

# THE WALL STREET JOURNAL.

## What's News

### Business & Finance

- ◆ **Hollywood writers**, studios and streamers said they have reached a tentative agreement that would end a monthslong strike, in a three-year deal including increased royalties and protections regarding the use of AI. **A1**
- ◆ **The efforts** by FTC Chair Lina Khan to protect competition are inadvertently enriching some on Wall Street, generating outside profits for Pentwater Capital Management and other large hedge funds that bet on merger deals. **A1**
- ◆ **Meta is planning** to release artificial intelligence chatbots as soon as this week with distinct personalities across its social-media apps as a way to attract young users, according to people familiar with the matter. **B1**
- ◆ **Initial public offering** listings by Arm, Instacart and Klaviyo recently represented the chance to revitalize a market that has long been in disrepair, but the results have been inconclusive. **B1**
- ◆ **The union** representing Ford Motor's auto-factory workers in Canada said that it secured double-digit wage increases and improved pensions in its labor pact with the automaker. **B3**
- ◆ **Theme-park operators** are pinning their hopes on a blockbuster fall season, betting that splashy Halloween and Oktoberfest events can make up for a summer season hurt by extreme weather. **B1**
- ◆ **Usher will headline** the halftime show for Super Bowl LVIII in Las Vegas next winter, the NFL said. **B3**

### World-Wide

- ◆ **Congress heads** into a make-or-break week for avoiding a government shutdown, with leaders of the Republican-controlled House hoping that they can persuade GOP holdouts to get on board with four full-year bills and a short-term funding patch. **A1, A4**
- ◆ **After failing** in Moscow's goal of a lightning victory in Ukraine, the Russian military has adapted on the battlefield as it shifts to a strategy of wearing down Ukraine and the West. **A6**
- ◆ **NASA recovered** a capsule carrying the largest sample ever collected from an asteroid after it was jettisoned from a robotic spacecraft and landed in a Utah desert. **A3**
- ◆ **More Democratic** lawmakers and officials are calling on Sen. Menendez to resign, after he was indicted in a bribery scheme. **A4**
- ◆ **Hawaiian Electric** regularly fell behind on plans to replace utility poles at risk of failure and spent millions less on upgrades than planned in the years before a wildfire destroyed Lahaina this summer. **A5**
- ◆ **Cuts to international aid** from some of Africa's biggest donors, and a litany of crises, mean humanitarian organizations are scaling back lifesaving medical services, food aid and other vital assistance. **A8**
- ◆ **The Labor Department** said it is investigating plants operated by Perdue and Tyson following a report that some of the poultry companies' contractors employed migrant children. **A5**

### JOURNAL REPORT

Healthcare: A new way to protect against heart attacks. **R1-8**

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## Ethiopian Breaks the Women's Marathon Record



**BY A MILE:** Ethiopia's Tigst Assefa celebrated Sunday in Berlin after obliterating the women's world record for the marathon, finishing in 2 hours, 11 minutes, 53 seconds, chopping more than two minutes off the previous mark. **A16**

## Movie, TV Writers Get Deal To End Strike

Pact with production companies would lift pay, set AI safeguards after long walkout

By Joe Flint

Hollywood writers, studios and streamers said on Sunday night they have reached a tentative agreement that would end a monthslong strike.

The new three-year deal includes several hard-fought victories for the writers including increased royalties, mandatory staffing for television "writing rooms" and protections regarding the use of artificial intelligence, people familiar with the pact said.

Neither side would address the terms of the accord. The Writers Guild of America said it is still finalizing the memorandum of agreement with the Alliance of Motion Picture and Television Producers, a coalition representing movie and TV studios, networks and streamers. The negotiating committee would then vote on whether to recommend it and send the contract forward for approval.

Until that happens, writers have been instructed not to return to work by the WGA. However, that both sides are acknowledging a deal after months of contentious negotiations is seen as the beginning of the end of the strike.

Both sides agreed to terms just after reaching a self-imposed deadline of Sunday evening before the start of the Yom Kippur holiday.

The deal comes after five consecutive days of talks that involved Warner Bros. Discovery CEO David Zaslav, Disney CEO Bob Iger, Netflix Co-CEO Ted Sarandos and NBCUniversal Studios Group Chairman

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## Deadline Fuels Late Gambit By McCarthy to Avoid Shutdown

By Siobhan Hughes

WASHINGTON—Congress heads into a make-or-break week for avoiding a government shutdown, with leaders of the Republican-controlled House hoping they can persuade GOP holdouts to get on board with four full-year bills and a short-term funding patch.

With a shutdown set for Oct. 1 unless Congress acts, the plan marks a last-ditch effort by Republicans to find a way forward. If no deal is reached, hundreds of thousands of federal workers are set to be furloughed.

House Speaker Kevin McCarthy (R., Calif.) said he believed a shutdown could still be averted. But in what has become a familiar problem, it remained unclear whether he would have enough votes to move forward with his plan. Last week, similar efforts to advance legislation were repeatedly blocked by conservative holdouts, and several lawmakers indicated they could stymie the latest effort as well, heightening the uncertainty just days away from the deadline.

"When it gets crunchtime, people that have been holding off all this time blaming every-

body else will finally hopefully move," McCarthy told reporters Saturday. On Sunday, he said of holdouts: "It's almost like they want to walk you into a shutdown, and then blame you for the shutdown," in comments on MSNBC.

McCarthy laid out the path forward in a GOP conference call. The House is expected on Tuesday to vote on a rule establishing the parameters for debate on a defense-spending bill, a bill funding the Homeland Security Department, one funding the State Department and another funding agricultural priorities.

After that, McCarthy is ex-

pected to focus on a short-term spending deal ranging from two weeks to two months to keep the government funded while negotiations continue.

GOP leaders know that time has run out to pass all 12 annual appropriations bills individually, so they are pleading with Republican colleagues in their 221-212 majority to sign on to a stopgap spending measure to avoid a shutdown.

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- ◆ **Republican dissidents frustrate budget bid.....** A4
- ◆ **GOP battle hurts efforts to counter China.....** A9

## ID Badges Track Staff In Return To Offices

By Chip Cutter and Te-Ping Chen

The work ID, long used for gaining entry to the office, now has a new job: tracking how long people stay.

Bosses are stepping up office surveillance this fall, vowing to use regular reports from badge systems to determine how many people are adhering to the return-to-work policy. Facebook parent Meta Platforms told employees in August that managers will review badge data monthly to assess whether those assigned to an office are meeting a requirement to spend at least three days a week in-person; repeated violations could result in disciplinary action, including termination.

Google notified workers that badge-swipe data could be a way it enforces its in-office policies. Other companies, from Amazon to JPMorgan Chase, also keep tabs on attendance through badges or other methods.

"We know who's assigned to an office and should be working in an office," said Bob Pragada, CEO of the engineering and consulting firm Jacobs, which employs more than 60,000 people and has used badge-swipe data to monitor its office-occupancy levels. The company tracks office attendance in the aggregate, and not on an individual basis, a spokeswoman said.

For decades, badge systems served mostly as a security measure. After the Sept. 11 attacks, the technology proliferated. Please turn to page A2

## To an Asteroid and Back



**PAYLOAD:** A NASA return capsule carrying the largest sample ever collected from an asteroid landed Sunday in Utah. **A3**

## D.C. Is in Panda-monium As China Takes Back Beloved Bears

The U.S. capital grapples with the coming departure of the giant Beltway insiders

By Andrew Duehren

WASHINGTON—There are constants to life in the nation's capital: sweltering summers, political dysfunction and, for much of the last 50 years, giant pandas.

Later this year, though, the three pandas living in the National Zoo will be sent to China, which has the rights to pandas in captivity all over the world. Their departure will leave Washington without at least one of the rotund, cuddly-looking bears for only the second time since



Eat shoots and leaves

Richard Nixon's breakthrough with Beijing in 1972.

The breakthrough in U.S.-China relations is bamboozling many in the city. Norma Valentini, a 52-year-old registered nurse who grew up in D.C. visiting the pandas, is finding the farewell difficult to bear.

"They've been here all my life," she said. She comes to the zoo at least once a week these days to bid them goodbye. "It's very, very sad."

Valentini was among the first to arrive at the panda enclosures on Saturday, the start of the second time since

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## Debunkers Bust Bad Scientists

Growing wave of volunteers expose faulty or fraudulent research papers

By Nidhi Subbaraman

An award-winning Harvard Business School professor and researcher spent years exploring the reasons people lie and cheat. A trio of behavioral scientists examining a handful of her academic papers concluded her own findings were drawn from falsified data.

It was a routine takedown for the three scientists—Joe

Simmons, Leif Nelson and Uri Simonsohn—who have gained academic renown for debunking published studies built on faulty or fraudulent data. They use tips, number crunching and gut instincts to uncover deception. Over the past decade, they have come to their own finding: Numbers don't lie but people do.

"Once you see the pattern

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## Betting Against FTC Profits Hedge Funds

By Caitlin McCabe and Ben Dummert

The efforts by Federal Trade Commission Chair Lina Khan to protect Main Street are inadvertently enriching some on Wall Street, generating outside profits for Pentwater Capital Management and other large hedge funds that bet on merger deals.

For the past two years, Khan has pursued an aggressive strategy as head of President Biden's antitrust agency, attempting to block proposed deals including Microsoft's acquisition of videogame maker Activision Blizzard and Amgen's pursuit of drugmaker Horizon Therapeutics.

In both cases, the FTC's intervention spooked investors and sent shares of the target companies swinging. This phe-

nomenon complicated the play-book for a group of hedge funds whose main strategy relies on wagering that mergers and acquisitions will succeed or fail.

Yet for a handful of firms willing to stomach the volatility, the FTC's antitrust efforts have yielded an unexpected windfall.

Their strategy? Betting big against Khan. Florida-based Pentwater stands to be a large winner from the FTC's recent failed bid to block the Amgen-Horizon deal. It built a stake of almost 7% in Horizon after the drug-maker began fielding takeover interest last year.

Pentwater is estimated to have scored around \$100 million on its Horizon trade on paper, according to an analysis of the hedge fund's public filings. It Please turn to page A8

# U.S. NEWS



THE OUTLOOK | By David Harrison

## Economy Set for a Quadruple Threat

The U.S. economy has sailed through some rough currents this year but now faces a convergence of hazards that threaten to create more turbulence.

Among the possible challenges this fall: a broader auto workers strike, a lengthy government shutdown, the resumption of student loan payments and rising oil prices.

Each on its own wouldn't do too much harm. Together, they could be more damaging, particularly when the economy is already cooling because of high interest rates.

"It's that quadruple threat of all elements that could disrupt economic activity," said Gregory Daco, chief economist at EY-Parthenon.

Many analysts expect slower economic growth this fall but not a recession. Daco forecasts economic growth to slow sharply to a 0.6% annual rate in the fourth quarter from an expected 3.5% gain during the current quarter. Economists at Goldman Sachs expect growth to cool to a 1.3% rate next quarter, from a 3.1% gain in the third.

So far in 2023, robust consumer spending and historically low unemployment have supported solid U.S. economic activity, despite the Federal Reserve lifting interest rates to the highest level in 22 years.

### UAW strike

One economic threat is a wider and more prolonged strike by the United Auto Workers against three Detroit automakers. Nearly 13,000 workers began striking three plants on Sept. 15. And UAW President Shawn Fain said Friday the strikes would expand to 38 General Motors and Stellantis parts-distribution centers across 20 states.

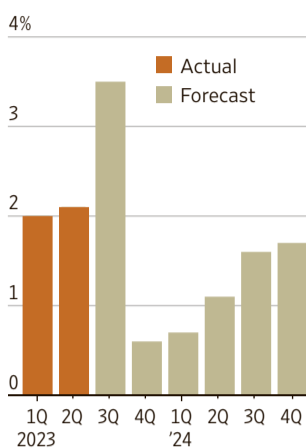
The initial impact of the limited strike is expected to be modest, but a broader work stoppage could curb auto production and drive up vehicle prices. Workers at auto-parts suppliers could also lose their jobs.

A broad strike would shave off between 0.05 and 0.1 percentage point from annualized economic growth for every week it lasts, according to Goldman Sachs.

By idling factories, a strike also postpones the auto sector's full recovery from supply-chain disruptions caused by the Covid-19 pandemic. Vehicles were scarce on dealer lots through much of last year as parts shortages held down production levels. That pushed up prices when many households were looking to buy.

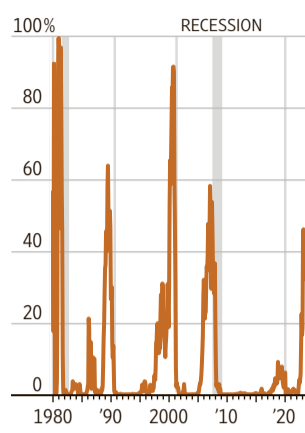
Domestic vehicle production is returning to near to where it was before the pandemic. Over time, the strike could dent output and push

### U.S. gross domestic product, change from previous quarter



Note: GDP is seasonally and inflation-adjusted at annual rates. Sources: Commerce Department (GDP actual); EY Parthenon (GDP forecast); S&P Global Ratings (recession probability)

### Modeled probability of a recession starting within the next 12 months



up prices again.

"I don't expect the strike on its own to tip the national economy into recession, but there are other speed bumps coming," said Gabe Ehrlich, an economist at the University of Michigan. "You put all those together and it looks like it might be a bumpy fourth quarter."

### Shutdown

The next bump could be a partial government shutdown. Congress has until the end of September to agree to fund the government. For now,

lawmakers are far apart.

If they can't reach a deal, all but the government's most essential workers would be furloughed, perhaps as many as 800,000. Those workers would likely spend less during the shutdown and the government would temporarily buy fewer goods and services.

In December 2018, a similar standoff caused a five-week partial shutdown in which the government funded some agencies and not others. Roughly 300,000 federal workers were furloughed. It shaved 0.1% off economic output in the

fourth quarter of 2018 and 0.2% in the first quarter of 2019, according to the Congressional Budget Office.

### Student loans

Another bump will be the resumption of federal student loan payments Oct. 1. The restart could divert roughly \$100 billion from Americans' pockets over the coming year, according to an estimate from Wells Fargo economist Tim Quinlan.

That would be the first time many borrowers make payments since March 2020, when the Education Department paused them to help cushion the financial effects of Covid-19.

Monthly payments for the tens of millions of student-loan borrowers affected average between \$200 and \$300 per person. Even though they make up a relatively small slice of \$18 trillion in annual U.S. consumer spending, they are still a worry to Walmart, Target and other large retailers.

### Pump prices

Higher gasoline prices add to that pressure. Brent crude oil prices have hovered above \$90 a barrel for the past few days, up from just above \$70 this summer. Gasoline prices surged 10.6% in August from

the prior month, the largest one-month increase since June 2022, according to Labor Department data.

That caused consumer inflation to edge higher for the second straight month after trending down the prior year. Pump prices have mostly held steady at higher levels this month. The average price of a gallon of regular gasoline Friday was \$3.86, according to OPIS, an energy data and analytics provider.

Elevated energy costs, like student loan payments, cut into Americans' budgets for dining out, holiday gifts and other discretionary purchases. They also can feed into prices for goods and services that are manufactured, shipped or flown. Airline fares rose nearly 5% last month. Persistent inflation could keep pressure on the Fed to hold interest rates higher for longer to further slow the economy.

"It's the strike, it's government shutdown, resumption of student loan payments, higher long-term rates, oil price shock," Fed Chairman Jerome Powell said when asked Wednesday about external factors that could affect the economy. "You're coming into this with an economy that appears to have significant momentum. And that's what we start with. But we do have this collection of risks."

## Miss America Steps Up to Be Face of Nuclear Energy

By JENNIFER HILLER

Does the U.S. need more nuclear power? Miss America thinks so.

So do Oliver Stone, Elon Musk and Sam Altman.

Atomic energy is elbowing its way back into the conversation about future energy supplies, with backers in the Biden administration and oil and gas industries alike.

Grace Stanke, the reigning Miss America, is on a charm offensive for the industry as part of a yearlong publicity tour.

"Why isn't this being shouted from the rooftops?" asked Stanke, a 21-year-old nuclear engineering student at the University of Wisconsin-Madison. She is too Wisconsin-nice to shout, but in more than 20 states so far she has touted clean energy and nuclear medicine at schools, nursing homes, a state legislature and once on a water-skiing podcast.

"It's the industry that saved my dad twice from cancer," Stanke said, referring to radiation and other treatments. "It



Grace Stanke, a nuclear-engineering student at the University of Wisconsin-Madison, is the reigning Miss America. Right, at the Peach Bottom Atomic Power Station in Delta, Pa.

powers 20% of America."

The youngest of three children, Stanke grew up in Wausau, Wis. She started participating in pageants at age 13 as a way to improve her performance skills for violin and got



interested in nuclear science in high school when her dad, a civil engineer, told her not to go into the field because there was no future in it. "I got into it out of spite," Stanke said. "When you're a 16-year-old girl and

your dad tells you not to do something, you go and do it."

Stanke spoke at the World Nuclear Association's symposium in London this month and aims to remain an industry voice even after she crowns the

next Miss America. She is completing her last elective class online and has accepted a job with Constellation Energy, which owns the nation's largest collection of nuclear-power plants. The job, which will start in 2024, will include a mix of technical work—as a nuclear fuels engineer—and public advocacy.

America's nuclear-power sector has for decades faced public-relations challenges, burdened by high costs, long construction timelines, plant closures and concern over disasters such as Fukushima and radioactive waste. Its Hollywood image includes giant mutants, the HBO series "Chernobyl" and the atomic-weapons race in the summer blockbuster "Oppenheimer."

"It's always playing the villain," Stanke said. "It's what created Godzilla."

Godzilla appears in filmmaker Stone's new documentary, "Nuclear Now," though the film argues that nuclear power is an obvious way to reduce the impact of climate change. It is a

similar message to Stanke's with a crustier delivery. "We have to build and build fast," Stone said in an interview. "What's wrong with nuclear energy was never wrong. It was a brilliant, brilliant gift that we turned our back on."

Americans hold ambivalent views on the technology and are far more supportive of wind and solar energy, though opinion is shifting, according to the Pew Research Center. Around 57% of Americans favor more nuclear power plants, up from 43% in 2020, according to a Pew survey released in August.

Investors in the dozens of startups pursuing smaller reactor designs include Bill Gates, co-founder of Microsoft; Dustin Moskovitz, co-founder of Facebook; and OpenAI chief Altman, who thinks more nuclear power will be needed in part for artificial intelligence. Tesla CEO Musk has been calling on the utility industry to build more generation and called himself an advocate for fission at The Wall Street Journal's CEO Council in May.

## ID Badges Track Staff At Offices

Continued from Page One ated, spreading from high-end buildings in major cities to offices nationwide. More recently, new technological developments—and the shift away from physical cards to mobile access—have made it significantly cheaper and easier for employers to extract and analyze data, said Matt Kopel, co-CEO of SwiftConnect, a building-access software provider that works with dozens of Fortune 500 companies.

To gauge whether employees are actively working in the office—as opposed to swiping in and leaving—Kopel said

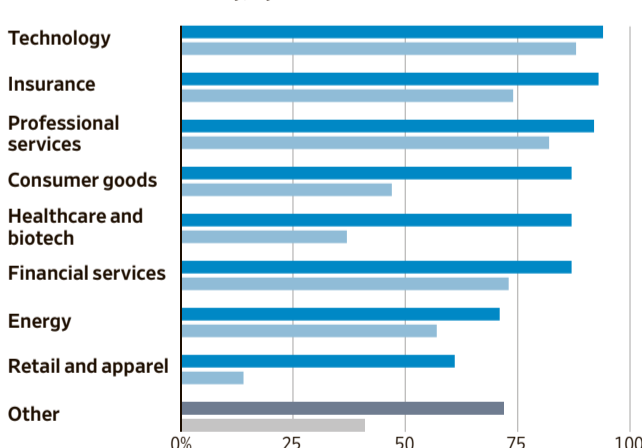
companies are drawing on other data points. More are using systems that require users to swipe their mobile phones to print documents, he said. Multiple swipes are another sign of a full day at the office.

