes to advising on crypto. Bitcoin debuted in 2009 with virtually no market value; by December 2017, it had surged past $19,000. Volatility has been a constant; by January 2019, a coin's value had fallen to $3,400.

On at least two occasions, including once last year, Bitcoin's price has dropped by about half within a matter of hours. In March, it dropped 16% within 12 days before perking back up. Volatility is one reason many advisors say Bitcoin merits only a low-single-digit allocation, if any. (Fun fact: The first documented purchase using Bitcoin was in 2010, when a Florida software programmer bought two pizzas for 10,000 Bitcoin. Those coins would now be worth about $580 million.)

Ric Edelman, founder of the firm that is now Edelman Financial Engines, the country's biggest independent RIA, says an allocation of 1% is appropriate. "It will not harm you if it becomes worthless," he says. "It will be annoying, but it won't be devastating, and it can have a meaningful impact."

Edelman Financial Engines doesn't allocate to crypto because it uses only mutual funds and ETFs, and a pure-play cryptocurrency fund in either format doesn't yet exist. Edelman himself started buying Bitcoin in 2014, and now has more than 1% of his net worth in cryptocurrencies.

The consensus crypto allocation ceiling is between 3% and 5%, depending on a client's risk profile, says Adam Blumberg, a co-founder of Houston-based Interaxis, which provides crypto education for advisors. Regulators tend to look skeptically at alternative allocations above 15%, notes Blumberg, who closed his RIA practice this year to focus on Interaxis.

Many advisors are treading carefully because of regulatory uncertainty. Douglas Boneparth, president of $86 million-asset Bone Fide Wealth in New York, says he started providing education on digital currencies five years ago because clients increasingly requested it or indicated they wanted to invest, or joined the firm already owning positions. Of Boneparth's 110 client households, about 20% own some form of cryptocurrency, mostly Bitcoin.

Boneparth doesn't recommend crypto or allocate clients to it, but when they ask about it, he explains the different methods of accessing the asset, its risks and potential benefits, and how it might fit into a more traditional portfolio. Boneparth is among the advisors who say crypto should be presented to clients as a speculative asset requiring a lengthy time horizon.

Learning about crypto and scripting client conversations, as Boneparth has, is a key part of the groundwork many advisors are now laying. One of those scripted conversations should be set aside for Bitcoin's next big price plunge, Blumberg advises.

Advisors allocating to crypto should amend their Form ADVs with the SEC, both to reflect crypto as an offering and, if necessary, to state that compensation options include fee-for-service. Incorporating crypto into an investment policy statement can also be a prudent step for those advising on the asset.

Isaiah Douglass, a partner at $21 million Vincere Wealth Management in Indianapolis, says he uses the statement to formally lay out the risks. "It documents that you've had the conversation and they've signed off," says Douglass, who started advising on Bitcoin last summer. More than a dozen of Vincere's approximately 100 households currently own crypto, and several others are interested, he says.

Advisors Take On Bitcoin

Crypto education doesn't stop with the investment process. Incorporating it into your practice requires care.

Marty Bicknell, Mariner Wealth Advisors

Ric Edelman, Edelman Financial Engines

Isaiah Douglass, Vincere Wealth Management

Douglas A. Boneparth, Bone Fide Wealth

A central element of advising on Bitcoin is deciding how to charge for the service. If a crypto ETF existed, it would be a simple matter: The crypto allocation would be held in the same account as other assets, at the same custodian. Asset-based charges would be extracted as usual. Advisors have been waiting years for such an ETF. Edelman likes to joke that he expects approval within 18 months, and that he has used this line for five years.

Several applications are pending with the Securities and Exchange Commission; the Grayscale Bitcoin Trust (ticker: GBTC) has filed to convert to an ETF, and a handful of asset managers, including Fidelity and VanEck, have filed for new Bitcoin ETFs.

Much has been made in the crypto community about the fact that SEC chairman nominee Gary Gensler understands cryptocurrencies and their underlying technology well, having taught about them at MIT. Whether that will translate into his support for a Bitcoin ETF remains to be seen.