"If you don't have two entries a day, you're either working really hard or you're not working," he said.

Companies generally have wide legal latitude to monitor workers, and some are turning to more granular sources of data such as IP address information transmitted via Wi-Fi, ceiling-mounted heat sensors and weight-triggered sensors attached to chairs that can track workplace occupancy levels, executives said.

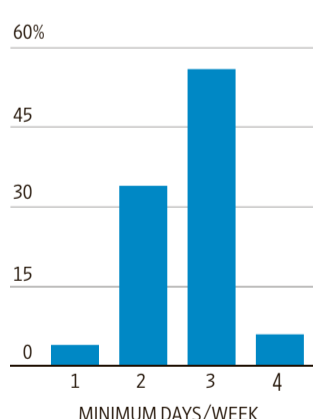
Some companies have told workers to document their whereabouts. In April, the operating committee of JPMorgan sent employees a memo asking them to log when they are out of the office—whether

### Percentage of large companies offering work-location flexibility, by sector\*



\*Among companies with at least 1,000 employees. †Roughly 18% of those tracked by Scoop mandate five days.

### Attendance requirements for Fortune 500 companies that don't mandate five days†



Source: Scoop Technologies

going to be more closely scrutinizing attendance and sending reminders to workers who didn't show up, there was "a lot of agitation," one Google engineer said. A linked Q&A in the email, this person said, indicated that badge data would be used to enforce work policies in the U.S.

"The messaging felt incredibly paternalistic," the engineer said. "It's not an appropriate treatment of people whose jobs can be done remotely."

Google declined to comment.

Many large companies settled on about three days a week in the office as they set hybrid schedules. After first trying to entice workers with meetings and free food, some companies are now threatening to punish those who don't comply, swapping carrots for sticks, said Rob Sadow, CEO of Scoop Technologies, a software company that also tracks return-to-office efforts.

"The biggest challenge in enforcing—with a stick—policy is employees are really good and creative at finding ways around that," Sadow said.

Part of what's behind the tracking push, said Andrew Farah, CEO of workplace analytics company Density.io, is a lack of information on office usage. "The best companies in the world have no idea how buildings are used," he said. "There's a dude with a clipboard who wanders around once a quarter to survey space with their eyes, then make an extrapolation to a billion-dollar portfolio."

—Georgia Wells contributed to this article.

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**CORRECTIONS & AMPLIFICATIONS**

**Disney said the layoffs** of more than 300 workers in Beijing in March weren't motivated by data security vulnerability concerns. The headline on an Exchange article Saturday about the layoffs incorrectly said that the company denied that politics motivated the layoffs.

Readers can alert The Wall Street Journal to any errors in news articles by emailing [wsjcontact@wsj.com](mailto:wsjcontact@wsj.com) or by calling 888-410-2667.

Companies have tried for months to get people back to offices, with mixed success, leading to a tug of war between workers and employers.

According to real-estate services company CBRE's survey of employers, 57% of companies are now tracking attendance. Among those conducting such tracking, almost half are doing so based on feedback from managers, while another 41% are tracking through badge swipes, sensors or data indicating where a worker's computer is being used. Some companies also want data to understand office usage patterns.

Of the companies that are tracking, 16% said they are enforcing attendance. Many want to avoid alienating workers, said Susan Wasmund, who leads CBRE's global occupancy management practice.

When Google emailed employees in June saying it was

## U.S. NEWS

# NASA Asteroid Mission Brings Back a Sample

Robotic spacecraft gathered rocks, dust that might yield new clues to solar system

By AYLIN WOODWARD

Mission controllers and scientists broke into whoops and applause Sunday as they watched an orange creamsicle-colored parachute deploy above a capsule carrying the largest sample ever collected from an asteroid.

Osiris-REX, the robotic spacecraft that helped deliver the sample to Earth, is part of a mission of the same name launched seven years ago by the National Aeronautics and Space Administration to a space rock named Bennu. After a nearly 4-billion-mile journey through space, the 20-foot-long Osiris-REX buzzed by Earth this weekend. It jettisoned a capsule containing rocks and dust collected from Bennu's surface, which safely landed in the desert of western Utah.

"This mission proves that NASA does big things. Things that inspire us, things that unite us, things that show really nothing is beyond our reach," said agency administrator Bill Nelson.

The sample could help to better understand the earliest days of our solar system, 4.5 billion years ago, and perhaps how asteroids helped seed our world with the ingredients for life as we know it, according to scientists involved with the mission.

"We think objects like Bennu may have made Earth habitable," said Dante Lauretta, principal investigator for Osiris-REX and a professor of planetary science and cosmochemistry at the University of Arizona. "They might have delivered the ocean water, the molecules that are in our atmosphere, and maybe even the organic materials that triggered the origin of life on our planet."

The exact amount of asteroid material contained in the capsule is still unknown, but Lauretta estimates it to be about 250 grams—half a pound or so.

The Osiris-REX mission isn't the first to deliver an asteroid sample to Earth. Two Japanese missions already did so from two other asteroids, in 2010 and 2020. But the size of the expected sample from NASA's mission dwarfs its predecessors—the largest sample Japan brought back, in 2020, was 5 grams.



The capsule containing a sample from the Bennu asteroid was brought to a clean room Sunday after it plunged to Earth.

"It is a big deal—this is the first time they've gotten a substantial amount of material," said Thomas Burbine, a planetary scientist and director of the Williston Observatory at Mount Holyoke College who isn't currently affiliated with the mission. "This will change the way we think about asteroids."

The larger the sample, the more interesting chemistry scientists can explore by extracting molecules out of the rocky material, according to Lauretta.

Sunday's delivery began at 6:42 a.m. Eastern time, when mission controllers com-

manded the Osiris-REX craft to release its capsule 63,000 miles above the Earth, or about one-third the distance from our planet to the moon. The capsule moved through space toward Earth for about four hours while the craft that released it began a new six-year journey toward an asteroid named Apophis.

The capsule landed at 10:52 a.m. ET in the Department of Defense's Utah Test and Training Range west of Salt Lake City. The capsule will be transported to a laboratory at NASA's Johnson Space Center in Houston, where the agency

curates other extraterrestrial samples, such as lunar rocks and meteorites. NASA said it intends to unveil the sample next month.

The Osiris-REX mission hasn't been without challenges. Discovered in 1999, Bennu was chosen as the mission's target because it was carbon-rich and could contain biochemical building blocks needed for life. Born from an ancient collision in the asteroid belt between Mars and Jupiter, Bennu also has an orbit that brings it close to Earth, making it more accessible than some other asteroids.

It took the Osiris-REX team two years to map the asteroid and choose a suitable, safe area to collect the sample from on the space rock's surface, which was unexpectedly littered with large, hazardous boulders. "This mission has been probably NASA's most challenging, technically," said Rich Burns, Osiris-REX project manager at NASA's Goddard Space Flight Center in Greenbelt, Md., which manages the mission. "Just to the dynamic of going to a small world that we didn't have good knowledge of, it was really a mission of true exploration."

# Migrants' Impatience With New App Fuels Crossings

By ALICIA A. CALDWELL

EAGLE PASS, Texas—Many of the thousands of migrants who crossed the Rio Grande into this small border city over the past week have one thing in common: They got sick of waiting for an appointment on the smartphone app the government wants them to use.

Some said the app offered appointments to ask for asylum several months in the future—longer than they were willing to wait after a long journey from countries such as Venezuela. Others said it was unresponsive and unusable.

"We all tried, but we couldn't get an appointment," said Kemp Granges, a 25-year-old Venezuelan national who illegally entered the U.S. at Eagle Pass recently, surrendered to border authorities and was later released to a local shelter.

The migrant surge overwhelming Eagle Pass and other communities is showing the limits of recently enacted Biden administration border policies



A migrant boy was handed to a member of the National Guard from a U.S. Border Patrol agent Sunday in Eagle Pass.

intended to help avoid such a scenario.

CBP One offers 40,000 appointments a month for people to enter the U.S. legally and request asylum, rather than entering illegally and risking deportation, which can depend on a variety of legal and logistical factors.

Combined with faster processing of people arrested at

the border and ways for residents of some countries to apply from abroad to enter legally and work in the U.S., the app is part of a set of programs instituted in May when Title 42, a pandemic-era policy allowing for the rapid expulsion of asylum seekers, expired.

Tens of thousands of migrants have taken advantage of CBP One and other legal op-

tions, but the capacity of those programs has been outpaced by demand to come to the U.S. that rose substantially over the summer.

Daniel Moncada, 19, and his brother Ricardo, 18, stood outside an Eagle Pass migrant shelter Friday, looking for friends who crossed the Rio Grande with them. The soonest CBP One offered an appointment, they said, was in three months. After a six-month trip to the border from Venezuela, they decided the wait was too long and illegally crossed into Eagle Pass.

Daniel Moncada said he knew he could face deportation, but he decided to take the chance.

"The risk was 50/50 to me," he said.

Moncada won his bet and was released with instructions to report back to immigration authorities at a later date to start what is likely to be a yearlong process to ask for asylum.

Homeland Secretary Ale-

jandro Mayorkas said Saturday in Texas that despite recent strains on the system, the Biden administration is committed to its border policies.

"Migration is incredibly dynamic, there are ebbs and flows to it," Mayorkas said. "The level of displacement in the Western Hemisphere is at a historic level and is actually outpacing displacement in other hemispheres of the world for the first time. We have confidence in our model, we have exhibited that it works. It is under stress now."

Mayorkas met in Texas' Rio Grande Valley with Honduran President Xiomara Castro to discuss migration to the U.S. from her country.

The Biden administration has said that anyone who doesn't come through the CBP One app and didn't ask for protection before reaching the U.S. likely won't be eligible for asylum and could face swift expulsion. U.S. Immigration and Customs Enforcement has been announcing nearly daily deportation flights.

"We will work to remove as quickly as possible those who do not qualify for relief under our laws," Mayorkas said.

Just over half of the 181,000 arrests made by Border Patrol agents in August were of families, many of whom are released in the U.S. rather than being processed for deportation, in part because of legal limits on how long they can be jailed. In addition, many are from Venezuela and other countries whose governments won't accept deportation flights. Some others are released when border agents are faced with more people than they can detain and process.

Once released in the U.S., migrants typically wait years for their asylum claims to be adjudicated.

Eagle Pass isn't the only city struggling with the migrant surge. Authorities in El Paso, Texas, are opening a city-run shelter with capacity for about 400 people. That space will be almost immediately full, city officials said Saturday.

# After 1997 Murder, a Convict's Life Is Again in Supreme Court's Hands

By JESS BRAVIN

Oklahoma City police jimmied the door of Room 102 of the Best Budget Inn, across from a strip joint called the Vegas Club, and found the battered, bloodied body of Barry Van Treese, the motel owner.

It was Jan. 7, 1997. A week later, police arrested the motel's 19-year-old handyman, Justin Sneed. He admitted to fatally beating Van Treese with an aluminum baseball bat. In a plea bargain that spared him the death penalty, Sneed agreed to testify that the motel manager, Richard Glossip, hired him to kill Van Treese. Glossip, insisting he was innocent, turned down a plea deal, was convicted and sent to death row.

A quarter-century later, Glossip's fate will be determined by the Supreme Court, the second time the highest court has considered issues related to his conviction. The justices are expected to discuss whether to take the case in a private meeting on Tuesday.

Keeping the case—and Glossip—alive is evidence unearthed by a pro bono lawyer convinced of Glossip's innocence. The evidence suggested Glossip was framed, prompting a volte-face by much of Oklahoma's Republican leadership. They argue for Glossip's conviction to be overturned.

"Public confidence in the death penalty requires that

these cases receive the highest standard of reliability," the state's attorney general, Gentner Drummond, said in April.

That same month, however, Oklahoma's highest criminal court unanimously rejected Glossip's appeal, keeping him on track to die. "Finality of judgments is a foundational principle of our system of justice," one of the judges wrote.

Drummond took the extraordinary step of joining Glossip in asking the Supreme Court to throw out the conviction. That petition caught the attention of the court, which stayed Glossip's May 18 scheduled execution so justices could consider whether to hear his appeal.

Among the questions presented: "Whether due process of law requires reversal, where a capital conviction is so infected with errors that the State no longer seeks to defend it."

The Oklahoma District Attorneys Association and three of Van Treese's relatives filed a brief opposing Glossip's petition. "Glossip and his abolitionist supporters are attempting to create the specter of an innocent person being executed, so that they can further their campaign against the death penalty," they argue.

Glossip, 60, was first convicted and sentenced to death in 1998, but a state appeals court threw out the verdict for ineffective assistance of coun-

sel. He was retried and convicted again in 2004. In July 2013, the 10th U.S. Circuit Court of Appeals rejected Glossip's federal appeal. That three-judge panel included now-Supreme Court Justice Neil Gorsuch, who has recused himself from this appeal.

Sneed's testimony was the prosecution's linchpin, as no physical evidence or other witnesses linked Glossip to the crime. Police theorized that Glossip had been stealing from the till and wanted to take over the business.

Oklahoma likely would have executed Glossip years ago had he not been the lead plaintiff in an earlier Supreme Court case that challenged the state's lethal-injection protocol as unconstitutional. He lost 5-4, and the 2015 precedent now makes it nearly impossible to contest execution methods for excessive cruelty.

But that appeal bought Glossip time, during which he contacted Sister Helen Prejean, the death-penalty abolitionist. She connected him with a sympathetic lawyer in Colorado, Donald Knight.

Going through 26 boxes of case records, Knight said he found dozens of leads that weren't followed. Aided by a paralegal and volunteer lawyers, he logged flaws in the 10-day police investigation and tracked down new witnesses to support an alternate motive for Sneed to kill Van Treese: rob-



Richard Glossip in early 2021

bery gone wrong, either by Sneed alone or with an accomplice.

Van Treese, known to carry large amounts of cash from the motels he owned, had been returning home the evening of Jan. 6, 1997, after a visit to Tulsa, Okla. In one scenario, Knight theorized that Van Treese may have been lured to Room 102 by a dancer he knew from the Vegas Club. Knight suspects the dancer also was involved with Sneed and, like him, needed money to fuel a methamphetamine habit.

The plan was for Sneed to rob Van Treese in the room, according to Knight's version of events, figuring that the married businessman would hesitate to file a police report.

But Knight suspected that Van Treese, 54, resisted, provoking a hopped-up Sneed to beat him furiously.

Knight said the pieces began coming together through the recollections of Sneed's former cellmates. In a Nevada state prison, Knight located Paul Melton, who in 1997 spent months with Sneed in the Oklahoma County Jail.

"He told me that he had a girlfriend at the time. He also told me that Van Treese was the 'Sugar Daddy' of Sneed's girlfriend," Melton said in an affidavit. "Their robbery scheme fell apart because Van Treese didn't go along with it."

Sneed, who is serving a life term in prison, didn't respond to an interview request.

The guest in an adjacent room, John Prittie, testified that he was awakened after midnight by noises like glass breaking. There was "muffled arguing," he testified, from "male and female voices."

More evidence emerged when Stephanie Garcia, who said she had worked at the Vegas Club in the 1990s, said she was friends with a dancer nicknamed Fancy who dated both Sneed and Van Treese. In an affidavit, Garcia said Sneed used the women from the Vegas Club as part of a ploy to bilk customers. "He wanted the girls to alert him when they were with a married man," her affidavit states.

In a 2021 interview with The Wall Street Journal, Glossip said Van Treese's dalliances with Vegas Club dancers were well known. But "police didn't

want to go down that route because of the fact that this was a guy that was killed and they didn't want to slander his name," he said.

A police department spokesman declined to comment on the case.

Knight hasn't been able to prove Fancy exists.

Drummond, the attorney general, turned over to Knight a box of records that prosecutors had argued was protected from disclosure. It contained documents, Drummond's Supreme Court brief says, demonstrating that prosecutors withheld critical information: that Sneed had been diagnosed with bipolar affective disorder.

"Glossip's fate turned on Sneed's credibility, which hung by a thread given his own culpability and capital exposure," Drummond's brief argues. Had defense attorneys known Sneed's diagnosis, they would have had a powerful argument to the jury that the state's star witness couldn't be trusted, the attorney general said.

Nonsense, says the opposing brief, noting that in April the Oklahoma Court of Criminal Appeals rejected the identical argument.

If the high court case goes Drummond's way, Oklahoma County prosecutors will have to decide whether to retry Glossip or set him free. If the court rejects Glossip's petition or later rules against him, he likely will be out of appeals.

U.S. NEWS



Rep. Andy Biggs



Rep. Dan Bishop



Rep. Ken Buck



Rep. Eli Crane



Rep. Matt Gaetz



Rep. Marjorie Taylor Greene



Rep. Ralph Norman



Rep. Matt Rosendale

# Shifting Group of GOP Dissidents Frustrates Efforts to End Standoff

By KATY STECH FEREK

A shifting band of lawmakers is blocking House Speaker Kevin McCarthy's efforts to move legislation funding the federal government, with a shutdown set for Oct. 1 if Congress fails to act. Dubbed the "dysfunction caucus" by critics, the holdouts have repeatedly flouted leadership.

Most of the dissidents come from deep-red districts. All have served in Congress for less than a decade. While many are focused on curbing longer-term spending, others spotlight issues such as immigration or slashing Ukraine funding. Last week, a handful of lawmakers twice blocked a procedural vote to advance a defense appropriations package, one of 12 bills needed to fund the government.

Here is a look at some of the GOP dissidents and what demands they have made.

## Andy Biggs (Ariz.)

**Assumed office:** 2017  
**Claim to fame:** One of 20 House Republicans to vote against McCarthy as House speaker in January, Biggs, 64, served as chairman of the hard-line House Freedom Caucus.

He has voted against Ukraine aid and measures that passed with heavy Republican support, including last year's

defense policy bill and a measure that would pay military members who were exposed to toxic substances during their service.

Biggs wants to cut spending and wants his colleagues to go through the 12 appropriations bills one by one.

## Dan Bishop (N.C.)

**Assumed office:** 2019  
**Claim to fame:** Bishop, 59, voted against McCarthy as speaker and has taken hard-right stances on issues such as guns, spending, abortion and immigration. He said in August that he won't run for re-election and plans to campaign to become the state's attorney general.

Bishop also has called for the House to take up each of the chamber's 12 appropriations bills separately.

## Ken Buck (Colo.)

**Assumed office:** 2015  
**Claim to fame:** Buck, 64, hasn't been afraid to break with Republican colleagues on contentious issues, such as in July when he voted against an \$886 billion military-policy bill that contained provisions to restrict abortion access, transgender healthcare and diversity efforts in the military.

He confirmed a recent New York Post report that he is considering leaving Congress for

other work, potentially in cable TV.

## Eli Crane (Ariz.)

**Assumed office:** 2023  
**Claim to fame:** A former Navy service member, Crane, 43, voted against McCarthy as House speaker. He wants steep cuts to federal spending and has urged his colleagues to take up appropriations bills one by one to achieve that.

## Matt Gaetz (Fla.)

**Assumed office:** 2017  
**Claim to fame:** He voted against McCarthy as House speaker and has continued to criticize him. He has insisted on no short-term spending patch but didn't join with other holdouts in blocking the defense bills last week.

Gaetz, 41, is perhaps McCarthy's top critic. He has helped pioneer the tactic of holding up "rule" votes, joining a group in June that blocked an unrelated gas-stove bill in a protest over spending.

## Marjorie Taylor Greene (Ga.)

**Assumed office:** 2021  
**Claim to fame:** A key ally to McCarthy in his speaker fight, Greene, 49, has become one of the most controversial figures in the Republican Party. Twitter

(now X) suspended one of her accounts over what it deemed Covid-19 misinformation. Democrats and some Republicans voted to remove Greene from her committee assignments for past remarks embracing conspiracy theories. Greene opposes sending more money to Ukraine.

## Ralph Norman (S.C.)

**Assumed office:** 2017  
**Claim to fame:** One of 20 House lawmakers to vote against McCarthy as speaker, Norman, 70, has taken staunchly conservative positions on gun rights, spending and abortion. He recently told a reporter that he is considering challenging fellow Republican Lindsey Graham for his Senate seat.

## Matt Rosendale (Mont.)

**Assumed office:** January 2021  
**Claim to fame:** Rosendale, 63, voted against McCarthy as House speaker. He is a member of the House Freedom Caucus and opposes efforts to support Ukraine. He unsuccessfully challenged Sen. Jon Tester, a Democrat, for his position in 2018 and is expected to challenge for the seat again in 2024.

# Deadline Looms on Shutdown

Continued from Page One

The impasse has prompted others to prepare backup plans. Senate Majority Leader Chuck Schumer (D, N.Y.) has moved forward with a shell bill that could be used as a legislative vehicle for a stopgap spending patch this week if needed. Some House lawmakers say they are considering teeing up a discharge petition, a maneuver to force a vote over the objections of the House speaker.

"A discharge petition is one of several options," said Rep. Brian Fitzpatrick (R, Pa.), a co-chair of the bipartisan Problem Solvers Caucus, on CNN on Sunday.

McCarthy, who won his job after 15 rounds of voting, has spent the year wrestling with a bloc of conservatives who have used their leverage to repeatedly derail leadership's plans. Last week, rebel Republicans twice blocked a vote to advance one of the 11 spending bills that have yet to clear the House, the defense appropriations bill that is set to be voted on again this week.

It wasn't immediately clear that McCarthy's plans would show any better results. Some conservatives have repeatedly indicated that they wouldn't support a continuing resolution, or CR, which continues spending in the new fiscal year at the prior year's levels.

"I will not support a CR," Rep. Matt Rosendale (R, Mont.) told reporters over the weekend. "I haven't changed one bit from that."

Rep. Tim Burchett (R, Tenn.) said he, too, would oppose a continuing resolution, telling CNN on Sunday that such spending agreements are "like telling a crack addict, 'We're going to give you more crack to keep you off crack.' It doesn't work."

Rep. Andy Biggs (R, Ariz.), who has repeatedly voted to thwart party leaders, indicated in an opinion article Sunday he would prefer a brief government shutdown to a continuing resolution if the end result lowered spending and future budget deficits.

Rep. Matt Gaetz (R, Fla.) said Sunday he's not for a shutdown. "But the way to fund the government is not the same way we've been doing it since the mid-'90s, where it's one up-or-down vote on the entire government all at once," he told Fox News. "We should

have separate single-subject spending bills."

Beyond that, McCarthy may have problems even getting a rule for debate cleared through the floor. Some \$300 million in routine funding for Ukraine remains in the bill even though Rep. Marjorie Taylor Greene (R, Ga.) said she would vote "no" unless the money was stripped out. The bill doesn't include the \$24 billion in supplemental Ukraine funding requested by President Biden.

Greene complained that "some of the House's strongest conservatives are going to vote for the rule," which she characterized as the first step in a process to give Biden a blank check for the war. She will still get an amendment vote on removing the aid.

Other Republicans said it was a good compromise.

"The \$300 million as compared to a 20-something-billion dollar supplemental—for me, that was a good trade," said Rep. Chip Roy (R, Texas), who voted to clear the measure through the House Rules Committee.

Republican leaders have been trying to pass the 11 remaining bills in hopes of heading into the Senate with a strong negotiation position on full-year spending levels.

But since the summer, conservative holdouts have blocked consideration of those bills, complaining, among other things, that the spending cuts they contain are still too small. Their continued opposition has angered many colleagues.

"The arsonists have lit their house on fire," said Rep. Garrett Graves (R, La.), a top lieutenant to McCarthy.

After setbacks last week, McCarthy canceled plans to keep the House at work through the weekend. But at least two dozen stayed back in Washington, according to Rep. Clay Higgins (R, La.), a House Freedom Caucus member.

Higgins emerged over the past week as the broker of a revised stopgap spending measure backed by McCarthy and intended to win over holdouts.

Under that plan, the House GOP would try to advance discretionary spending bills for fiscal 2024 totaling \$1,526 trillion, more than the \$1,471 trillion preferred by conservatives but less than the roughly \$1.59 trillion in gross spending that House Republican appropriators had approved. His idea was to essentially split the difference—a move that has forced House appropriators to go back and examine how they can save an additional \$60 billion for the year.

—Katy Stech Ferek and Yuka Hayashi contributed to this article.

# Menendez Is Pressured By Democrats To Resign

By TIM HANRAHAN

A growing number of Democratic lawmakers and officials are calling on Sen. Bob Menendez to resign, after he was indicted Friday in a bribery scheme by federal prosecutors.

The Manhattan U.S. attorney's office charged the Democratic senator with accepting cash, gold bars and other benefits in exchange for using his office to enrich three businessmen and aid the Egyptian government. Menendez stepped aside as chairman of the Foreign Relations Committee, but has rejected demands that he quit the Senate.

"I am not going anywhere," Menendez said. He called the charges false and said he was the victim of "an active smear campaign of anonymous sources and innuendos."

New Jersey Gov. Phil Murphy, a Democrat, called for Menendez's resignation late Friday, and he was joined by a series of other officials as the weekend progressed. Democratic lawmakers representing New Jersey including Reps. Mikie Sherrill, Bill Pascrell Jr. and Josh Gottheimer, an influential centrist, also called for him to leave.

Gottheimer said Menendez has been a "critical voice and a tough fighter for Jersey" on issues including guns and abortion, but given the seriousness of the allegations he should "step aside as he focuses on his defense."

# For Trump, 'Stop the Steal' Campaign Never Gets Old

By SCOTT PATTERSON

Donald Trump has portrayed every campaign of his short political career in one of two ways: He either won, or the election was stolen.

Now, he is framing the next election, for which he is the front-runner among Republicans, the same way.

"The Democrats must stop interfering with our upcoming 2024 presidential election," Trump wrote on Truth Social this month, using all capital letters. "The weaponization & cheating must stop."

Trump and his campaign say a series of criminal indictments against him are part of a scheme by Democrats to thwart him in next year's vote. After a federal grand jury indicted Trump in August for trying to subvert the will of the American voters in 2020, the Trump campaign said the prosecution by Justice Department special counsel Jack Smith was an attempt by President Biden "to interfere with the 2024 presidential election." Similar complaints followed indictments by prosecutors from New York and Georgia.

Accusations of vote-rigging and election interference have been central features of the political playbook Trump and his allies have used for the eight years he has been in national politics. His "stop the steal" leitmotif has served both to discount past defeats and preempt any prospect of one ahead.

Democrats weren't the original focus of Trump's voter-fraud allegations, in 2016; then they were aimed at fellow Republicans. Trump's longtime ally Roger Stone launched the



Trump supporters demonstrated outside the Pennsylvania state Capitol on Nov. 6, 2020.

Stop the Steal activist movement that year amid allegations that GOP leaders were conspiring to wrest the nomination away from Trump.

Four years later, the Stop the Steal movement and efforts by other pro-Trump protest groups to reverse the election results culminated in thousands of Trump supporters breaching the Capitol as Congress met on Jan. 6, 2021, to certify Biden's victory.

The August indictment by a federal grand jury in Washington charges Trump with four crimes connected to his effort to cling to power after losing in 2020. In Georgia, a grand jury charged Trump, his lawyer Rudy Giuliani and 17 other Trump allies with operating a criminal enterprise to overturn Biden's victory in the state. All have pleaded not guilty.

"Every American citizen has

an absolute First Amendment right to question the anomalies and irregularities in any local, state or federal election," Stone told The Wall Street Journal. There is no corroborated evidence of widespread voter fraud in the 2020 election.

Trump's election denial was on display in February 2016, after he lost the Iowa caucuses to Texas Sen. Ted Cruz. Cruz "didn't win Iowa, he stole it," Trump said on Twitter. There is no evidence of voting irregularities in those caucuses.

Trump warned of violence if he didn't win the GOP mantle. In a March 2016 interview on CNN, the candidate said if he wasn't the clear winner by the time of the convention in July, "I think you'd have riots."

After securing the GOP nomination, Trump shifted voter-fraud allegations to the coming general election. "The only way

we can lose, in my opinion...is if cheating goes on," he said in August 2016.

While Trump's 2016 victory put a temporary end to such concerns, the president returned to his warnings about a fraudulent election in 2020. In May of that year, he wrote on Twitter, "Don't allow RIGGED ELECTIONS!" Later that month he tweeted: "The Democrats are trying to Rig the 2020 Election, plain and simple!"

At least 46 of Trump's Twitter posts contained the phrase "rigged election" or "stolen election," and nearly all were reposted more than 10,000 times, according to a Journal review of his messages since he took office.

In November 2020, after Trump's loss, right-wing political operative Ali Alexander established a Stop the Steal LLC entity in Alabama with a bank

account and websites, according to the Jan. 6 House select committee's final report. Alexander couldn't be reached for comment, and a person who has represented him didn't respond to a request for comment.

Stone, meanwhile, had been convicted in a federal court in 2019 for making false statements, witness tampering and trying to impede a congressional investigation into Russian election interference. In December, after losing the election, Trump pardoned Stone for the charges.

After Biden won, a scheme to enlist false slates of electors took shape. Stone and others close to the president promoted the idea that legislators in certain states won by Biden could send alternative slates of electors to Congress. The plan was taken up by several attorneys advising Trump, including John Eastman and Kenneth Chesebro. Eastman and Chesebro were both named as co-defendants by the grand jury in Georgia that charged Trump and 18 allies with operating a criminal enterprise. Both pleaded not guilty.

Trump and his allies engaged in at least 200 attempts in public or private to target state legislators and state or local administrators to overturn election results, according to the House select committee's final report.

Around noon on Jan. 6, 2021, Trump took the stage near the White House. "We must stop the steal," he said. He then encouraged his supporters to march to the Capitol.

—Jack Gillum contributed to this article.

U.S. NEWS

# Maui Electric Utility Was Late on Power-Pole Fixes

By KATHERINE BLUNT AND DAN FROSCH

Hawaiian Electric regularly fell behind on plans to replace tens of thousands of utility poles at risk of failure and spent millions less on upgrades than it planned in the years before a wildfire destroyed the town of Lahaina this summer, a Wall Street Journal review of regulatory records found.

State regulators and members of Congress are questioning how well the utility maintained its equipment before the blaze on Aug. 8, which killed at least 97 people.

Generally, wooden poles

that have deteriorated or were built to outdated standards are at risk of falling during high winds and dropping live wires that could spark wildfires.

Hawaiian Electric has acknowledged that numerous power lines and poles fell in Maui on the day of the fire, but the company has denied that they were the cause of the inferno that leveled Lahaina.

The regulatory filings show Hawaiian Electric frequently cited resource constraints and engineering challenges for not making as many upgrades as it intended.

In 2022, Maui Electric, a subsidiary of the company, planned to spend at least \$25

million to make its infrastructure on the island more resilient, but spent about \$17 million and replaced fewer poles than anticipated. The utility designated roughly \$2.4 million for a program to bolster reliability on Maui last year, but spent \$355,832. After saying it would spend \$1.15 million last year to better prevent its high- and low-voltage lines from starting fires, it spent about \$9,300 on the program.

“Since the pandemic, like many utilities, we have faced supply chain constraints and a tight market for professionals like engineers, and being out in the middle of the Pacific makes this especially challeng-

ing,” Hawaiian Electric said. “We have taken steps to reallocate equipment, personnel and resources across the islands we serve whenever necessary. Public safety is always our top priority and something we never compromise on.”

The company, which has about 165,000 poles across its system, doesn’t report the exact number it replaces every year. But it has repeatedly told regulators the majority of its poles are built to a 1960s standard that didn’t account for hurricane-strength winds.

Many are more than 40 years old, putting them at high risk of breaking down. Some date to the 1920s.

As early as 2011, the company said it needed to move more quickly to upgrade its equipment or run the risk that failing poles would result in longer or more frequent blackouts. It repeated the warning in several subsequent filings.

Hawaiian Electric has acknowledged that downed power lines caused a fire the morning of Aug. 8 in the same spot where the blaze that destroyed Lahaina began.

But it said a different blaze which ignited that afternoon incinerated the town and its equipment wasn’t to blame because it had cut power to the area.

Hawaiian Electric said it

hadn’t determined the age of the poles in the area where the fire sparked. About 950 utility poles were damaged by winds or fire across West Maui on Aug. 8.

The company is the target of numerous lawsuits alleging that it is responsible for the destruction of Lahaina, including from local residents and Maui County.

Hawaiian Electric has said it would respond to questions from the Hawaii Public Utilities Commission about the Lahaina fire by Oct. 2. Its chief executive, Shelee Kimura, is set to testify before a congressional committee investigating the disaster on Sept. 28.

## U.S. WATCH

### VIRGINIA

#### Meat Plants Probed Over Child Labor

The Labor Department said it is investigating plants operated by poultry giants Perdue Farms and Tyson Foods following a report that some of the companies’ contractors employed migrant children to clean meat-processing plants.

The New York Times magazine last week published an article that said migrant children were working overnight shifts at some of the companies’ plants.

Perdue and Tyson said they would cooperate with any federal investigation. The companies said they didn’t know that children were working in their plants, which outsource cleaning to sanitation firms.

The Labor Department confirmed that it is investigating a Tyson plant and a Perdue plant, both in Virginia. The agency could try to hold these companies liable for the labor practices of their contractors.

—Lauren Weber

### NORTHEAST

#### Ophelia Still Poses Flood Threat

After being downgraded from a tropical storm, Ophelia on Sunday still threatened parts of the Northeast with coastal flooding, life-threatening waves and heavy rain from Washington to New York City, the National Hurricane Center said.

As Ophelia weakened, a new tropical storm named Philippe brewed in the Atlantic.

The center warned that swells generated by Ophelia would affect the East Coast for the rest of the weekend, likely causing dangerous surf conditions and rip currents. Ophelia was also expected to drop 1 to 3 inches of additional rain over parts of the Mid-Atlantic and New England. Isolated river flooding was also possible.

—Associated Press

### LOUISIANA

#### Defendant Who Fled in '91 Caught

A Louisiana man who fled his 1991 trial for attempted murder has been arrested more than three decades later after authorities found him hiding in Mexico, authorities said. Greg Lawson, 63, was brought back to the U.S. on Thursday after being located in Mexico, the FBI said. Lawson was accused of shooting a man in 1991 in Bienville Parish.

The FBI released video of Lawson being escorted by authorities at an airport.

The FBI wrote on X, formerly Twitter, that it located Lawson on a tip.

—Associated Press

### GEORGIA

#### Carters Make Public Appearance

Former President Jimmy Carter and his wife, Rosalynn, on Saturday made a surprise appearance at the Plains Peanut Festival in their Georgia hometown, the Carter Center wrote in a social-media post on X, formerly known as Twitter.

Jimmy and Rosalynn Carter are seen in a reposted video riding through the festivities in a black SUV.

The former president, who has been in home hospice care since February, turns 99 on Oct. 1. The former first lady has since been diagnosed with dementia.

—Associated Press



# GREEN JOBS

Our Executive Chairman Anthony Pratt was joined by U.S. Ambassador to Australia Caroline Kennedy, Kentucky Governor Andy Beshear, and Australian Ambassador to the U.S. Kevin Rudd at the grand opening of Pratt Industries’ newest **100% recycled paper mill and box factory** last week in Henderson, Ky.



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## WORLD NEWS

## Russia's Army Learns From Battle Errors

Poor performance at start shocked West, but adaptation now hinders Ukraine

By MATTHEW LUXMOORE  
AND MICHAEL R. GORDON

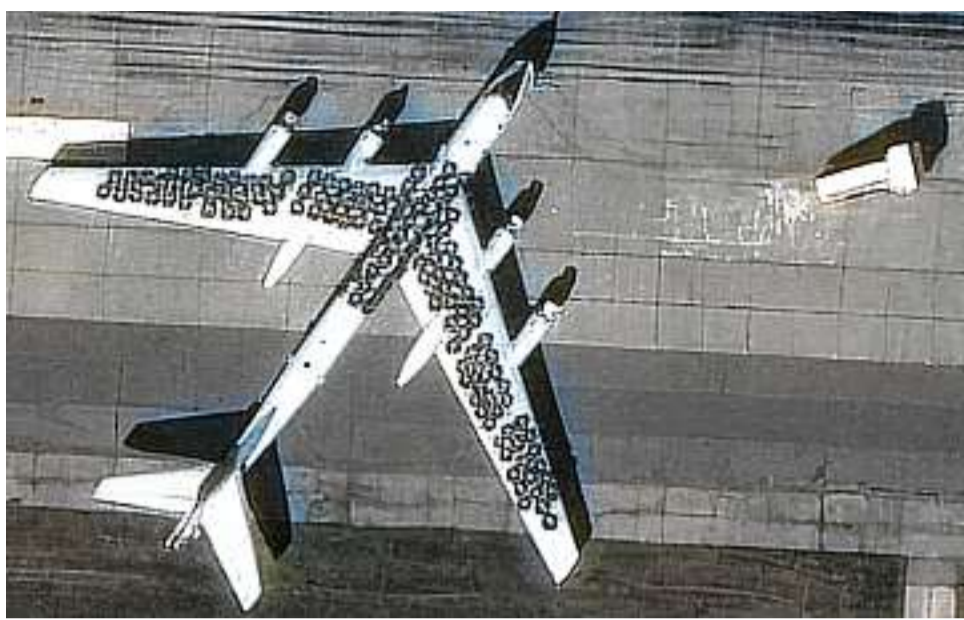
More than a year after Moscow failed in its goal of a lightning victory in Ukraine, the Russian military has steadily adapted on the battlefield as it shifts to a strategy of wearing down Ukraine and the West.

The poor performance of the Russian military in the early days of the war shocked many in the West and ultimately allowed Ukraine to resist, and then roll back, a large part of the Russian advance.

But Russia has since learned from its mistakes, adapting in ways that could make it difficult for Ukraine to expel Russian forces from its territory.

After Ukraine easily swept through Russia's lines in the Kharkiv region last autumn, Moscow spent months preparing formidable defenses ahead of the current Ukrainian counteroffensive in the south. Moscow is also deploying drones to scope out and attack Ukrainian positions in a way to which Kyiv has struggled to respond.

As a result, Ukrainian forces have advanced slowly in the past few months, facing dense



The Russians are piling tires on bombers at some of its bases, possibly to confuse drones.

minefields while Russian helicopters, antitank missiles and artillery pick them off.

"We have seen quite a few areas where they're adapting, and of course we're paying close attention to that," Gen. James Hecker, the top U.S. Air Force commander in Europe, said in an interview.

To be sure, Russia's military—which has suffered more than 270,000 killed and wounded as its army has lost more than 50% of its "combat effectiveness," according to some Western estimates—might need to make deeper changes to sustain a yearslong war.