In the meantime, there are crypto investing solutions that enable asset under management, or AUM, fees. But they're different from ETFs in that they come with higher minimums and management fees. The Eaglebrook SMA's management and custody fees total 1.3%, for example. Alternatively, advisors can set up crypto accounts and subaccounts directly with Gemini, the cryptocurrency exchange, and charge an AUM fee. "It just takes quite a bit of work and knowledge to do so and is an invitation for compliance headaches," Blumberg cautions.

As the world waits for a true retail crypto fund, the Grayscale Bitcoin Trust has become a popular solution, with more than $36 billion of assets. The security consists solely of Bitcoin and trades over the counter. It carries a 2% expense ratio and has recently swung from trading at a large premium to a significant discount—amplifying its risk.

A more diversified option is Bitwise Asset Management's Bitwise 10 Crypto Index fund (BITW), which tracks the 10 largest digital coins, has a 2.5% expense ratio, and is trading at a 55% premium to its net asset value.

There are also several crypto-focused hedge funds, with hefty investment minimums, high management fees, and other hedge fund drawbacks that can preclude them from records of mass-affluent clients.

In some cases, a fee-for-service approach is the only compensation option. For example, crypto owners who are concerned about a custodian being hacked might opt for a "hard wallet," the digital equivalent of a combination safe. The fee in such cases can be calculated based on the time spent advising on crypto and helping clients buy and securely hold it.

For Douglass, crypto advisory services fit neatly into a monthly planning fee, facilitated by payments software AdvicePay. The firm's monthly advice fee is tiered based on complexity, and clients with more than $100,000 in crypto holdings are placed in the highest tier. Those fees are charged in addition to a fee based on assets under management.

While advisors have the means to advise and allocate on crypto, the infrastructure certainly has room to evolve. Among the technical problems is a lack of unified reporting and analysis, which makes portfolio management difficult, Blumberg says. "If you are allocated 5% to Bitcoin, and Bitcoin runs up in value, giving you an 8% allocation, rebalancing to get back to 5% is difficult and costly," he says. "When custodians like Fidelity or Schwab can custody crypto, or there are good data highways, some of these problems will be solved."

One development to watch: BNY Mellon, whose Pershing unit is the RIA industry's third-largest custodian, announced in February that it's creating a digital-asset custody and administrative platform—but it hasn't made clear whether it will accommodate financial advisors' client accounts. "The digital-asset custody offering will support BNY Mellon's diverse client base when the offering comes to market later this year pending necessary approvals," a company representative says.

How big will the crypto advice market become? The potential is probably limited by regulatory uncertainty and the extra steps needed to buy, hold, and integrate the assets into a portfolio—until the launch of an SEC-approved, pure-play crypto ETF. "From a practicality standpoint for advisors, that's the golden ticket," Boneparth says.

In the Bitwise/ETF Trends survey, nearly 50% of advisors said the launch of a Bitcoin ETF would make them more comfortable allocating to crypto assets. But some see the merit of becoming a crypto-advice early mover. Douglass, for one, is betting on it, and last summer began asking clients what they think about Bitcoin.

"If they don't believe in it, that's where the conversation ends," he says. "But I want to be sure I talked to them about it, in case it's huge in 2025." B

Illustration by Kyle Bean; Photos, from top, by Mariner Wealth Advisors; courtesy of Edelman Financial Engines; Brian Powell; Douglas A. Boneparth

BARRON'S

TOP ADVISOR GUIDE

Below is a list of Barron's-ranked advisors who are actively taking on new clients. For more information on them and other ranked advisors, visit barrons.com/guide.