It still suffers from a Soviet-style top-down structure that allows little initiative for front-line commanders and gives priority to political goals from Moscow over battlefield decision-making. It expended months and thousands of lives to take Bakhmut, an eastern Ukrainian city with little strategic value, after the Kremlin identified it as a key target. Russia has continued to deploy tens of thousands of soldiers to defend the city, where it claimed its only major victory since the war's early months.

Moreover, Russia is now largely on the defensive as it tries to hold back the Ukrai-

nian push, and it is far easier for armies to defend than to go on the offensive. Analysts and Western officials said Russia has exhausted its offensive capacity for now and is failing to gain new ground in parts of eastern Ukraine where it is still trying to push forward.

However, the Russian military is showing some capacity to learn from early mistakes.

For instance, early in the war, Russian warplanes flew into the teeth of the Ukrainian air defenses and suffered serious losses because Moscow had failed to gain air superiority. More than 75 planes were shot down, with many flying

"right into the surface-to-air missile engagement zones of the Ukrainians," Hecker said.

He added, however, that much of the Russian air force now remains intact. "So they now don't fly in those rings or if they do, it is for low altitude for very quick moments and then they go back out," he said, although that tactic has seriously hampered the accuracy of the Russian bombing missions and that air superiority remains well beyond the Russians' reach.

The Russians have added guidance capabilities to older bombs they release from planes flying beyond the range of Ukraine's air defense, including from aircraft flying over Russian territory. Ukraine struggles to detect and shoot them down with their Soviet-era aircraft.

Russia has also moved command posts and many ammunition depots farther from the front lines after Ukraine struck them using Western-provided HIMARS launchers, which fire guided rockets with a range of almost 50 miles.

After the Ukrainians began to use extended-range JDAM satellite-guided bombs, the Russians moved their command posts farther back still. Those strikes have forced the Russians to conserve the use of artillery, extend their already strained supply lines and become more precise in their targeting.

The U.S. has now said it

would provide a small number of ATACMS missiles to Ukraine in the coming weeks and that more might be provided later. Those surface-to-surface missiles have a range between 100 and 190 miles depending on the model that is provided, and could similarly target Russian logistical lines.

Early in the war, Moscow deployed unprotected columns of Russian armor into Ukraine, expecting minimal resistance from Kyiv, and sent undermanned and under-equipped units into combat, resulting in tens of thousands of Russian deaths.

The Russians are now better at protecting their soldiers by building deep, highly fortified trenches. They hide their tanks and armored personnel carriers in tree lines and under camouflage netting, conducting sorties to fire on Ukrainian positions before swiftly retreating.

After the Ukrainians began using drones to strike Russian combat aircraft deep inside Russia, the Russians started dispersing their planes to more airfields. They also began putting tires on the wings and fuselage of bombers at some of their bases.

"Placing tires, crates and other material on top of the wings and fuselage could be an attempt to confuse or alter the visual patterns used by drones targeting the aircraft," said Stephen Wood, senior director at Maxar.

## Zelensky's Blunt Message Draws a Mixed Response

BRUSSELS—Volodymyr Zelensky, Ukraine's high-profile wartime leader, has proved himself to be a communications whiz, rallying Western public opinion to his side and winning remarkable support for his embattled country.

By Daniel Michaels,  
Laurence Norman  
and Lindsay Wise

But there is also Volodymyr Zelensky, the actor-turned-president and political neophyte, who can be his own worst public-relations enemy, risking the support of other world leaders with angry broadsides aimed at some of Kyiv's biggest benefactors.

The two Zelenskys were on display during the president's recent visits to the United Nations and Washington.

At the U.N. General Assembly, he lashed out at some European allies that are engaged in a spat over Ukrainian grain exports, saying they "play out solidarity in a political theater" but are actually "helping set the stage for Moscow."

Poland, one of Ukraine's most fervent backers and one of the countries tussling over

the grain, returned fire. Polish President Andrzej Duda compared Ukraine to a drowning man who could pull a would-be rescuer down.

Two days after Zelensky's U.N. speech, the president showed his charming and thankful side as he made the rounds in Washington, profusely thanking the U.S. and Poland for their assistance. U.S. officials on Friday said President Biden pledged advanced long-range missiles to help the Ukrainian counteroffensive.

Zelensky's mix of ire and appreciation reflects his desire to display strength at home and gratitude abroad, Ukrainian political observers say.

His contrasting stances and iconoclastic approach to wartime communications can come at a cost. His informal, apparently impromptu reactions carry an air of authenticity that has won him allegiance and respect. But they can also come off as grating to career politicians and diplomats from other countries who must address their own domestic audiences.

Zelensky, who gained broad notice on Ukrainian TV playing a schoolteacher who becomes president, was thrust into the



Volodymyr Zelensky, second right, his wife Olena Zelenska and U.S. officials visited the Pentagon 9/11 memorial last week.

spotlight when Russian troops invaded in February 2022.

In the past 18 months or so, Zelensky has irked U.N. officials by saying the Security Council should act against Russia or consider dissolving itself. He infuriated some Israeli lawmakers by comparing Russia's invasion of Ukraine to the Holocaust.

In an interview in May, Zelensky said that, as an outsider, he can't grasp why some West-

ern governments move slowly with weapons deliveries when Ukraine needs them immediately to save lives. He said he uses all means available—at times abrasive, at times supplicatory—to secure additional support.

A senior European official who has dealt extensively with Ukraine said Zelensky's demeanor became more focused and precise after the invasion. "Of course in war times, espe-

cially, things get black and white, and when there are things that you don't like, or statements that don't support you, you take it quite emotionally," the official said.

During the North Atlantic Treaty Organization summit in Lithuania in July, Zelensky posted a social-media message rebuking NATO allies for their "unprecedented and absurd" resistance to advancing Ukraine's candidacy for membership.

That fulmination angered Biden and his closest advisers, people familiar with the events said, and nearly prompted the administration to remove any mention of Ukraine's candidacy from a summit communiqué.

Britain's then-defense secretary, Ben Wallace, said Zelensky should remember that "You've got to persuade doubting politicians in other countries that, you know, that it's worthwhile" to support Ukraine.

The next day, a chastened Zelensky called the summit "a meaningful success for Ukraine." He boasted that his delegation would return home with a "significant security victory" promising "absolutely new security opportunities."

In Washington on Thursday, Zelensky displayed his growing political savvy and star power. Speaking to members of Congress days before a potential government shutdown that is currently the main focus of their attention, he concentrated on messaging about why helping Ukraine helps America.

Zelensky's messaging overall has helped Ukraine, starting from the war's first day. That evening, he addressed an emergency meeting of European Union leaders by video, telling them, "This may be the last time you see me alive." Officials present said his comments were deeply moving, prompting fast and unprecedented EU assistance.

His messaging has won international attention, but is also very focused on the Ukrainians who elected him in 2019.

"I am grateful to everyone who is waiting for their loved ones from the front line, to everyone who prays for them every day, who calls or texts such an important 'How are you?' to hear the much-desired 'Everything is fine!'" he said in a social-media video filmed from Kyiv on Ukraine's Independence Day in August.

## In Counteroffensive, Ukraine Tries to Expand Breach on Front Line

By ANASTASIA MALENKO

The most important fighting in Ukraine right now is taking place in a few fields and tree lines near a southeastern agricultural village that had only a few hundred inhabitants before the war.

Ukrainian paratroopers pierced the main Russian defensive line to the west of the village of Verbove in late August and have since fought their way through fortifications and created a path to send armored vehicles through.

Ukraine has sent some of its strongest units, equipped with Western-supplied armored vehicles, to fight there, including air-assault troops. There are plenty of reasons why they picked Verbove, in the Zaporizhzhia region, said military analysts and soldiers, from the relative weakness of Russian defenses there to the options it offers for further advances.

The bulge that Ukraine has created in the front line represents its main effort to achieve the key objective of its counteroffensive: to cut the Russian occupying force holding nearly 20% of the country in two. To do that, Kyiv's military needs to push as close to the coast of the Sea of Azov as possible. The quickest route, along a road running south from



A Ukrainian soldier prepares for combat in Zaporizhzhia.

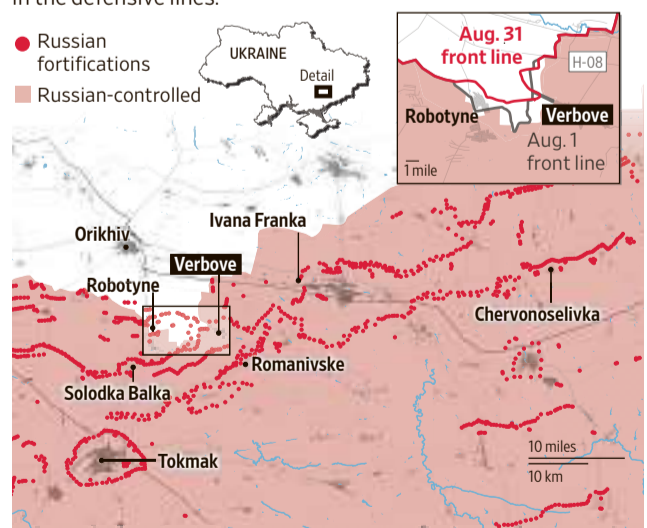
Orikhiv via the transport hub of Tokmak, is the best defended. Russia spent months preparing trenches, fortified machine-gun and missile positions, antitank obstacles and other fortifications along that route.

Initial Ukrainian assaults in large formations of armored vehicles were repelled in June. Ukraine switched tactics to advancing in small infantry units, methodically overcoming Russian positions. The approach

started to pay off in August, when Ukraine seized the village of Robotyne and quickly took more territory toward Verbove to the east. As Ukraine took control of Robotyne, it deployed some of its most-powerful air-assault units, including the 82nd Brigade.

Their biggest advance has come to the west of Verbove, where the main Russian defenses skirt the edge of the village. It is there that they

Satellite images show Russian forces scrambling to patch gaps in the defensive lines.



Note: Russian-controlled area as of Sept. 20  
Sources: Brady Africk, American Enterprise Institute (Russian fortifications); Institute for the Study of War and AEI's Critical Threats Project (Russian-controlled area)  
Emma Brown/THE WALL STREET JOURNAL

have made a small breach of the main defensive line, which they are trying to expand.

One reason, some analysts say, is that the direct path to Tokmak through the village of Solodka Balka has stronger fortifications.

Some trenches west of the Verbove area lack elements such as accommodation bunkers and covered firing positions, said Emil Kastehelmi, an open-source intelligence ana-

lyst with Black Bird Group.

Soldiers there say fighting has been intense and progress measured in tiny increments.

Breaching near Verbove also offers a route toward the city of Berdyansk on the Azov coast, which could force Russia to spread its troops thinner.

The alternate path through Solodka Balka would take Ukrainian forces into a more heavily fortified zone, which

would be easier to defend for Russian troops. Satellite imagery analysis of the area by Kastehelmi shows covered trenches and fighting positions, antitank ditches and rows of concrete blocks known as dragon's teeth, among other defenses.

The comparative weakness of Russian positions west of Verbove could stem from various factors, such as limited resources and manpower or failures by individual units in their areas of responsibility.

Recent satellite images show the Russian forces rushing to patch these gaps ahead of where the Ukrainians are advancing, both closer to the front line and further south.

Since May, Russian forces laid new rows of dragon's teeth obstacles for tanks near Romanivske, about 11 miles southeast of Verbove.

Between July and August, the Russian forces added fortifications near Chervonoselivka. New trenches and barriers also popped up near Ivana Franka in late August.

## Watch a Video

Scan this code for a video on plans to send U.S. ATACMS missiles to Kyiv.

## WORLD NEWS

## Libya Disaster Exposes Neglect

Collapsed dams reflect decades of conflict, corruption as anger mounts

By **Benoit Faucon**  
and **Jared Malsin**

In 2003, a group of Swiss engineers examined a pair of dams along a river in eastern Libya. They concluded the structures were under stress and recommended strengthening them and building a third dam to ease the pressure.

The job didn't get done. Three companies hired to make the repairs during the twilight of Moammar Gadhafi's regime fled the country when he was overthrown in 2011.

Three years later, Libya fractured into two. Funds allocated to rebuild the dams disappeared before they could be spent, according to audits carried out on the project. In 2014, Islamic State extremists seized the area. A Russian-backed warlord took control a few years later, putting the dams further beyond the reach of the recognized government in Tripoli.

Then, on Sept. 11 this year, after two decades of neglect, the twin dams were overwhelmed by a storm rolling in from the Mediterranean, which destroyed them and sent a torrent of water blasting down through the city of Derna, washing entire neighborhoods out to sea and killing more than 6,000 people.

The catastrophic loss of life is the latest example of how corruption and neglect are fueling a wave of anger at governments across the Middle East. It also raises questions about how infrastructure in the region can withstand extreme weather events such as this month's Storm Daniel, which scientists say was exacerbated by the forces generated by climate change.

"Negligence was the prelude to the whole disaster," said Anas El-Gomati, director of the



Flooding caused by Storm Daniel devastated Derna, Libya, and killed thousands of people.

Tripoli-based think tank Sadeq Institute. "Libyans are fed up. They want to see a transparent process that actually brings individuals to account."

In Derna, the epicenter of the Libyan disaster, throngs of people have demanded justice and the removal of local leaders as the full toll becomes clear. Demonstrators gathered in front of a mosque during one protest. Later, a smaller group set fire to the mayor's house.

A Wall Street Journal investigation—based on a review of documents including reports from the Libyan government's Audit Bureau and interviews with Libyan officials and the foreign contractors hired to fix the dams—shows a trail of mismanagement that runs from the Gadhafi regime through to the present day.

Built in 1978 by a company from what was then Yugoslavia, the dams along the Wadi Derna were part of Gadhafi's plans to scale up Libya's economy. Instead, the country entered a long period of international isolation that began to lift only after Libya agreed to give up a weapons program and hand over a suspect in the bombing of Pan Am Flight 103

over Lockerbie, Scotland.

Within days of United Nations sanctions lifting in 2003, Miguel Stucky, a Lausanne-based dam engineer, received a call from Libya's General Water Authority seeking advice on the two dams, people familiar with the matter said. His consulting firm, named Stucky, recommended strengthening the existing two structures, building a third one and clearing up the embankments to avoid flooding, the people said.

Stucky continued advising the Libyan government, but in 2008, the Swiss businessman narrowly escaped arrest when Gadhafi's son Hannibal was detained in Geneva for allegedly beating his servants. Libya objected to the detention, and Stucky's business partner was subsequently arrested and their cement-trading business in Tripoli confiscated. He stopped going to Libya. Gruner, a Swiss engineering-services company that bought Stucky's business in 2013, didn't return a request for comment.

The Libyan government, meanwhile, was slow to implement Stucky's proposals. Work repeatedly stalled. Gadhafi's

second son, Saif al-Islam, halted payments for major infrastructure projects amid a power struggle between the dictator's sons and the Libyan government at the time, Libyan officials said, including Mohammed Ali Abdallah, who worked on a committee tasked in 2012 with consolidating the country's debts after the fall of the Gadhafi regime.

A brief window to stabilize the dams did open, in 2021, when Libya's rival factions agreed to form a unity government. According to Libyan officials, the water ministry meant to supervise the rehabilitation of the Derna dams was paralyzed by a dispute between the minister and his deputy, a militia leader who posted armed men to block access to the minister's office.

The minister retaliated by asking the central bank to freeze accounts normally used for water projects, according to correspondence seen by The Wall Street Journal.

A few months later, the unity government splintered, leaving the country again divided between two administrations both claiming power.

By then, the dams' collapse was only one big storm away.

## WORLDWATCH

## GAZA STRIP

## Israeli Airstrikes Hit Militant Sites

Israeli airstrikes struck militant sites in Gaza for the third straight day, the Israeli military said, after Palestinian militants near the border fence launched incendiary balloons into Israel and threw an explosive at soldiers. The strike came on the heels of an Israeli military raid in the northern West Bank that Palestinian health officials said killed two Palestinians.

It was the latest bloodshed in a surge of violence during a sensitive Jewish holiday period. A series of violent escalations on the border between Israel and Gaza during the past week has raised the specter of an escalation for the first time since a brief round of conflict last May between Israel and the Palestinian Islamic Jihad militant group.

There were no reported casualties from the strikes in Gaza. Earlier on Sunday, the Israeli military shot and wounded five Palestinians who were rallying at the separation fence along the Israeli frontier with the crowded enclave.

The Israeli army on Sunday said it had targeted two posts belonging to Hamas, the militant group that rules Gaza, just east of the Bureij refugee camp and Jabaliya.

—Associated Press

## ARMENIA

## Refugees Arrive From Tense Region

The first refugees from Nagorno-Karabakh have arrived in Armenia, local officials said Sunday, and more were expected to come after a 10-month blockade and a lightning military offensive this month that resulted in Azerbaijan reclaiming full control of the breakaway region.

Thousands of people were evacuated from cities and villages affected by the latest fighting and taken to a Russian camp in Nagorno-Karabakh.

The first group of about 30 people has arrived in Armenia's Syunik region from Nagorno-Karabakh, Karen Balyan, adviser to the Syunik governor, told Armenian media on Sunday. Ethnic Armenian separatist authorities in Nagorno-Karabakh also said the Russians would accompany anyone who wanted to go to Armenia.

At the same time, two dozen ambulances carried 23 people who sustained severe wounds during the two days of fighting to Armenia from Nagorno-Karabakh, the country's Health Ministry said.

Nagorno-Karabakh is located in Azerbaijan and had come under the control of ethnic Armenian forces, backed by the Armenian military, in separatist fighting that ended in 1994.

—Associated Press



PLENTY OF HORNS: Musicians in traditional garb played at the Oktoberfest beer festival in Munich on Sunday.



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WORLD NEWS



More than 3,000 migrants are housed at a shelter in Giessen, Germany, that served as a U.S. Army base until 2008.

# Refugee Waves Take Toll on Germany

By ELIZABETH FINDELL

GIESSEN, Germany—The refugee crisis that shook Europe almost 10 years ago never really ended in Germany. Now the country is struggling to cope.

More than 322,000 migrants requested asylum here last year, the United Nations said, numbers second only to the U.S. globally. Germany receives nearly half as many asylum requests as the U.S. despite having just a quarter of the U.S. population and less than 4% of its land mass.

On the front line of this crisis are midsize cities such as Giessen, where a processing center sees about a thousand new arrivals every week. There, officials and residents are trying to continue a tradition of being a haven for refugees in an increasingly difficult political climate.

The challenges have come in waves, said Manfred Becker, director of the intake center. They started in 2015 when the influx began in earnest and

state employees worked long hours scrambling to process arrivals. The next challenge was Covid-19, when close quarters proved a test. Then came the Ukraine war, when families fleeing Russian aggression began to arrive, Becker said.

Every day, large numbers of people arrive from Europe, North Africa and the Middle East. The steady inflow partly reflects a choice by Germany, whose government continues to embrace refugees despite increasing public skepticism. Berlin sees the newcomers as a potential solution to an aging population and a shortage of workers, but resentment of migration has intensified among voters, spurring support for far-right forces.

A poll this year by Ipsos found that 48% of Germans now believe the country should stop accepting refugees completely, up from 32% last year. The anti-immigration Alternative for Germany political party has seen its support rise to a record 21%.

“We are in the middle of a

fierce debate as to whether we are at the limit,” said Danielle Kasparick, a migration-policy researcher at the University of Hildesheim. “Germany had the feeling that due to our history...we have more of an obligation to help those in danger by their governments. I would say that sentiment is starting to erode.”