The Top Advisor Guide is a custom reprint of all of our advisor rankings. It allows Barron's-ranked advisors (and only Barron's-ranked advisors) to publish their contact information. Advisors pay a fee to be listed in this section, but their participation has no bearing on their place in our rankings, nor does it guarantee that they will be ranked in future years. The Guide is meant as a starting point for clients looking for an advisor—a first-pass vetting that can help narrow a search. Every advisor will have his or her own approach to investing, financial planning, and other services. Clients are encouraged to approach the search for an advisor the way they would a search for a doctor—interviewing multiple professionals and getting opinions from multiple third parties.

ARIZONA

Mark Stein
Galvin, Gaustad & Stein
Scottsdale
mark@ggsadvisors.com
(480) 776-1440
ggsadvisors.com
1.52m Typical Account Size
$428m Team Assets

Ruth Transue
Wells Fargo Advisors
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(520) 529-5932
fa.wellsfargoadvisors.com/ruth-transue
$2m Typical Account Size
$680m Team Assets

Trevor Wilde
Wilde Wealth Management Group
Scottsdale
trevor@wildewealth.com
(480) 361-6203
wildewealth.com
$0.7m Typical Account Size
$1,315m Team Assets

CALIFORNIA

Seth Haye
Morgan Stanley
Westlake Village
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(805) 494-0215
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$3.5m Typical Account Size
$1,345m Team Assets

Elaine Meyers
J.P. Morgan Securities
San Francisco
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(415) 315-7801
jpmorgansecurities.com/elainemeyers
$50m Typical Account Size
$3,250m Team Assets

Greg Onken
J.P. Morgan Securities
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(415) 772-3123
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$15m Typical Account Size
$3,500m Team Assets

Deb Wetherby
Wetherby Asset Management
San Francisco
deb@wetherby.com
(415) 399-9159
wetherby.com
$33.3m Typical Account Size
$5,779m Team Assets

Dale Yahnke
Dowling & Yahnke Wealth Advisors
San Diego
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(858) 509-9500
dywealth.com
$4.2m Typical Account Size
$4,674m Team Assets

Cheryl L. Young
Morgan Stanley
Los Gatos
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(408) 358-0976
fa.morganstanley.com/youngandassociates
$6m Typical Account Size
$2,482m Team Assets

COLORADO

Melissa Corrado Harrison
UBS Financial Services
Denver
melissa.harrison@ubs.com
(303) 820-5770
financialservicesinc.ubs.com/team/corrado-harrison
$25m Typical Account Size
$954m Total Assets

WASHINGTON, DC

Michael Freiman
Morgan Stanley Wealth Management
Washington
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(202) 778-1382
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$1.3m Typical Account Size
$1,735m Team Assets

Greg Marcus
UBS Financial Services
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financialservicesinc.ubs.com/team/marcushendlerstern/meetourteam
$30m Typical Account Size
$779m Total Assets

Marvin McIntyre
Morgan Stanley Private Wealth Management
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(202) 778-1381
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$8.5m Typical Account Size
$4,156m Total Assets

FLORIDA

Richard Altieri
Morgan Stanley
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$5m Typical Account Size
$1,144m Team Assets

Adam E. Carlin
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$20m Typical Account Size
$3,128m Team Assets

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$10m Typical Account Size
$1,153m Team Assets

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$12.5m Typical Account Size
$2,152m Team Assets

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$2m Typical Account Size
$881m Team Assets

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$5m Typical Account Size
$1,290m Team Assets

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$3m Typical Account Size
$2,152m Team Assets

Thomas Moran
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Naples
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moranwm.com
$5m Typical Account Size
$3,265m Team Assets

GEORGIA

Michael Hines
Consolidated Planning Corporation
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cpcadvisors.com
$2.5m Typical Account Size
$843m Team Assets

ILLINOIS

Tom Kilborn
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$4m Typical Account Size
$1,092m Team Assets

Kathleen Roeser
Morgan Stanley
Chicago
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(312) 443-6500
fa.morganstanley.com/theroesergroup
$8m Typical Account Size
$1,645m Total Assets

INDIANA

Trent Cowles
Merrill Lynch
Indianapolis
trent_cowles@ml.com
(317) 624-8451
fa.ml.com
$3.2m Typical Account Size
$865m Team Assets

IOWA

Jerry Ask
Jerry K. Ask Investment Services
Cedar Rapids
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(319) 395-9230
jkainvest.com
$0.5m Typical Account Size
$462m Team Assets

Matt Fryar
Wells Fargo Advisors
Des Moines
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(515) 245-3120
fa.wellsfargoadvisors.com/matthew-fryar
$5m Typical Account Size
$875m Team Assets

KANSAS

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(913) 387-2734
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$1.8m Typical Account Size
$2,176m Team Assets

KENTUCKY

Barry Barlow
Merrill Lynch
Louisville
barry_barlow@ml.com
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$4m Typical Account Size
$1,032m Team Assets

Travis Musgrave
Merrill Lynch
Lexington
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(859) 231-5258
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$5m Typical Account Size
$828m Team Assets

MASSACHUSETTS

Debra Brede
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Needham
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$2m Typical Account Size
$1,118m Team Assets

Kevin Grimes
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grimesco.com
$3m Typical Account Size
$3,104m Team Assets

Susan Kaplan
Kaplan Financial Services, Inc.
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$3.5m Typical Account Size
$2,252m Team Assets

Victor T. Livingstone
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$35m Typical Account Size
$4,496m Team Assets

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New England Private Wealth Advisors, LLC
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$7m Typical Account Size
$2,136m Team Assets

Raj Sharma
Merrill–Private Wealth Management
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$10m Typical Account Size
$7,882m Total Assets

MICHIGAN

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$1.5m Typical Account Size
$511m Total Assets

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$0.8m Typical Account Size
$3,076m Team Assets

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$2m Typical Account Size
$3,638m Team Assets

NEBRASKA

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$1m Typical Account Size
$1,351m Team Assets

NEVADA

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$4.9m Typical Account Size
$1,357m Team Assets

NEW JERSEY

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$2.5m Typical Account Size
$1,729m Team Assets

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$1.3m Typical Account Size
$585m Team Assets

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$2.5m Typical Account Size
$1,729m Team Assets

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$3m Typical Account Size
$1,922m Team Assets

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lmarzen@bridgewateradv.com
(212) 221-5300
bridgewateradv.com/team/leo-marzen
$5m Typical Account Size
$1,550m Team Assets

Justin McCarthy
Mariner Wealth Advisors
New York
justin.mccarthy@marinerwealthadvisors.com
(212) 869-5900
marinerwealthadvisors.com/why-us/people/justin-mccarthy
$2.9m Typical Account Size
$1,492m Team Assets

Robert Stolar
Morgan Stanley Private Wealth Management
New York
robert.stolar@morganstanley.com
(212) 761-8138
advisor.morganstanley.com/family-wealth-group
$50m Typical Account Size
$2,968m Team Assets

Ron Vinder
Morgan Stanley Private Wealth
New York
ron.vinder@morganstanleypwm.com
(212) 503-2365
advisor.morganstanley.com/the-vinder-group
$50m Typical Account Size
$9,760m Team Assets

Elizabeth Weikes
J.P. Morgan Securities
New York
elizabeth.weikes@jpmorgan.com
(212) 272-9214
jpmorgansecurities.com/lsswgroup
$25m Typical Account Size
$3,757m Team Assets

Participation in this section is only open to advisors who have been listed in our editorial rankings. Advisors pay a fee to be included in this reprint. Participation in this section has no bearing on the outcome of our rankings. Assets are tied to the most recent ranking. For more information, visit barrons.com/guide.