In large and midsize cities, migrants are competing with Germans for scarce housing, raising rents. Foreigners, many of them young men, have higher crime rates as a group than German citizens, according to police statistics. Because unemployment among refugees is much higher than average, some Germans complain that they live off the country’s generous social-welfare system.

At the same time, researchers note that Germany’s strict regulations make it difficult for even accepted refugees to work.

Giessen, a university town of some 90,000 people, serves as the first place for refugees bound for the state of Hesse.

It is among some 300 self-declared sanctuary cities in Germany. Giessen has hosted large refugee camps since the end of World War II.

The refugee facility was a U.S. Army base until 2008. Afghan migrants, the largest group at the center, sleep in the same rooms, eat in the same canteen and receive medical care from the same on-site clinic as soldiers on their way to Afghanistan.

After Afghans, the biggest groups are Syrians, Turks and Ukrainians, Becker said. Depending on the situation, migrants might live at the facility for six to 18 months. Special rules apply to Ukrainians, who are allowed to work and pick their places of residence shortly after they arrive in Germany.

Giessen has had its challenges. Becker spent a recent morning on the phone with the city trying to open more housing for the migrants, and has seen his volunteer number decline. Local integration officials said they deal with landlords not wanting to rent to migrants.

# Aid to Africa Falls As Crises Escalate

By NICHOLAS BARIYO

KAMPALA, Uganda—In Chad, refugees from the war in Sudan feed grass and insects to starving children after cash-strapped United Nations agencies halted food rations. In the Democratic Republic of Congo, clinics treating victims of sexual violence are running out of basic supplies such as painkillers. In Mali, 200,000 more displaced children are out of school because European governments slashed funding.

Across Africa, cuts to international aid from some of the continent’s biggest donors, and a litany of crises, mean humanitarian organizations are scaling back lifesaving medical services, food aid and other vital assistance to the most vulnerable.

The shortfalls—which aid agencies say are among the biggest financing gaps in their history—are also a result of higher prices for essentials such as wheat and fuel, the emergence of new conflicts and natural disasters on the continent and major donors diverting funding to respond to the war in Ukraine.

The decision by some governments to reduce aid flows has prompted rebukes from the U.S., which increased its pledges to the continent this

year, after cutting back in 2021.

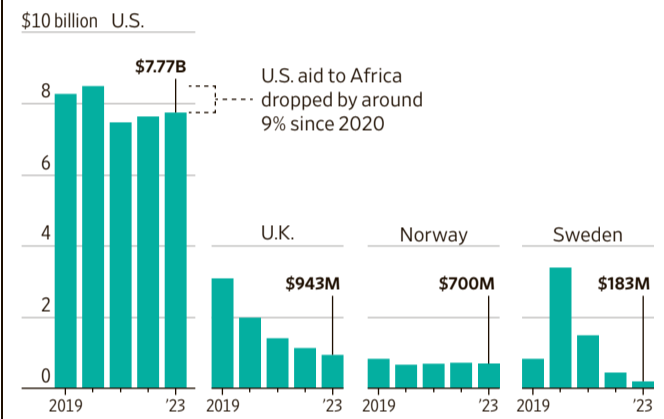
Last year, aid for sub-Saharan Africa from rich countries in the Organization for Economic Cooperation and Development fell by 8% to \$29 billion compared with 2021, according to OECD data. The same group of countries spent \$16 billion on military and humanitarian aid for Ukraine, up from less than \$1 billion a year earlier, the OECD said.

Governments in the U.K., Denmark and Sweden have said they reappropriated money initially destined for foreign aid to instead pay for an influx of Ukrainian refugees in their own countries.

Aid groups say funding has become even more constrained this year, as they struggle to attract donations for humanitarian emergencies in Africa, including the civil war that started in Sudan in April, a record-breaking drought in East Africa and lingering crises such as the conflict in eastern Congo.

The U.N.’s World Food Program says it has \$10 billion of the \$25.1 billion it says it needs to help a record 345 million people worldwide facing food shortages this year. The number of people going hungry globally is up by around 200 million since before the coronavirus pandemic.

Official aid to Africa from key donor countries



Source: Government reports

## FROM PAGE ONE

### Funds Bet Against FTC, Khan

Continued from Page One also holds stock valued at more than \$1 billion in Activision and in Seagen, the biotech company that agreed to sell itself to Pfizer—and is betting that outstanding bids for each of them will ultimately survive FTC and other regulatory scrutiny and close successfully.

D.E. Shaw Group is also among the funds that stood their ground following the FTC lawsuit against Horizon. The New York-based firm steadily increased its position and holds more than \$500 million in the shares, filings show. Other funds that bet on Horizon include Farallon Capital Management and HBK Capital Management, according to public filings.

“Because of the FTC’s lawsuit, we have had the ability to take something that would have made tens of millions of dollars and instead make many, many times that amount,” said Matt Halbower, Pentwater’s chief executive.

Halbower, a Harvard Law School graduate with a degree in electrical engineering from the Massachusetts Institute of Technology, launched Pentwater in 2007, after stints at hedge fund Citadel and the now-closed Deephaven Capital Management. His firm is named after Pentwater, Mich., on the shoreline of Lake Michigan, near where Halbower grew up and where he and his wife spent their honeymoon.

Pentwater last year scooped up shares of Twitter, now X, in a wager that Elon Musk would ultimately acquire the company, and it was a vocal opponent of Rio Tinto’s takeover of Turquoise Hill Resources, a Canadian miner.

Pentwater was also among the firms that committed to the private investment in public equity, or PIPE, raised to take former President Donald Trump’s social-media company public through a blank-check

merger. (The deal hasn’t closed, however, and Pentwater ultimately hasn’t invested and likely won’t.)

Since its inception, Pentwater, which oversees close to \$5 billion, has averaged a net return of more than 11% annually, according to a person familiar with the matter. By comparison, the HFRI Event-Driven Index generated an annualized net return of 4.47% from January 2007 through August 2023, according to research firm HFR.

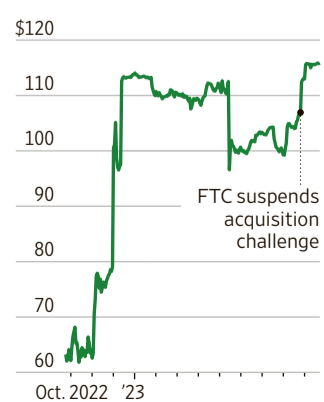
Pentwater’s investment in Horizon started as it often does for M&A deals: The hedge fund spotted a report in The Wall Street Journal—in this case, a late-November article saying that the drug company was holding takeover talks. Halbower’s aim was simple: Pile in shares early, then profit if the acquisition closed and Horizon’s shares rose to their agreed-upon deal price.

From late November through mid-May, Pentwater purchased more than seven million shares in the drugmaker, constructing what Halbower said was his largest risk position at the time. But Halbower was also monitoring what he called a “difficult to predict regulator”—the FTC.

Aware that the agency had moved to block Microsoft’s acquisition of Activision, he bought bearish options contracts on Horizon’s stock, offering Pentwater protection on its position in case the FTC were to intervene.

The FTC’s lawsuit arrived on May 16. As other investors rushed for the exits, Horizon’s

Horizon’s share price over the past year



Source: FactSet

shares plunged nearly 20%. Pentwater’s options position offered some protection, while Halbower began reading the FTC’s lawsuit. His takeaway: Buy more shares.

“It was just clear from reading the complaint that the government wouldn’t be able to prove its case,” Halbower said. “I was very surprised that the FTC would bring such a weak case.”

In its lawsuit, the commission argued that Amgen could illegally bundle its products with Horizon’s medicines for thyroid eye disease and gout to entrench its dominance of the top-selling therapies.

Halbower believed the FTC argument was flawed because there was no precedent and because Amgen had told the agency that it wouldn’t bundle Horizon products. He added over two million shares at an average price of slightly more than \$93 each following news of the FTC suit—and then kept buying.

Earlier this month, the FTC agreed to end its legal challenge of the deal as part of a proposed settlement with Amgen, paving the way for the company’s acquisition of Horizon to close as soon as next month.

Horizon’s shares finished Friday up 0.1% at \$115.61—below Amgen’s proposed \$116.50 per share price—offering more upside for Pentwater’s stake. Pentwater now owns more than 15 million shares in Horizon, according to regulatory filings compiled by research firm M&A Monitor.

The regulator defended its opposition to the Amgen-Horizon deal and the resulting settlement.

“The FTC got extensive, binding agreements on all the concerns we raised,” FTC spokesman Douglas Farrar said in an email. “The Amgen-Horizon settlement is a legal victory for the FTC but more importantly, a big win for Americans who need access to affordable medicine.”

Halbower thinks the current windfall from FTC actions will be short-lived.

Next year’s presidential election campaign probably means the regulator will need to rein in its approach, he said.

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# WORLD NEWS

## Budget Battle Hurts Biden Pacific Efforts

By CHARLES HUTZLER

WASHINGTON—Count as another looming casualty of the House Republicans’ budget fight a U.S. bid to fortify its influence in the Pacific against China.

The Biden administration is racing to finish an updated economic assistance pact with the Marshall Islands, to complement similar agreements reached with Palau and the Federated States of Micronesia. The three archipelagic nations occupy part of a strategic expanse of ocean between Hawaii and the Philippines and host critical U.S. military facilities. The administration is seeking \$7.1 billion over 20 years to renew the three pacts starting in the year beginning Oct. 1.

Republicans in a key House committee have yet to include the funding in legislation, saying the agreement with the Marshalls isn’t completed and that the administration must identify cuts elsewhere to offset outlays on the pacts and keep overall spending down.

Completing the pact with the Marshalls and funding the three agreements are being seen as a test of U.S. commitment toward a region it once dominated but then neglected in recent decades, providing an opening for China. President Biden is hosting a collection of Pacific island leaders on Monday for a summit administration officials said is intended to demonstrate U.S. resolve to reassert the American presence in the region.

“If we fail to approve that package in a timely way, we severely risk our credibility vis-à-vis the region and obviously vis-à-vis what we are saying on competing with China,” said Joseph Yun, the envoy leading U.S. negotiations with the three nations.

At last year’s Pacific island summit—the first of its kind held by the U.S.—Biden and leaders and senior officials

from 14 Pacific island governments pledged to forge a strong partnership in the face of what they called “an increasingly complex geopolitical environment”—a glancing reference to China. Among the top U.S. objectives, the White House said, was completing the agreements with the Marshalls, Palau and Micronesia.

In the year since, the U.S. has had mixed results across the Pacific islands. The U.S. Coast Guard has stepped up a program to assist the island nations in patrolling the fishing grounds that are a source of livelihood from poaching by fleets from China and other countries.

At the same time, the U.S. Agency for International Development is expanding its and the Peace Corps’ projects in the region.

The U.S. has opened an embassy in Tonga, and administration officials said one in Vanuatu would follow. An attempt to do the same in Kiribati has seen little progress. An anti-U.S. whispering campaign emanating from the large Chinese Embassy there has contributed to the difficulties, one official said.

When a congressional delegation visited the Solomon Islands in August, Prime Minister Manasseh Sogavare declined to meet the group as did other cabinet ministers, said Cleo Paskal, a senior fellow with the Foundation for Defense of Democracies think tank in Washington, who was on the trip.

Beijing has made some of its deepest inroads in the Solomons, striking a security pact with Sogavare’s government and giving him an audience with Chinese leader Xi Jinping in Beijing in July.

Sogavare, who attended the United Nations General Assembly last week, is skipping the White House summit, administration officials said. The officials declined to say how many Pacific leaders will attend.

# FROM PAGE ONE



The pact would increase pay and set safeguards for the use of artificial intelligence. A picket line last week in Los Angeles.

## Tentative Writers Pact Reached

Continued from Page One  
Donna Langley.

A resolution to the writers’ strike could open the door to a deal with the Screen Actors Guild, the performer’s union that has been on strike since mid-July. It marked the first time both unions went on strike since 1960.

Getting both strikes resolved could salvage at least some of the 2023-24 television season and the summer movie season. Typically in television it takes at least two months of outlining and writing episodes before production starts.

The WGA went on strike May 2, closing writing rooms industrywide. The strike quickly shut down late-night TV shows and stalled work on scripted television shows and films. Members of the union, which represents 11,500 writers, mobilized to form picket lines outside productions with finished

scripts to disrupt those shoots.

The Los Angeles economy has been severely hurt by the strike: A spate of productions ground to a halt, and thousands of other Hollywood workers dependent on the industry for their livelihoods have been sitting on the sidelines. The Milken Institute has projected the hit to California’s economy to be in the billions. Other states feeling the pinch from the shutdown include Georgia and New Mexico.

Among the WGA’s demands were a minimum number of writers per television show and guaranteed employment for those writers from conception to postproduction. They also wanted additional residuals from streaming programs and more transparency around how streaming shows fared with viewers.

The use of artificial intelligence and the staffing mandates were particularly difficult areas to find common ground. The studios and streamers were initially against any mandatory staffing and their unwillingness to negotiate on that point was one of the key reasons talks never really gained any traction last spring.

In recent weeks, the AMPTP gave ground on the staffing issues as well as exploring the idea of changing formulas for streaming residuals that would reward success more than the current model.

While a tentative agreement is good news, the strike has already done a lot of damage to the industry. Movie studios began delaying major film releases, networks changed fall prime-time line-ups and entertainment companies put talent deals on hold. Some executives began questioning the viability of the television season and planned theatrical releases early next year if the strike dragged on into October.

Negotiations between the WGA and AMPTP initially restarted on Aug. 11, which gave some in the industry hope that the dispute would soon be resolved. Those talks stalled and relations between the two sides grew nastier.

The AMPTP in late August made public its latest offer to striking writers. The WGA criticized the offer and the AMPTP’s decision to make it public, which some viewed as an attempt to undermine the union’s hold on its membership.

In early September, some top showrunners reached out to the union to express concern about the lack of negotiations, which put more pressure on the WGA to get back to the table. “Shameless” producer John Wells, “Riverdale” producer Greg Berlanti and Ryan Murphy, whose credits include “Dahmer—Monster: The Jeffrey Dahmer Story,” were among those showrunners.

Around that time, daytime talk show host Drew Barrymore and HBO’s Bill Maher said they planned to resume shooting so that their staff could work, but reversed the decisions after industry backlash.

In a statement, the Screen Actors Guild-American Federation of Television and Radio Artists applauded the tentative pact.

“SAG-AFTRA congratulates the WGA on reaching a tentative agreement with the AMPTP after 146 days of incredible strength, resiliency and solidarity on the picket lines,” the statement said. “While we look forward to reviewing the WGA and AMPTP’s tentative agreement, we remain committed to achieving the necessary terms for our members.”

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FROM PAGE ONE

Sleuths Debunk Bad Studies

Continued from Page One

across many different papers, it becomes like a one in quadrillion chance that there's some benign explanation," said Simmons, a professor at the Wharton School of the University of Pennsylvania and a member of the trio who report their work on a blog called Data Colada.

Simmons and his two colleagues are among a growing number of scientists worldwide who moonlight as data detectives, sifting through published studies for evidence of fraud.

At least 5,500 faulty papers were retracted in 2022 versus 119 in 2002, according to Retraction Watch a website that keeps count. The jump largely reflects work by the Data Colada scientists and other academic volunteers, said site co-founder Dr. Ivan Oransky. Their discoveries have led to embarrassing retractions, upended careers and retaliatory lawsuits.

Neuroscientist Marc Tessier-Lavigne stepped down last month as president of Stanford University, following years of criticism about data in his published studies. Posts on PubPeer, a website where scientists dissect published studies, triggered scrutiny by the Stanford Daily. A university investigation followed, and three studies he co-wrote were retracted.

Stanford concluded that although Tessier-Lavigne didn't personally engage in research misconduct or know about misconduct by others, he "failed to decisively and forthrightly correct mistakes in the scientific record." Tessier-Lavigne, who remains on the faculty, declined to comment.

The hunt for misleading studies is more than academic. Flawed social-science research can lead to faulty corporate decisions about consumer behavior or misguided government rules and policies. Errant medical research risks harm to patients. Researchers in all fields can waste years and millions in grants trying to advance what turn out to be fraudulent findings.

The data detectives hope their work will keep science honest, at a time when public faith in science is ebbing. The pressure to publish papers—which can yield jobs and grants—pushes researchers to chase unique findings, sometimes at the expense of truth, said Simmons and others. "It drives me crazy that slow, good, careful science—if you do that stuff, if you do science that way, it means you publish less," he said. "Obviously, if you fake your data, you can get anything to work."

The journal Nature this month alerted readers to questions raised about an article on the discovery of a room-temperature superconductor—a profound scientific finding, if true. Physicists who examined the work said the data didn't add up. University of Rochester physicist Ranga Dias, who led the research, didn't respond to a request for



comment but has defended his work. Another paper he co-wrote was retracted in August after an investigation suggested some measurements had been fabricated or falsified. An earlier paper from Dias was retracted last year. The university is looking closely at more of his work.

Experts who examine suspect data in published studies count every retraction or correction of a faulty paper as a victory for scientific integrity. "If you think about bringing down a wall, you go brick by brick," said Ben Mol, a physician and researcher at Monash University in Australia. He investigates trials in obstetrics and gynecology. His alerts have prompted journals to retract some 100 papers.

Among those looking into other scientists' work are Elisabeth Bik, a former microbiologist who specializes in spotting manipulated photographs in molecular biology experiments, and Jennifer Byrne, a cancer researcher at the University of Sydney who helped develop software to screen papers for faulty DNA sequences that would indicate the experiments couldn't have worked.

"If you take the sleuths out of the equation," Oransky said, "it's very difficult to see how most of these retractions would have happened."

Training by accident

The origins of Data Colada stretch back to Princeton University in 1999. Simmons and Nelson, fellow grad-school students, played in a cover band called Gibson 5000 and a softball team called the Psychoplasmatics. Nelson and Simonsohn got to know each other in 2007, when they were faculty members in the business school at the University of California, San Diego.

The trio became friends and, in 2011, published their first joint paper, "False-Positive Psychology." It included a satirical experiment that used accepted research methods to demonstrate that people who listened to the Beatles song "When I'm Sixty-Four" grew younger. They wanted to show how research standards could accommodate absurd findings. The study became the most cited paper in the journal Psychological Science.

When the trio launched Data Colada in 2013, it became a site to air ideas about



Clockwise from top left: Leif Nelson and Joe Simmons; Uri Simonsohn; and Elisabeth Bik at home in California. They are among many scientists who examine published studies.

the benefits and pitfalls of statistical tools and data analyses. "The whole goal was to get a few readers and to not embarrass ourselves," Simmons said. Over time, he said, "We have accidentally trained ourselves to see fraud."

They co-wrote an article published in 2014 that coined the now-common academic term "p-hacking," which describes cherry-picking data or analyses to make insignificant results look statistically credible. Their early work contributed to a shift in research methods, including the practice of sharing data so other scientists can try to replicate published work.

"The three of them have done an amazing job of developing new methodologies to interrogate the credibility of research," said Brian Nosek, executive director of the Center for Open Science, a nonprofit that advocates for reliable research.

Nelson, who teaches at the Haas School of Business at the University of California, Berkeley, is described by his partners as the big-picture guy. Simonsohn is the technical whiz, at ease with opaque statistical methods. "It is nothing short of a super-

power," Nelson said.

The men first eyeball the data to see if they make sense in the context of the research. The first study Simonsohn examined for faulty data on the blog was obvious. Participants were asked to rate an experience from zero through 10, yet the data set inexplicably had negative numbers.

Another red flag is an improbable claim—say a study that said a runner could sprint 100 yards in half a second. "You immediately know, no way," said Simonsohn, who teaches at the Esade Business School in Barcelona, Spain.