NORTH CAROLINA

Mike Absher
Absher Wealth Management
Chapel Hill
mike@absherwealth.com
(919) 283-2340
absherwealth.com
$1.5m Typical Account Size
$474m Team Assets

Mike Bell
Edward Jones
Hickory
mike.bell@edwardjones.com
(828) 328-8111
edwardjones.com/mike-bell
$0.8m Typical Account Size
$447m Team Assets

R. Neil Stikeleather
Bank of America
Merrill Lynch
Charlotte
neil.stikeleather@ml.com
(704) 705-3233
fa.ml.com/stikeleatherandassociates
$0.8m Typical Account Size
$535m Team Assets

OHIO

Valerie Newell
Mariner Wealth Advisors
Cincinnati
valerie.newell@marinerwealthadvisors.com
(513) 618-3040
marinerwealthadvisors.com/why-us/people/valerie-l-newell
$3m Typical Account Size
$3,708m Team Assets

David Singer
The Evelo/Singer/Sullivan Group
Merrill Private Wealth
Cincinnati
david_singer@ml.com
(513) 579-3889
pwa.ml.com/evelosingersullivan
$15m Typical Account Size
$3,800m Team Assets

Linnell Sullivan
The Evelo/Singer/Sullivan Group
Merrill Private Wealth
Cincinnati
linnell_sullivan@ml.com
(513) 579-3890
pwa.ml.com/evelosingersullivan
$7m Typical Account Size
$1,900m Team Assets

OKLAHOMA

Jana Shoulders
Mariner Wealth Advisors
Tulsa
jana.shoulders@marinerwealthadvisors.com
(918) 991-6910
marinerwealthadvisors.com/why-us/people/jana-shoulders
$3m Typical Account Size
$1,995m Team Assets

OREGON

Judith McGee
Raymond James Financial Services
Portland
judith.mcgee@raymondjames.com
(503) 597-2222
mcgeewm.com
$1m Typical Account Size
$768m Team Assets

PENNSYLVANIA

Patti Brennan
Key Financial, Inc.
West Chester
pbrennan@keyfinancialinc.com
(610) 429-9050
keyfinancialinc.com
$2m Typical Account Size
$1,366m Team Assets

Michael Hirthler
Jacobi Capital Management
Wilkes-Barre
mhirthler@jacobicapital.com
(570) 826-1801
jacobicapital.com
$3m Typical Account Size
$1,403m Team Assets

Barbara Hudock
Hudock Capital Group
Williamsport
bhudock@hudockcapital.com
(570) 326-9500
hudockcapital.com
$1m Typical Account Size
$585m Team Assets

Rob Thomas
Mariner Wealth Advisors
State College
rob.thomas@marinerwealthadvisors.com
(814) 867-2050
marinerwealthadvisors.com/why-us/people/rob-thomas
$0.2m Typical Account Size
$5,111m Team Assets

RHODE ISLAND

Malcolm Makin
Raymond James
Westerly
mmakin@ppgadvisors.com
(401) 596-2800
ppgadvisors.com
$1.5m Typical Account Size
$1,423m Team Assets

Matthew Young
Richard C. Young & Co., Ltd.
Newport
info@younginvestments.com
(401) 849-2137
younginvestments.com
$1.7m Typical Account Size
$1,163m Team Assets

David Reiser
J.P. Morgan Securities
Providence
david.reiser@jpmorgan.com
(203) 722-9900
jpmorgansecurities.com/reiserwmgroup
$2m Typical Account Size
$438m Team Assets

TENNESSEE

Christi Edwards
Morgan Stanley
Nashville
christi.edwards@morganstanley.com
(615) 298-6554
advisor.morganstanley.com/the-edwards-pharris-group
$4m Typical Account Size
$1,045m Team Assets

Jason Pharris
Morgan Stanley
Nashville
jason.pharris@morganstanley.com
(615) 298-6555
fa.morganstanley.com/theedwardspharrisgroup
$4m Typical Account Size
$1,064m Team Assets

TEXAS

Bonner Barnes
Corda Investment Management
Houston
bonner@cordamanagement.com
(713) 439-0665
cordamanagement.com
$0.9m Typical Account Size
$1,160m Team Assets

Alexander Ladage
UBS Financial Services
Austin
alex.ladage@ubs.com
(512) 479-5287
financialservicesinc.ubs.com/fa/alexladage
$10m Typical Account Size
$1,436m Team Assets

Tommy McBride
Merrill Lynch Wealth Management
Dallas
thomas_mcbride@ml.com
(214) 750-2004
fa.ml.com/mcbride
$7.5m Typical Account Size
$1,583m Team Assets

John Merrill
Tanglewood Total Wealth Management
Houston
jmerrill@tanglewoodwealth.com
(713) 840-8880
tanglewoodwealth.com
$2.5m Typical Account Size
$1,129m Team Assets

Scott Tiras
Tiras Wealth Management
Houston
scott.b.tiras@ampf.com
(713) 332-4400
tiraswealth.com
$4m Typical Account Size
$2,058m Team Assets

VIRGINIA

Stephan Cassaday
Cassaday & Company
McLean
steve@cassaday.com
(703) 506-8200
cassaday.com
$1.5m Typical Account Size
$3,510m Team Assets

Joseph Montgomery
The Optimal Service Group of Wells Fargo Advisors
Williamsburg
joe.montgomery@wellsfargoadvisors.com
(757) 220-1782
optimalservicegroup.com
$7m Typical Account Size
$17,355m Team Assets

WASHINGTON

Michael Matthews
UBS Private Wealth Management
Bellevue
m.matthews@ubs.com
(425) 451-2350
ubs.com/team/thematthewsgroup
$5m Typical Account Size
$1,509m Team Assets

Erin Scannell
Ameriprise Financial
Mercer Island
erin.j.scannell@ampf.com
(425) 709-2345
heritage-wealth.com
$0.5m Typical Account Size
$2,870m Team Assets

WISCONSIN

Andrew Burish
UBS Financial Services
Madison
andrew.burish@ubs.com
(608) 831-4282
ubs.com/team/burishgroup
$2m Typical Account Size
$3,591m Team Assets

BARRON'S
TOP RIA FIRMS

Below is a reprint of select firms from Barron's Top 100 RIA firms ranking who are actively taking on new clients. For more information on them and other ranked advisors, visit barrons.com/guide.

We began ranking independent advisory (RIA) firms in 2016 as an acknowledgment of the rapid growth and evolution in that area of wealth management. The RIA space is consolidating at a dizzying pace, as firms build scale in a quest to improve the sophistication and efficiency of their services. Our RIA Firm ranking looks to the ability of firms to serve their clients well, using data such as assets under management, revenue, technology spending, staffing levels, and more.

1919 Investment Counsel
Baltimore, MD
info@1919ic.com
(410) 454-5719
1919ic.com
37 Advisors | 8 Offices
$18.09b Total Assets
$1m Account Minimum

Advance Capital Management
Southfield, MI
jtheisen@acadviser.com
(248) 350-8543
acadviser.com
20 Advisors | 5 Offices
$2.96b Total Assets
$0 Account Minimum

BDF LLC
Itasca, IL
info@bdfllc.com
(800) 840-4740
bdfllc.com
28 Advisors | 2 Offices
$4.60b Total Assets
$1m Account Minimum

Beacon Pointe Advisors
Newport Beach, CA
info@beaconpointe.com
(949) 718-1600
beaconpointe.com
130 Advisors | 21 Offices
$15b Total Assets
$1m Account Minimum

Bradley, Foster and Sargent, Inc.
Hartford, CT
info@bfsinvest.com
(860) 527-8050
bfsinvest.com
13 Advisors | 3 Offices
$5.0b Total Assets
$500k Account Minimum

CAPTRUST
Raleigh, NC
info@captrust.com
(800) 216-0645
captrust.com
330 Advisors | 52 Offices
$409b Total Assets
$500k Account Minimum

Carson Wealth
Omaha, NE
rcarson@carsongroup.com
(888) 321-0808
carsonwealth.com
228 Advisors | 130 Offices
$15.2b Total Assets
$100k Account Minimum