Another telltale sign is perfect data in small data sets. Real-world data is chaotic, random.

"Is it just an innocent error? Is it p-hacking?" Simmons said. "We never rush to say fraud."

The trio texts almost daily and email constantly. Simonsohn's phone pinged in August while he was on vacation with family in the mountains of Spain. Simmons and Nelson broke the news that they were being sued for defamation in a \$25 million lawsuit. "I was completely dumbfounded and terrified," Nelson said.

Scientists moonlight as data detectives to uncover deception

'She's usually right'

Bad data goes undetected largely because the publications rely on volunteer experts to ensure the quality of published work, not to detect fraud. Journals don't have the expertise or personnel to examine underlying data for errors or deliberate manipulation, said Holden Thorp, editor in chief of the Science family of journals.

Thorp said he talks to Bik and other debunkers, noting that universities and other journal editors should do the same. "Nobody loves to hear from her," he said. "But she's usually right."

Most journals have hired people to review allegations of bad data. Springer Nature, which publishes Nature and some 3,000 other journals, has a team of 20 research staffers, said Chris Graf, the company's research integrity director, twice as many as when he took over in 2021.

Bik and others said it can take months or years for journals to resolve complaints about studies. Of nearly 800 papers that Bik reported to 40 journals in 2014 and 2015 for running misleading images, only a third had been corrected or retracted five years later, she said.

Honest work

Simonsohn got a tip in 2021 about the data used in papers

D.C. Tries to Bear Panda Loss

Continued from Page One

of a nine-day "Panda Palooza" to celebrate the bears before they leave. The festivities began when Tian Tian, a 26-year-old male, Mei Xiang, a 25-year-old female and their three-year old cub, Xiao Qi Ji, were each served layered cakes of frozen fruit juice and bamboo shoots. The desserts were frosted with a mixture of mashed sweet potatoes, mashed carrots and honey.

While the adult pandas devoured the treats, Xiao Qi Ji, whose birth in 2020 was broadcast on the Zoo's "Panda Cam" livestream, appeared to play with his food, much to the delight of the human children crowded before him.

A smattering of morning rain did little to dampen enthusiasm for the party. Amy Pena, 47, flew from her home in Tampa, Fla., to see the pan-

das in person before they leave. Michael Cardinale, a 10-year-old who traveled with his parents from Brooklyn, N.Y., checks the "Panda Cam" every morning before school. When he grows up, he hopes to be a zoologist in China helping pandas.

"They bring me joy, and I just love them," Cardinale, clad in a panda jacket, said.

Other planned events for the festival include screenings of "Kung Fu Panda" and a display of paintings produced by the pandas themselves.

(A panda's ability to grip bamboo shoots means the species is well-suited to creating visual art).

By Dec. 7, the animals will return to Chinese conservationists, who have essentially been renting the adult pandas to the National Zoo, generally for about \$1 million a year since 2000. Under the agreement—part of China's global, soft-power "panda diplomacy"—cubs born in Washington go back to China, too.

Zoo officials hope the pandas' absence is short-lived and are applying for a fresh batch. They are still figuring out what to do without the zoo's



Cub Xiao Qi Ji with his farewell dessert Saturday

stars and key attraction.

"We have folks who come repeatedly for the giant pandas, so we're going to see a drop in attendance for that," said Pamela Baker-Masson, the zoo's director of communications. "Are we going to stop selling panda plush in the stores? Probably not."

A spokesman for the Chinese embassy in Washington said teams from the U.S. and China were in talks about future work on giant panda conservation and research.

David Rubenstein, the billionaire co-founder of the Carlyle Group, has donated mil-

lions to support the pandas. He thinks an agreement for new pandas would be good for the zoo, and for geopolitical stability. "It's not overnight going to resolve all U.S.-China problems but it would obviously be one less issue to be dealt with," he said.

Pandas first arrived at the National Zoo during a fuzziest period in great power relations. Traveling with her husband in China in 1972, then First Lady Patricia Nixon was taken with the pandas at the Beijing zoo. Zhou Enlai, then the premier of China, promised her "I'll give you some,"

and in return for two pandas, the U.S. gifted China two musk oxen, launching one of the most consequential trading relationships in the world.

The Nixon administration selected Washington to host the original pair of bears, named Hsing-Hsing and Ling-Ling. "I think panda-monium is going to break out right here at the zoo," Mrs. Nixon said upon their arrival.

Over the decades, the excitement spread across Washington. Panda statues went up. The mascot for the Washington Mystics women's basketball team is a panda. The city's metro system sells panda tote bags and mugs.

Yael Krigman owns a bakery, called Baked by Yael, across the street from the zoo, and for years her establishment has been selling "panda pops," small, spherical pieces of cake on a stick decorated to resemble the bear. She has sold them to customers who have panda tattoos—and plans to continue doing so.

"The real pandas are definitely the best thing but if you can't have them, the panda pops are the next best thing," she said.

published by Harvard Business School professor Francesca Gino. Her well-regarded studies explored moral questions: Why do some people lie? What reward drives others to cheat?

The three scientists examined data underlying four studies and identified what they said were irregularities. Numbers in data sets look to have been manually changed. In December 2021, they sent their discoveries to Harvard, which conducted its own investigation.

Harvard concluded Gino was "responsible for 'research misconduct,'" according to her lawsuit against Harvard, Nelson, Simmons and Simonsohn. The Harvard Business School asked journals that published the four papers to retract them, saying her results were invalid.

In June this year, the trio posted their conclusions about Gino's studies on Data Colada. Data in four papers, they said, had been falsified. When they restored what they hypothesized was correct information in one of the four studies, the results didn't support the study's findings. The posts sent the social sciences community into an uproar.

Gino is on administrative leave, and the school has begun the process of revoking her tenure. In her lawsuit, Gino said Harvard's investigation was flawed as well as biased against her because of her gender. A business school spokesman declined to comment. The suit also contends that the Data Colada blog posts falsely accused her of fraud. The three scientists said they stood by their posted findings.

Gino, through her lawyer, denied wrongdoing. She is seeking at least \$25 million in damages. "We vehemently disagree with any suggestion of the use of the word fraud," said Gino's lawyer Andrew Miltenberg. Gino declined to comment.

Miltenberg said Gino was working on a rebuttal to Data Colada's conclusions.

In August, a group of 13 scientists organized a fundraiser that in a month collected more than \$300,000 to help defray Data Colada's legal costs. "These people are sending a very costly signal," Simmons said. "They're paying literal dollars to be, like, 'Yeah, scientific criticism is important.'"

At LiLiES, a restaurant a few blocks away that also panders to panda fans, manager Ryan Raihan is less sanguine. "We benefit a lot from the pandas. It would severely impact our business," he said. The eatery has a partially panda-inspired menu and boasts its own panda statue outside.

"I believe panda pancakes are here to stay and so is the statue," he said.

As the U.S. and China relationship has grown more tense, panda politics have also become more black-and-white.

Three cubs previously born at the National Zoo—who were products of artificial insemination, as Xiao Qi Ji was—have already been sent to China, while pandas at other U.S. zoos have also recently left. Rep. Nancy Mace (R., S.C.) has legislation to keep U.S.-born panda cubs in America.

How do you even send a panda to China? FedEx, apparently. The logistics company will provide a plane to transport the three animals, though like much else in Washington, their exact date of departure is a closely held secret.



flict management at Harvard Law School and co-wrote the book “Thanks for the Feedback.” A lot of it stems from employees who have demanded more of a voice...even if another app wasn’t what they had in mind.

Be careful what you wish for. “You have to say something,” says Matt Abrahams, who teaches at the Stanford Graduate School of Business and has a book coming out this week about spontaneous communication.

A smart start is to ask some questions of your own to the boss, says Abrahams. What kind of guidance do they typically find useful? If they readily divulge a time they messed up or made a change, be more candid, he suggests.

Emphasizing the positive might subconsciously correct the negative. For example, praising the boss for being so focused at the start of her speech could imply that she completely lost her train of thought by the end, without you having to spell it out. But don’t get too soft, Abrahams warns, devolving into coded language and euphemisms.

“You’re being coy. You’ve got something to say but you’re not saying it. That can look really bad for you,” he says. After all, we were all hired to be experts in our jobs.

### The risk of always saying yes

Earlier in his career, Irvan Krantzler used to nod his head yes to everything, eager to fit in. That project idea? It sounded great. A deadline next week? Sure, he could handle it.

The result, he says, was often “bad news, late.” The issue he didn’t speak up about—an unrealistic timeline, not enough people on the team—would fester and eventually send a project sideways.

“I can’t be put in a situation where I can’t be open with people,” he says he realized. He started voicing his concerns more, and left one employer where everyone was expected to agree all the time.

When Leslie Venetz’s boss asked her what she thought about a new team of salespeople, she assumed the pair were just spilling thoughts in confidence. A few months later, her comments were shared with HR, she says, and a person she had identified as weak was fired.

She felt guilty and betrayed, and soon left the company.

Now when clients of her sales training and consulting firm request her feedback, she asks how they’re going to use it. Are they deciding the fate of a division, this week? Or just considering a possibility, and gathering dozens of opinions in the meantime?

The answer, she says, determines her candor.

“Everyone says that they want feedback,” she says. “There’s something to be said for taking a moment.”

# Bosses Say They Want The Truth. Do They Mean It?

Dealing with the trickiest phrase you can hear from a manager: ‘I’d love your feedback’



## WORK & LIFE

RACHEL FEINTZEIG

**M**archiano Loen stared at his screen for two hours. He drafted one response, then another. He begged someone in human resources for help. Still, the question vexed him.

What can your manager improve on?

“Oh God, I actually have to answer this,” the tech worker thought as he pondered the employee survey. “What am I going to write?”

Bosses claim they want honest feedback. Telling the truth can spark change, make your work life better and show off your own assertiveness. Or you could get fired. (At least it feels that way.)

Like it or not, silence isn’t an option. But you have to be really careful about just how candid to get with the boss.

Loen says he was once frozen out by a manager after suggesting he could improve his communication style during presentations. Warm small talk and jokes evaporated, and Loen’s big projects were redistributed.

Now he uses what he calls “the Jacuzzi approach.” He dips a toe in with bosses to test the water, seeing how they react to a fairly neutral piece of commentary before saying anything of substance. He might ask, would that meeting be better on Tuesday than Monday?

“It’s a survival mechanism,” he says.

### The lies we tell

The average person lies three times in the first 10 minutes of meeting someone new, according to research from Robert Feldman, a professor of psychological and brain sciences at the University of

Massachusetts Amherst. Such superficial fibs lubricate many of our social interactions, he says, helping us fit in and getting people to like us.

This salad is delicious, we insist. Or, I loved the “Barbie” movie, too! With the boss, the photo of their kid is suddenly extraordinarily cute, their jacket perfect for today’s presentation.

“At the end of the day, we want to hear good things,” Feldman says. “Your boss is just like everybody else.”

What about when bosses want to be tapped into what’s really going on, too? After all, you’re the one who’s connected to collegial chatter and gossip, which can give managers insight into how they can do a better job and get ahead. Giving the right information to your boss can help you, too. You just have to share it the right way.

“I want people to feel like they can be them,” says Karin Storm Wood, who manages a team of communication professionals at a

private school. But “I don’t want everything.”

Don’t assume you have all the facts, she says. Acknowledge you’re just sharing one person’s perspective. And keep your language grounded. For instance, describe a behavior instead of lobbing a negative adjective at your boss.

Wood says she’s OK with hearing that she sometimes jumps around from idea to idea in brainstorming sessions. She doesn’t want you to call her “scattered.”

“That’s like, ‘Ouch,’” she says. “It has that element of judgment.”

### Feedback, please!

Everyone seems to want our take these days. We’re subjected to quarterly 360 reviews, weekly pulse surveys and drive-by requests for input by the coffee machine. It’s part of a longstanding shift from command-and-control leadership styles to more collaborative ways of running companies, says Doug Stone, who teaches con-

## How CEOs Survive NYC’s Busiest Month

By LYNN COOK AND CHIP CUTTER

**S**eptember in New York City is a corporate scheduler’s nightmare and a schmoozer’s dream, with Climate Week NYC, the United Nations General Assembly, Fashion Week and other events crowding the calendar.

It is also a kind of networking Olympics for high-powered people. Breakfasts typically start at 7 a.m., and leaders of all kinds run a gauntlet of meetings that can end with after-dinner drinks after midnight. In between are spontaneous chats on meeting sidelines, tête-à-têtes in hotel lobbies and countless cocktail-party conversations.

Scores of C-suiters and pooh-bahs crisscrossing the city this month say it takes getting choosy about invitations, a great opening line, an extra laptop battery pack and comfortable shoes. In high-density networking situations, executives say they have learned not to waste a moment.

Among the leaders in networking mode is Alan Brookes, the new chief executive of Arcadis, a \$4 billion architecture and engineering firm based in Amsterdam that employs 10,000 people in the U.S. Between client meetings, cocktail parties and roundtable discussions, Brookes, 62 years old, says he was

scheduled for two dozen engagements over five days.

Brookes’s company encourages all employees—even the boss—to take public transit when possible, so he relies on subways and buses to get to meetings, a competitive advantage when the schedule is packed and traffic snarled, he notes. Last Monday morning, shortly after 7 a.m., he boarded a crosstown bus moving in the direction of Scandinavian House on Park Avenue, to a gathering of business leaders held by the World Business Council on Sustainable Development.

“I don’t believe in private cars [or] even a taxi unless I have to,” says Brookes, whose company is helping design and build a major flood-control project around lower Manhattan. “The traffic is horrendous, so this is much quicker.”

By evening rush hour, as Brookes left a meeting at the New York Stock Exchange, the skies had opened up. He ran to the subway in the rain, arriving early—and thoroughly soaked—at Google’s dinner for executives near SoHo designed to provoke a conversation about food sustainability. Executives were served salmon, chocolate and French Champagne—a “Last Supper” of delicacies, one host said, that future generations won’t get to enjoy due to ecological crisis and overfishing.



▲ CEO Alan Brookes says his networking strategy is to ask people what brought them to town.

Kyle Dropp, co-founder of business research outfit Morning Consult, hosted a Monday-night soiree at his terraced Lower East Side apartment for executives and marketing gurus. Hilton showed off a new hotel in Times Square. Managing executives and expectations amid the frenzy of invitations requires ninja-like blocking and tackling, says a public-relations person in charge of his CEO’s schedule.

Kathryn Wylde, who runs the powerful business group Partnership for New York City, weighed invitations to a reception at the Metropolitan Museum of Art on the Upper East Side along with a dinner in downtown Brooklyn.

Attending both? “Logistically impossible,” she says, noting that she chose the National Grid-hosted Brooklyn dinner because she had already committed to it. “You just have to cut your losses.”

Wylde compares the city’s September scum to the World Economic Forum in Davos, Switzerland. “Everybody’s paying attention to themselves being seen. They’ll never notice if I’m missing.”

So thick are the crowds of bold-face names last week that Prince William, hosting the Earthshot Prize Innovation Summit, marveled that he went for a morning jog without getting noticed. (Much.)

The day before client meetings that would include swings through the redesigned Tiffany & Co. on Fifth Avenue and the David Yurman flagship store near Madison Avenue—both Arcadis projects—Brookes headed toward the East River for a tour of his flood-mitigation project, designed to protect New Yorkers from future storm surges. Next was an employee town hall and lunch with staff at the office in Tribeca.

Brookes talked with staff about why the company has taken on certain contracts, such as one to build charging stations for EVs, and

he took questions from employees about doing business with oil-and-gas companies.

“I want to be clear about what we stand for as a business,” he says. “It’s about the projects you do and the difference you make.”

With strangers, Brookes says his networking strategy is to ask what brought them to town.

“You don’t want to introduce yourself, don’t want to do an icebreaker about

yourself, if you know what I mean,” he says. “But people rarely will not talk about themselves.”

Brookes says he worked rooms all week to learn as much as he could, not just to pitch his company. He sparked a conversation with somebody from Deloitte and called it fascinating to hear what projects they were involved with. “This is why I’m here really,” he says.

Judith Wiese, an executive with Siemens, the German industrial conglomerate, is chatting people up on artificial intelligence on the sidelines of gatherings. She tries to end most conversations with: “Who do you get inspired by? Who would you recommend I go see?”

Her strategy isn’t only to attend meetings, but also to capture the mood. Conversations about sustainability are shifting from the theoretical to the practical, she says, because companies are getting specific about their climate goals.

“I always love these weeks,” Wiese says. “You get a sense of where the conversation is moving.”

PERSONAL JOURNAL.

By Rachel Wolfe

# Demand for Donated Sperm, and Cost, Soars

New genetic screening and fewer donors make babies more expensive

Choosing an anonymous sperm donor has never been easy. But it used to be a lot cheaper.

New genetic screening and the reluctance of some would-be donors mean couples and single parents by choice have fewer options when they need help having children. And that help can be twice as expensive as it was before 2019: often upward of \$2,000 for what equates to a single attempt to become pregnant.

"We don't actually know where the end of the demand is, because we can't keep up," says Mike Large, who helps oversee donation services at California Cryobank, one of the country's largest sperm banks.

Sperm banks and fertility experts, in light of broader acceptance of nonheterosexual parenting arrangements, say they are seeing more clients looking to use donor DNA. LGBTQ couples make up 60% of California Cryobank's clients, and single women make up 20%. Brown Fertility, based in Jacksonville, Fla., now works with some 4,000 patients seeking donor sperm a year, up from closer to 2,000 before the pandemic.

As demand has surged, supply has plummeted. Sperm-bank executives say they haven't caught up after a pause during Covid-19's peak. In addition, facilities say they are rejecting more applicants with certain risk factors as genetic and psychological screening techniques have improved. Seattle Sperm Bank, another large center, now tests for 514 conditions, up from 175 a few years ago.

A discouraging factor is the prevalence of low-cost DNA tests, which have the potential to dissuade those who don't like the idea of being found. California

▼ Julia and Abbie Ensign said insurance didn't cover costs for conceiving their son, Harbor.



Cryobank and Seattle Sperm Bank require donors to leave contact info for children to access when they turn 18. The banks say some have decided against donating after learning of the requirement.

Clients of California Cryobank now have about 300 different donors to choose from, down from 550 in 2019.

"We used to staple a flier to a telephone pole at a college campus," Large says of efforts to attract donors. "Now, we spend millions of dollars a year on digital advertising." The company operates booths at Los Angeles Galaxy professional soccer games to try to raise its cool factor and increase donor diversity.

California Cryobank pays donors up to \$1,500 a month, and more recently started giving out

additional payments during the screening process.

Prices for the company's most popular vials have nearly doubled to \$1,895, up from around \$1,000 in 2021. Shipping, freezer storage and subscriptions to view the virtual donor catalog cost clients hundreds of dollars more.

Some states now require that insurance plans cover infertility treatment, but donor sperm and its associated costs are hardly ever included, fertility doctors say.

## Sperm bank alternatives

There are few easy workarounds to going through a donor bank.

When asking a friend or family member, in what is known as directed, or known, donation, couples and single moms must shoulder the cost of medical and genetic testing alone. They must also hire lawyers to write up parental-rights contracts. Dr. Iris Insoigna of the Columbia University Fertility Center says this method is a less popular option as a result.

Ilana Cliffer, a Harvard post-doctoral researcher, says she initially considered asking a male friend to be a donor after she saw how much a single unit of sperm would cost. But her best bet had recently moved across the world. She next turned to an app that



▲ Tiffanie Williams says she took on a second job to help pay for the conception costs for her twin boys.

matches people seeking donors with prospective men, for a monthly fee. She says she was inundated with crude offers to have sex.

"It was the creepiest thing I've ever seen," Cliffer says.

Cliffer, 37 years old, ended up paying about \$5,000 for the recommended four vials from California Cryobank. She says she made the purchase more quickly than planned after receiving a message from the bank: "Sperm prices are going up in a week, so you'd better buy now."

She is thrilled with the result: Her 7-month-old daughter, Zazi.

## Second job

Tiffanie Williams went straight to the sperm banks. She had to find a second job and took out a \$20,000 loan to help pay for the conception process for her twin boys. The Jacksonville, Fla., therapist opted for in vitro fertilization after two failed attempts at a medical insertion process known as intrauterine insemination, or IUI. She spent \$1,290 including shipping on two vials of sperm from Fairfax Cryobank.

She was disappointed that the four banks she considered had only a handful of Black donors in their respective catalogs.

Overwhelmed at the prospect of expanding her search on her own, she decided to host a "sip and pick," inviting six of her college sorority sisters to come over with their laptops and help her choose from several different donor bank sites. She supplied sparkling wine, and they supplied the push she needed to select a donor.

To cut costs, Julia and Abbie Ensign skipped the doctor's office in favor of mailing a box to their doorstep.

"We wanted to spend as little as we could," says 27-year-old Abbie, adding that insurance didn't cover the process.

Their only costs were two \$1,600 vials of Fairfax Cryobank sperm and a \$129 at-home insemination kit.

The couple, social-media content creators in Salt Lake City, succeeded in conceiving their son, Harbor, now 2 years old, on their second try.

## Frantic search

The scarcity of sperm donors can mean prospects, especially those who are nonwhite or exceptionally intelligent or athletic, are in particularly high demand. Some banks cap purchases after a certain number of families have bought vials from a single donor.

After months agonizing over the choice—including upgrading to a \$275 premium California Cryobank subscription—Claire Wasserman and Ashley Louise finally agreed on a donor.

The next time donations became available, the Los Angeles couple frantically tried to check out what they could find online, only for the sperm bank's app to crash and the supply to dwindle before they could log back in.

"It was like buying Taylor Swift tickets," says Louise, co-founder with her wife, Wasserman, of a career-development organization.

Though they eventually procured vials, their first two attempts at IUI didn't take. After more than \$11,000 on donor sperm and fertility treatments, the couple finally got the news that they were hoping for. They are expecting twins.

They say they won't go through the costly and exhausting process again. "We are done," Louise says.



MY RIDE | BY A.J. BAIME

# A Camaro in Which A Couple Fell in Love

Tom McLaughlin, a 55-year-old CPA who lives in Monee, Ill., on the custom "Rockstar" 1979 Chevrolet Camaro Z28 he owns with his wife, Meri McLaughlin, a legal assistant, as told to A.J. Baime.

I bought the Camaro right around when Meri and I started dating in 1987. We'd go cruising. We didn't have a lot of money. But, as I always say, we fell in love in this car. In 1988, I went into the U.S. Army and got deployed overseas. In 1989, I came home, and we pulled the Camaro out of storage to use as our limo at our wedding. The car moved around: to my mother-in-law's garage, to our condo and then to our first house. When we turned 50, we wanted to restore it and turn it into something special.

My best man at my wedding knew a local car builder, the owner of Platinum Custom Cars. The builder came up with the idea of "Rockstar." We worked with a local shop called Zolper's Auto Restorations for the body and paint, and with Schober's Custom Hot Rod Interiors.

I got my first guitar when I was in the Army, and for 15 years I

▶ A local artist painted the 'Rockstar' logo onto the engine cover under the hood.

played in bands. We headlined the Naperville Ribfest. We played Navy Pier in Chicago, and the Taste of Chicago food festival. A lot of bars and clubs, too. So the Rockstar theme felt good to Meri and me, and over time we kept coming up with ideas.

The color is a deep purple. The inspiration is CadZZilla, a custom car owned by Billy Gibbons of ZZ Top. We had little touches put around the car, things you wouldn't see unless you really looked. We had a guitar painted on the backside of the fuel cap door. A local artist painted the Rockstar logo on the engine cover, under the hood. I



told the interior guy, when I open the door, I want it to feel like a velvet rope is opening and I'm walking into a VIP area.

We had an idea to do some detailing on the front hood scoop. I drew out notes on a music staff on tracing paper and a pinstriper painted the notes along the edges of each side of the scoop. On the passenger side are the notes to "Take Me Home Tonight" by Eddie Money, and the driver's side has "Livin' on a Prayer" by Bon Jovi. If you know how to play guitar, you can look at the car and play these songs.

On the wall in our garage, we painted the opening line from the Sammy Hagar song "I Wanna Rock": "Eighteen, I found my dream machine; turn the key and every light turned green." The song actually says 16, but I bought the Camaro at 18, so we changed the words.

We showed this car before it

▲ "When you start it up, it is loud!" says Tom McLaughlin of the 1979 Camaro he owns with his wife.

was even finished, and it won a first-place award in its class at the Chicago World of Wheels show in March. Then, after a five-year build, we brought the completed car home on Wednesday, Sept. 13.

When you start it up, it is loud! Cars like this are never really done. We have an idea to replace the three pedals. For the clutch pedal, we want to put a pause button. For the brake, a stop button. And for the gas, a play button.

A lot of things have changed since I bought this car 36 years ago. But some things haven't. People ask me, what do you want to do? I just want to hang out with Meri.

FROM TOP: PHOTO ILLUSTRATION BY DANEY KOPPIK; THE WALL STREET JOURNAL; ISTOCK (2); BLUE FRANKLIN; JULIA ENSIGN

## ARTS IN REVIEW



## EXHIBITION REVIEW

## A Tailor-Made Tasting Menu

A playful, delectable show explores the relationships between what we wear and what we eat

By LAURA JACOBS

**A**sk yourself the ways that food and fashion connect and your first thought will probably be matter-of-fact: Eat too much and your clothes won't fit. Given a minute, you might fix on a word that's intrinsic to both: taste. In the context of food, taste is a biological system; with fashion, it's a system of aspiration and imagination, the educated eye and a moment's leap (or lapse). Different as they are, these two systems melt into each other. I recall, for instance, a line of handbags Coach brought out a few years ago. It featured red cherries with green stems printed on white pebbled leather. Oh those cherries were desirable, so cheery, yet my inner arbiter was mysteriously rattled by them. It was systemic overload.

The above thoughts fall far short of what the exhibition "Food & Fashion," at the Museum at FIT, delivers. The show is tightly focused, with 80 or so garments and accessories on view. Low on academic jargon, the wall text and labels brim with wide-ranging insight, swinging off the shared vocabulary of eating and dressing and having fun with the double meanings. This show is delightful, or rather, delicious.

Co-organized by Melissa Marra-Alvarez, MFIT's curator of educa-

tion and research, and Elizabeth Way, the museum's associate curator of costume, the exhibition begins by stating: "Food motifs have been woven and printed on textiles and clothing for hundreds of years, and over the past decade, this relationship has become more visible in new ways. Food themes are compelling for fashion designers because they can communicate a multitude of concepts engaging the issues that shape our cultures and societies." These concepts make up the show.

In the introductory gallery, the curators accentuate the dalliance of the food-fashion nexus with "A Day of Food as Fashion." It starts with breakfast in "The Fashion Kitchen," a colorful scenario that exemplifies the show's creativity. Breakfast means bread products, and here they are purses (bread to hold bread!)—among them, Fendi's coveted Baguette handbag, this one from 2023, and a plastic purse that resembles a loaf of Wonder Bread (1986). A sunny 1950s shirt-waist dress with the apron printed on, and Bonnie Cashin's more elevated pink cotton and lurex bouclé apron (1949-59), recall the post-war home-economics classes in

**Clockwise from right: Perry Ellis picnic suit (spring 1990); Bergdorf Goodman hat (c. 1965); Nancy Haggerty shoes (c. 1932) and Balenciaga hat (c. 1955); plastic bread purse (1986); and Moschino black wool dinner suit (fall 1989)**

which girls learned to cook and sew (first project: make an apron). A 2016 line of Smeg appliances, their curvy retro shapes hand-painted with fruits and cherries by Dolce & Gabbana, is a high-visibility mash-up of food and fashion.

The "Day" moves on to the farmer's market and its fashion produce, illustrated by accessories camouflaged as lemons, bananas, grapes, lettuce and the like, none better than Bes-Ben's adorable cocktail hat of mini corncobs and green husks curling like feathers (1962-65). Fast food in the after-

noon comes next, represented by original, deconstructed and vividly appropriated uniforms from White Castle and McDonald's—capitalism, consumerism and childhood captured in turrets and golden arches. Dinner out follows, a sit-down in which style is concentrated above the table, in the bodice.

The main gallery is organized like a food hall, with pink walls and black archways over each stall, 10 in all. We begin with four stalls given over to four facets of history. "Haute Couture/Haute Cuisine"

sees us in the court of Louis XIV, where the "art of living" was established, and continues through the Rococo, when cuisine and couture were ambitiously embellished with bows, scrolls and swags. "Dressing to Dine" addresses the way social change, especially new freedoms for women during the 1920s, saw the evolution of evening attire. "A Feast for the Eyes" displays six pieces inspired by images of food in art, and includes a 2018 Comme des Garçons gown that's a giant Giuseppe Arcimboldo food face, and "The Souper Dress," a War-holesque paper shift printed with Campbell's soup cans (1966-67). Then comes a stall of four designers who produced



Installation view of 'A Feast for the Eyes' in 'Food & Fashion' at the Museum at FIT

cookbooks, among them Christian Dior, whose overeating contributed to his early death.

In the middle of the gallery, food is treated as cultural identity, and ancestral dishes are revisited in prints, colors and materials by designers of many nationalities. "Sugar, Spice & Everything Nice?" is a confectionery of dresses, hats and shoes that equate femininity with bakery sweets. Lavender, pink and buttercream are the dominant colors in scrumptious concoctions by Angelic Pretty, Cristóbal Balenciaga and Jean Dessès.

The four stalls on the far wall are activist, sociological and scientific. A 1987 denim overall dress by Patrick Kelly, who often wore overalls himself, nods to black American sharecroppers as well as to the fact that food and fashion are both rooted in agriculture. Jeremy Scott's "Chocolate Bar Dress" (Fall 2014), a goddess gown in Hershey brown, is the body commodified. "Growing Alternatives" takes up the "simple life" championed by William Morris in the 19th century, embraced by hippies in the 1960s and '70s, and promoted by today's Slow Food and Slow Fashion movements.

Of all the stalls my favorite is "Fashion From Your Fridge," which spotlights breakthrough materials made from organic matter. Cloth and buttons created from the casein protein in spoiled cow's milk! Leather-like goods developed from apple skins and mushroom mycelium! A silk substitute derived from orange pulp! It's Cinderella in the garden, being outfitted for the ball.

## Food &amp; Fashion

The Museum at FIT, through Nov. 26

Ms. Jacobs is the Arts Intel Report editor for the weekly newsletter Air Mail.

# SPORTS

## How Rugby Can Help NFL Defenses

The Eagles' quarterback sneak is driving defenses nuts. Rugby tactics offer a remedy.

By JONATHAN CLEGG AND ANDREW BEATON

The NFL play that torments the brightest defensive minds in football these days hardly resembles a football play at all.

Popularized by the Philadelphia Eagles and Jalen Hurts, it's a twist on the traditional quarterback sneak. Only instead of the quarterback lunging forward solo, he gets some extra muscle from his teammates pushing him from behind to bulldoze through the line. The short-yardage play was so effective last season, as the Eagles successfully converted 92% of their sneaks en route to the Super Bowl, that the NFL considered banning it.

But the actual solution for it might not lie in the rulebook. As it happens, there's another game with an oblong ball in which shoving a ball carrier through a fearsome tangle of enormous bodies isn't a controversial new play.

It's basically the entire sport.

This ancient game is called rugby, and the best teams in the world are in France right now pummeling each other into the turf at the 2023 Rugby World Cup.

To outsiders, rugby may look like a lawless riot that involves running, kicking and lots of flattening of people. But no sport is more advanced when it comes to the art of stopping a ball carrier in his tracks, and to those familiar with rugby's rules, the short-yardage play that has confounded the NFL doesn't look foreign at all. In fact, it's so routine they even have a name for it: a maul.

The mechanics of a maul are essentially the same as the NFL

tactic that has become known as the tush push. The player in possession of the ball is surrounded by teammates who bind their arms together and drive him forward as one tightly packed unit, while a swarm of opponents desperately tries to prevent them from gaining territory. The main difference in rugby is that the players are crazy enough to attempt this without pads.

Those with experience stopping a rugby maul suggest some unorthodox strategies that defenses could employ to negate the effectiveness of the Eagles' sneak: Binding arms together before the snap. Moving laterally as a unit to plug holes in the line. And forgetting everything you know about traditional defensive line technique.

Scott Henderson is the head coach of the Eagles, but he leads a different flock of birds. He coaches the USA Rugby Eagles, the country's national rugby team, and he says that defensive linemen who are used to working individually need to behave as one to counter the collective force aiming to push them backward.

"Make it a stalemate," Henderson says. "The way you might do that, in rugby anyway, is you bind [arms] and now it becomes four legs pushing together instead of two."

Rugby has been played since 1823, when an English schoolboy decided to pick up a soccer ball and invent a new way to experience pain. In the two centuries since then, the sport has figured out that the key to defending a maul is to halt the ball carrier's momentum. To do that, players in-



The Eagles' quarterback sneak looks like it's from a rugby match. Is that the answer to stopping it?

terlock their arms, dig in their heels, and construct what is effectively a wall of gigantic humans.

Unlike football, where each defensive lineman is on his own trying to beat one of his offensive counterparts, rugby relies on pack behavior—scrams, rucks and mauls all see players bind themselves together and move as one collective unit. That technique is crucial to stopping a collective push by the offense, whether the ball has laces or not.

While there have been cries to make the rugby-style play illegal in the NFL, the rulebook actually gives defensive players an advantage that they're not currently exploiting. Offensive players are prohibited from linking their arms to block. But there's no specific rule stopping defensive players from doing so in order to create a wall of their own.

The only reason NFL defenders haven't done so is that this notion is completely antithetical to typical defensive line play. Pass rushers and run stoppers normally operate with the aim of winning

individual matchups against an opposing blocker to get into the backfield. Against the tush push, though, there's no time for that—as soon as the ball is snapped, the quarterback is thrusting forward. The goal is simple: don't get pushed backwards.

"There are rules about the offensive line pre-binding, but there's nothing to say the defense couldn't," says Dan Lyle, a former captain of the U.S. rugby team. "You could play a five-man defensive front, three linebackers, and you pre-bind and fill the gaps. One man goes low, one fills the hole. You're thinking about the defense of this as a team."

Lyle, who was once offered a contract to play tight end for the Minnesota Vikings, has another unconventional suggestion for stopping the Eagles' sneak. This one involves wrestling a giant amorphous blob.

When Lyle played for the U.S. team under former coach Jack Clark, the squad practiced mauls by performing something known as the amoeba drill. It called for the defenders to link arms and

move quickly from side to side, to learn how to move effectively as a unit in reaction to the different surges that the attacking team might make.

"You've got to try to manipulate the amoeba," Lyle said. "You're going to have to fight through two to three layers before you reach the center, or the ball carrier. But the No. 1 thing is you've got to try to disrupt it, stop it at the source and prevent it from shifting from one hole into another."

There's one rugby insider who's especially motivated to help NFL defenses figure this play out.

Mike Tolkin coached the U.S. team at the 2015 Rugby World Cup, and his suggestions include undercutting the offensive linemen, using their leverage to halt the offense's momentum and deploying a linebacker to tackle the quarterback if he goes airborne. Even more than other rugby coaches, Tolkin may have spent a little extra time thinking about it.

"I'm a Giants fan," he said, "so anything to do with the Eagles, I'm averse to."

### The WSJ Daily Crossword | Edited by Mike Shenk

1	2	3	4	5	6	7	8	9	10	11	12
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65				66					67		

- 28 Some deliverers
- 29 British singer Rita
- 32 Book, in Bordeaux
- 33 Brewer's bottleful
- 36 Turn unexpectedly
- 37 Kimono sash
- 38 Dam-building org.
- 39 Former coach of the Jets and Bills
- 40 Home of the Magic
- 43 Increased
- 44 Liquor in some fizzes
- 45 Simple shirt
- 47 Bit of breakfast tableware
- 48 Office plant
- 50 Daisy's kin
- 51 Put into words
- 55 Like some wine and cheese
- 56 Tragic king of drama
- 57 Home of the NCAA's Mustangs
- 59 French article
- 60 Airline that used an "up and away" slogan
- 61 Direction opposite WSW

### LOOK SHARP! | By Mike Shenk

- Across**
- 1 Like a twangy voice
  - 6 Soft mineral
  - 10 Egyptian serpent
  - 13 Extreme
  - 14 "The Merry Widow" composer
  - 15 Dilapidated boat
  - 16 Song for which Beyoncé won her 28th Grammy
  - 18 Scale units: Abbr.
  - 19 Removes from office
  - 20 Geometry class calculation
  - 22 Synagogue chest
  - 23 Weeps
  - 27 Brewing vessel
  - 30 Starts sharing personal information
  - 31 Tycoon John Jacob \_\_\_\_\_
  - 32 Eruption output
  - 34 Online craft market
  - 35 London street famed for its tailors
  - 38 Easy run
  - 41 At any time
  - 42 Dangerous animal
  - 46 "Girl With a Pearl Earring" painter
  - 48 Bluegrass instrument
  - 49 Trucker's lubricant
  - 52 Buck's partner
  - 53 Called up
  - 54 Cake brand found in the frozen food aisle
  - 57 Thesaurus wd.
  - 58 State-of-the-art, and a clue to this puzzle's circled letters
  - 62 Fuming
  - 63 Single
  - 64 Like some kitchens
  - 65 Game with Reverse and Draw 2 cards
  - 66 Fruit basket
  - 67 Aerial footage provider
  - Down**
  - 1 Main point
  - 2 Powerfully attracts
  - 3 Did terribly
  - 4 They're measured in degrees
  - 5 Victoria, Constance or Louise
  - 6 Far from loquacious
  - 7 Cry of insight
  - 8 Young fellow
  - 9 Bring into being
  - 10 In any event
  - 11 Outback and Ascent, for two
  - 12 "Antiques Roadshow" network
  - 14 Wood strip
  - 17 Historian's focus
  - 21 Gave fresh strength to
  - 22 Words with glance or loss
  - 24 State capital founded by William Penn
  - 25 Prepare for a bout
  - 26 Person with a cover

### Previous Puzzle's Solution

D	I	D	T	O	A	B	A	B	P	A	W	Z	
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L	U	N	G	S	K	N	E	E					
S	P	O	T	T	S	A	F	R	A	N	S		
K	U	V	A	S	Z	E	T	N	A	W	O		
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G	E	N	Z	T	H	O	R	O	U	G	H	L	Y
P	A	I	L	O	B	O	E	T	A	U	P	E	
A	S	T	O	P	O	N	D	E	I	G	H	T	

The contest answer is **WEBSTER'S**. As hinted in the title and theme clues, find "from A to Z" as the phrase suggested by 74-Across. Then take the eight instances of an answer with an A and Z separated by one letter (PAWZ, BAEZ, ABZUG, KUVASZ, KATZ, PAEZ, MARZ, LASZLO) to find the contest answer.



Ethiopia's Tigst Assefa shatters a world record at the Berlin Marathon.