Cary Street Partners
Richmond, VA
info@carystreetpartners.com
(804) 340-8100
carystreetpartners.com
42 Advisors | 13 Offices
$2.9b Total Assets
$100k Account Minimum

Chevy Chase Trust
Bethesda, MD
mwishkoff@chevychasetrust.com
(240) 497-5023
chevychasetrust.com
22 Advisors | 1 Office
$34b Total Assets
$3m Account Minimum

Churchill Management Group
Los Angeles, CA
info@churchillmanagement.com
(877) 937-7110
churchillmanagement.com
45 Advisors | 41 Offices
$6.55b Total Assets
$750k Account Minimum

Edelman Financial Engines
Santa Clara, CA
prteam@edelmanfinancialengines.com
(617) 556-2305
edelmanfinancialengines.com
340 Advisors | 150 Offices
$260b Total Assets
$5 Account Minimum

EP Wealth Advisors
Torrance, CA
bparker@epwealth.com
(310) 910-9477
epwealth.com
47 Advisors | 15 Offices
$6.93b Total Assets
$500k Account Minimum

Gofen and Glossberg, LLC
Chicago, IL
info@gofen.com
(312) 828-1100
www.gofen.com
11 Advisors | 1 Office
$4.97b Total Assets
$1m Account Minimum

Hightower Advisors
Chicago, IL
businessdevelopment@hightoweradvisors.com
(312) 962-3800
hightoweradvisors.com
267 Advisors | 96 Offices
$102.5b Total Assets
$0m Account Minimum

Homrich Berg
Atlanta, GA
info@homrichberg.com
(404) 264-1400
homrichberg.com
52 Advisors | 4 Offices
$6.99b Total Assets
$1m Account Minimum

IEQ Capital
San Francisco, CA
info@ieqcapital.com
(650) 581-9807
ieqcapital.com
10 Advisors | 2 Offices
$11.6b Total Assets
$10m Account Minimum

Kovitz
Chicago, IL
wealth@kovitz.com
(312) 334-7300
kovitz.com
35 Advisors | 4 Offices
$5.15b Total Assets
$1m Account Minimum

MAI Capital Management
Cleveland, OH
info@mai.capital
(216) 920-4800
mai.capital
75 Advisors | 10 Offices
$9.1b Total Assets
$1m Account Minimum

Mariner Wealth Advisors
Leawood, KS
info@marinerwealthadvisors.com
(913) 647-9700
marinerwealthadvisors.com
350 Advisors | 41 Offices
$35b Total Assets
$100k Account Minimum

PagnatoKarp | Cresset
Reston, VA
ppagnato@pagnatokarp.com
(703) 468-2700
pagnatokarp.com
46 Advisors | 9 Offices
$12b Total Assets
$10m Account Minimum

Private Advisor Group
Morristown, NJ
startthedialogue@privateadvisorgroup.com
(973) 538-7010
privateadvisorgroup.com
664 Advisors | 306 Offices
$21.22b Total Assets
$100k Account Minimum

RegentAtlantic
Morristown, NJ
info@regentatlantic.com
973-738-9353
regentatlantic.com
24 Advisors | 2 Offices
$4.90b Total Assets
$1m Account Minimum

Signature Estate & Investment Advisors
Los Angeles, CA
bholmes@seia.com
(310) 712-2326
seia.com
20 Advisors | 8 Offices
$11.21b Total Assets
$500k Account Minimum

Snowden Lane Partners
New York, NY
info@snowdenlane.com
(646) 218-9760
snowdenlane.com
52 Advisors | 12 Offices
$2.49b Total Assets
$0 Account Minimum

SBSB Financial Advisors
McLean, VA
info@sbsbllc.com
(703) 734-9300
sbsbllc.com
30 Advisors | 2 Offices
$5b Total Assets
$1m Account Minimum

Wealth Enhancement Advisory Services
Plymouth, MN
info@wealthenhancement.com
(763) 417-1700
wealthenhancement.com
200 Advisors | 46 Offices
$24b Total Assets
$0 Account Minimum

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