## Tigst Assefa Shatters Women's Marathon Record in Berlin

By RACHEL BACHMAN

Ethiopian Tigst Assefa obliterated the women's world record for the marathon, finishing in 2 hours, 11 minutes, 53 seconds on Sunday at the Berlin Marathon in another stunning advance during the sport's "super shoe" era.

Assefa chopped more than two minutes off Kenyan Brigid Kosgei's world record of 2:14:04 from the 2019 Chicago Marathon. It was just the second major marathon for Assefa, who is 26 years old, after her breakout performance at last year's Berlin Marathon, where she won in 2:15:37—at the time, the third-fastest women's time ever recorded.

Assefa's record continues a string of jaw-dropping performances since the introduction of so-called "super shoes" several years ago. In road racing, super-light, thick-soled shoes, often featuring a rigid, springlike plate underfoot, have taken over, and the athletics world governing body has grandfathered in as legal all but

their most extreme versions.

Eliud Kipchoge, who won Sunday's Berlin men's race in 2:02:42, set the men's world record of 2:01:09 last year in Berlin wearing a version of Nike's super shoes.

Assefa is sponsored by Adidas, and was featured in a recent promotion for the brand's latest road shoe, which weighs less than five ounces and contains a rigid element called a rocker in the forefoot that it claims will "trigger forward momentum and improve running economy."

On Sunday, the race began with the women's leaders running in a pack at near world-record pace on the flat Berlin course. Assefa began to pull away around the 10-mile mark.

Assefa looked confident and comfortable despite the blistering pace, reaching the half-marathon mark in 1:06:20, on pace to break the world record by a minute.

Then she sped up.

She got to 40 km, just under 25 miles, in 2:05:13, putting her on pace for a finishing time in the 2:12 range. Spurred on by the knowledge that the world record was likely clinched, Assefa picked up her pace in the closing stretch and burst through the finish line in 2:11:53.

She beat Sunday's second-place finisher, Kenyan Sheila Chepkirui, by nearly six minutes.

Assefa began her competitive career in her teens on the track, winning a silver in the 4x400 meter relay and a bronze medal in the 800 meters at the

African junior championships in 2013. She began running road races several years ago and ran her first marathon in March 2022, finishing seventh in a time of 2:34:01 in the Riyadh Marathon in Saudi Arabia.

**Assefa shaved more than two minutes off the world record**

## OPINION

## Why Is Anxiety Rising?



**INSIDE VIEW**  
By Andy Kessler

“Olivia expressed despair due to climate change.” “Badge is anxious when he thinks about the future.” In August, a Montana court ruled that these and other youth plaintiffs “have a fundamental constitutional right to a clean and healthful environment, which includes climate.” Anxiety is on the rise and, rightly or wrongly, is blamed for everything. A recent federal survey reports 27% of respondents had symptoms of an anxiety disorder, up from 8% in 2019. That’s scary. Youth emergency-room visits for mental health have gone up significantly.

Do you suffer from anxiety? The Mayo Clinic’s list of signs and symptoms includes feeling nervous, feeling a sense of impending danger or panic, increased heart rate, rapid breathing, sweating and trouble concentrating. Apart from those with nerves of steel, I’ll bet we’ve all had at least one of these symptoms. A survey by KFF suggests that half of 18- to 24-year-olds report anxiety or depression symptoms. Not everyone can deal with them.

Gymnast Simone Biles and tennis player Naomi Osaka have withdrawn from competitions because of anxiety. PGA Tour commissioner Jay

Monahan took a leave of absence for anxiety right after the merger announcement with Saudi-backed LIV Golf.

This is mostly a U.S. problem—affluenza?—which I’ve seen blamed on social media, poor sleep and previous underreporting. Yes, Instagram-inflamed narcissism is a problem, but I think the rise of anxiety is about more than that. So what is it?

• **Extinction anxiety.** Daily news reports question the ability of humans to survive in the near future. AI experts warn about human extinction. In February, President Biden called the “climate crisis” an “existential threat.” Are the Four Horsemen of the Apocalypse heading our way? In 2019 Rep. Alexandria Ocasio-Cortez said, “The world is going to end in 12 years if we don’t address climate change.” Only eight years to go. Most of us know her as a grandstanding bubble head, but some young people actually believe her. A recent New York Times op-ed was titled “Why I Bring Up Climate Change on First Dates.” Because you don’t want second dates?

• **Covid anxiety.** Global pandemics are scary, but did we really need to pile on bad policy that amplified anxiety? Lockdowns, school closings, double masks and face shields, parents wiping down groceries, social distancing, canceled parties, closed churches, mandatory vaccina-

tion—all made anxiety worse. This scared everyone and led to an overload of screen-based activities like Zoom, Netflix and videogames that force dopamine dependence on young minds and eliminate important and calming social cues a generation may never learn.

**Fears of extinction, Covid, socializing and a second Trump term are all at play.**

• **Status anxiety.** For years, students have been told to study hard, take advanced-placement courses, crush the SAT and ACT, overbook extracurricular activities, show leadership and get involved in community service—all application-essay fodder to get into top universities. Overwhelmingly, students are still rejected. This is devastating for a generation that always got participation trophies. No one ever turned them down, and now they feel shame for attending a perfectly fine state school. I blame parents.

• **Speaking anxiety.** Once on campus, students have to choose their words, even pronouns, carefully if they don’t want to be labeled oppressors. What should be four fun years of learning and building social skills has become full of anxiety-filled pauses as students

consider what words not to use. It’s an indoctrination of microaggressions, trigger warnings, safe spaces, cancellation, worrying about appearing privileged, and writing papers that bow to the current and constantly changing orthodoxy.

No one can keep up. “Primary” bedrooms, not “master.” Tampons in men’s bathrooms. And don’t dare eat a hamburger. Then parents tell students who call home in tears that they are probably anxious and should ask for extra time for papers and exams. In an oppression-obsessed culture, anxiety becomes a form of victimhood. Thanks, educators.

• **Weed-induced anxiety.** Plenty of studies show that high levels of THC can induce anxiety, paranoia and panic. In 1995 the potency or average concentration of THC of cannabis was about 4%. By 2014 it was 12%. Many dispensaries now advertise potency over 20%. The Godfather OG strain is 34%. So much for mellowing out. Strangely, some take Cannabidiol, or CBD, a non-high-inducing form of cannabis, to cure anxiety.

• **Trump anxiety.** ‘Nuff said. Well, except that the former president’s recent mug shot looks like the anxiety-inducing chief droog from Stanley Kubrick’s “A Clockwork Orange.”

I’m anxious just thinking about all this.

Write to [kessler@wsj.com](mailto:kessler@wsj.com).

**BOOKSHELF** | By Michael Luca

## Where Have The Good Men Gone?

**The Two-Parent Privilege**

By Melissa S. Kearney  
(Chicago, 240 pages, \$25)

For families with young children, morning routines can resemble an assembly line: Make breakfast. Remind the kids to brush their teeth. Negotiate which snacks to include in their backpacks. Remind them again to brush their teeth. Look for shoes. Head out the door. Head back in the door to get the stray backpacks.

In our household, when one parent is out of town, the process seems to intensify and can feel like the “I Love Lucy” episode in which Lucy takes a job wrapping chocolates. Quickly overwhelmed by the speed of the conveyor belt, she starts shoving chocolates anywhere they’ll fit, and concludes, “I think we’re fighting a losing game.”

Over the past 50 years, the number of one-parent households in America have dramatically increased. In 2019, 57% of U.S. children lived with two parents, down from 80% in 1980. Is



the rise of single-parent households an emblem of empowerment or a sign of dwindling support for children?

Discussions of parenting can be fraught, dominated by feelings over facts, and too often tinged with judgment rather than support. The problem is, in part, that there has been limited accessible evidence on the causal effect of household logistics on children’s outcomes.

Enter “The Two-Parent Privilege: How Americans Stopped Getting Married and Started Falling Behind,” Melissa Kearney’s

clear-eyed look at the economic impact of having a second parent at home. Ms. Kearney is an economist at the University of Maryland; her topics of research range from the social impact of the MTV show “16 and Pregnant” to the recent Covid baby bust. As she notes, “discomfort and hesitancy have stifled public conversation on a critically important topic that has sweeping implications not just for the well-being of American children and families but for the country’s well-being.”

Mr. Kearney’s objective is two-fold: first, to offer a data-driven overview of the rise and impact of single parenting; second, to propose strategies to enable more kids to live in stable households.

When it comes to the economic well-being of children, she argues, having two parents really is better than one—on average. Consider the conclusion of a 2004 paper, “Is Making Divorce Easier Bad for Children? The Long-Run Implications of Unilateral Divorce,” by the economist Jonathan Gruber. “As a result of the increased incidence of parental divorce,” Ms. Kearney tells us, “children wound up having lower levels of education, lower levels of income, and more marital churn themselves (both more marriages and more separations), as compared to similarly situated children who did not live in places where unilateral divorce laws were in effect.” Moreover, Ms. Kearney notes that children living with a stepparent also tend to have worse behavioral outcomes than those whose birth parents remained married.

While divorce is common, the spike in the number of single-parent households is mainly driven by an increase in the share of mothers who have never married—particularly among those who are less educated. In 2019, 60% of children whose mothers had a high-school degree (but less than a four-year college degree) lived with both parents, “a huge drop from the 83% who did in 1980” and low relative to the roughly 84% of children of college-educated mothers who lived with both parents in 2019. The author also notes significant gaps in family structure according to race: In 2019, 38% of black children lived with married parents, compared with 77% of white children and 88% of Asian children.

**Children fare better when they grow up with both parents—no surprise. But sometimes mothers have no choice but to go it alone.**

What is driving these changes? Among other factors, Ms. Kearney refers to the lack of “marriageable men,” pointing to a 2019 paper by the economists David Autor, David Dorn and Gordon Hanson, “When Work Disappears: Manufacturing Decline and the Falling Marriage Market Value of Young Men.” The paper analyzes the effect of drops in income for less-educated men, driven by increased international competition in manufacturing, and finds, Ms. Kearney tells us, that “the trade-induced reduction in men’s relative earnings led to lower levels of marriage and a higher share of unmarried mothers. It also led to an increase in the share of children living in single-mother households with below-poverty levels of income.” Reintroducing economic opportunities (for instance, through fracking booms) doesn’t seem to reverse this trend—suggesting an interplay between economic shocks and evolving social norms.

Overall, Ms. Kearney makes a compelling case that we should be concerned about the rising rate of single-parent households, at least from the perspective of child well-being. The solution is more complicated. Noting that “so many men seem to be less than ideal marriage partners,” Ms. Kearney emphasizes the importance of “improving the economic position of non-college-educated men so they are more reliable marriage partners and fathers.” How does one go about this monumental task? Ms. Kearney points to government investments in job training, public and community colleges, earnings supplements, and criminal-justice reform.

She also points to the role of media and the need for role models. Her own research shows that “the depictions of the difficulties associated with being a teen mom as shown on the MTV reality television show ‘16 and Pregnant’ led to a decline in rates of teen child-bearing in the U.S.” She also calls for “scaling up government and community programs that improve outcomes for parents and children from disadvantaged backgrounds,” such as nurse visits to new moms and moms-to-be.

Co-parenting is ultimately about more than lightening the load. Reflecting on my own marriage, I was reminded of the simple joys my wife and I have shared with our kids: the day we sat on a bench holding hands and laughing as our youngest son barreled through the park; our recent apple-picking outing; movie nights; Sunday waffles; weekend hikes. These moments weren’t about productivity gains or divvying up tasks. But they are part of the reason that, I suspect, Ms. Kearney’s proposals will be good not only for children but for parents as well.

Mr. Luca is an associate professor of business administration at Harvard Business School and co-author of “The Power of Experiments.”

## Biden Does Big Labor’s Bidding in Mexico



**AMERICAS**  
By Mary Anastasia O’Grady

Donald Trump plans to visit Detroit this week. He’s looking for support from members of the United Auto Workers, and President Biden’s re-election team is sweating about it. Mr. Biden needs Big Labor. But UAW President Shawn Fain has warned the president that he has to “earn” his members’ support. Politico reported last week that the union “is withholding its endorsement from Biden over his handling of electric vehicle subsidies.”

Mr. Biden may be in a bind with auto workers. But elsewhere, in a matter less visible to the American public, he’s going to great lengths to do union bidding. His weapon of choice is Mr. Trump’s U.S.-Mexico-Canada Agreement, or USMCA.

The USMCA’s labor chapter includes a tool to punish a production facility that denies workers the right to collective bargaining or free association. Under this “rapid response labor mechanism,” output of the specific plant where the violation is deemed to have occurred can be subject to sanctions by trading partners.

Katherine Tai was trade counsel for Democrats on the House Ways and Means Committee when Mr. Trump was trying to get the USMCA through Congress. Now she’s

the U.S. trade representative, or USTR for short. Along with her predecessor, Bob Lighthizer, she played a key role in developing the problematic rule. It isn’t clear that right-to-work states in the U.S. could pass its tests. Thanks go to Ms. Tai for demonstrating that the rule is also easy to abuse for political gain.

The USTR’s office has filed more than 10 complaints against Mexico using this novel labor mechanism. Most have been remediated through company concessions. But in August Ms. Tai used it for the first time to request a dispute-settlement panel to defend the interests of the Mexican mining union Los Mineros.

It’s been 13 months since the USTR launched consultations regarding Mexico’s discrimination against American oil, gas and renewable investors. Ms. Tai still hasn’t found the time to ask for an arbitration panel. But her request for a panel to address the Mexican union’s complaint comes only two months after the issue was raised with Mexico. The reason is simple: The AFL-CIO and the United Steelworkers signed the petition Los Mineros filed in May with the USTR. It alleges denial of worker rights at the San Martin mine in the state of Zacatecas.

Los Mineros isn’t any old labor organization. In January 2022, a Mexican arbitration board inside the Ministry of Labor ordered the union to reimburse members for the embezzlement of

some \$54 million. The union has yet to comply, relying on court injunctions to delay the legal resolution. The union maintains its innocence. Meantime, it’s asking the USTR to intervene in the matter of the San Martin mine, despite lacking territorial jurisdiction.

In 2007 miners at the site—owned by the Mexican conglomerate Grupo Mexico—walked off the job. According to a company representative, they “were protesting safety and health conditions and alleged some non-compliance with their collective-bargaining agreement negotiated by Los Mineros.”

**Trade Representative Katherine Tai engages in union activism south of the border.**

Eleven years later more than 50% of employees voted to return to work. They were led by a coalition calling itself “the United Workers.” The Grupo Mexico representative told me the company improved working conditions to ensure safety and also increased wages to adjust for the many years the workers were on strike. Since then, more than two-thirds of the workers have returned to the mine, which is now operating normally.

The holdouts are led by the president of Los Mineros, Napoleon Gómez Urrutia, a Mexican senator not directly

elected. He holds a proportional-representation seat allocated to him by President Andrés Manuel López Obrador’s Morena Party. In other words, it’s his political heft as a union leader that put him in the upper chamber, where all senators enjoy immunity from criminal prosecution.

Mexico argues that the San Martin labor dispute doesn’t fall under the USMCA because it occurred before the agreement was signed in November 2018. Furthermore, since the mine doesn’t export its mineral production to the U.S., the use of the labor mechanism doesn’t apply and the production facility would be impossible to subject to sanctions. Mexico’s judiciary is handling the matter according to domestic law.

As the White & Case law firm pointed out in an Aug. 28 post on its website, a Mexican labor court ruled on June 14 that Los Mineros is the holder of the collective bargaining agreement and it ordered “Grupo Mexico to pay back wages and benefits” and “declare[d] the strike as concluded.” The company has requested a review of the calculation of wages owed but not the wider order.

None of this matters to Ms. Tai. Even if she loses, she can claim she did her best to try to turn her office into Mexico’s national labor relations board. But it’s a shabby way to treat a trade partner. For anyone paying attention, it’s one more example of the politicization of her office.

Write to [OGrady@wsj.com](mailto:OGrady@wsj.com).

## School Choice the Easy Way

By Corey DeAngelis

Gov. Greg Abbott last week said he’s calling the Texas Legislature into special session next month to pass school choice for every child. During the regular legislative session, the GOP-controlled Senate handily passed a school-choice bill 18-13, with only one Republican voting no.

The GOP-controlled House, however, failed to pass the bill, demonstrating the influence of unions even with the GOP. But Gov. Abbott promised political consequences for Republican lawmakers who continue to block education freedom. “There’s an easy way to get it done, and there’s a hard way. We will take it either way—in a special session or after an election,” he declared.

School choice has become a political winner, as 76% of the candidates supported by my organization, the American Federation for Children, and

our political affiliates won in 2022. We plan to form a super PAC to scale up these efforts.

Last year 88% of Texas Republican primary voters supported a nonbinding ballot proposition stating: “Texas parents and guardians should have the right to select schools, whether public or private, for their children, and

**Texas lawmakers can pass a bill during the special session—or face the voters later.**

the funding should follow the student.” That was up nine points since it was last on the ballot, in 2018. An August University of Texas poll found that a majority of the state’s voters support school choice, including 67% support from Republicans. Rep. Travis Clardy—who sent his children to private school and voted

against school choice during the regular session—already has a primary opponent, Joanne Shofner, president of the Nacogdoches County Republican Women.

Republicans in other states have been united. Arizona passed a universal school-choice bill last year with one-seat GOP majorities in each chamber, meaning every Republican lawmaker needed to show up and vote yes. In North Carolina this year, all Republicans—including one Democrat who switched to the GOP—cosponsored a universal school-choice bill, giving them enough votes to override an expected veto from Democratic Gov. Roy Cooper. On Friday Mr. Cooper yielded and said he’d let the bill become law.

What’s unfolding in Texas is similar to what happened in Iowa. Gov. Kim Reynolds fought hard last year for limited private-school choice, and her bill easily passed the state’s GOP-controlled Senate,

with only one Republican voting against it. But the House, where Republicans hold 60 of 100 seats, balked.

Ms. Reynolds got involved in nine House primary races, ousting several Republican incumbents for opposing choice. As one of them, Dennis Bush, put it, “The governor [was] trying to use [the] election as a referendum for her voucher bill.” Challenger Zach Dieken defeated him, 56% to 24%.

In January, Iowa became the first state to pass a universal school-choice bill in 2023. Ten states, all with Republican legislatures, have passed universal school choice in the past two years. If Texas House Republicans are smart, they’ll take the “easy way” and use the coming special session to become No. 11.

Mr. DeAngelis is a senior fellow at the American Federation for Children and a visiting fellow at Stanford University’s Hoover Institution.



## OPINION

## REVIEW &amp; OUTLOOK

## LETTERS TO THE EDITOR

## California Wants to Know Your Emissions

Progressives in Sacramento are increasingly trying to regulate for all of America. Now a bill on Gov. Gavin Newsom's desk would require businesses from sea to shining sea to report their CO2 emissions. You can check out of California, but you can't escape its climate regulation.

California's Senate this month passed legislation that would require companies with more than \$1 billion in annual revenue that do business in the state to publicly disclose their CO2 emissions. This would include the emissions of their suppliers, customers, contractors and even commuting workers. Companies could get dunned for errors.

"Doing business" in California is defined as having annual sales exceeding \$610,395, or more than \$61,040 in property or payroll, in the state. Almost any medium-sized business with a single worker in California would have to report its emissions.

California Democrats are one-upping the Biden Securities and Exchange Commission, which is expected soon to finalize a rule requiring public companies to report their CO2 emissions. The California bill goes further than the SEC's proposed rule since it would also apply to private businesses, limited liability companies, and partnerships.

About three-quarters of the estimated 5,300 companies that would be covered by the bill are private. Small businesses that are suppliers, contractors or customers of covered businesses might also be compelled to calculate emissions. Farms that sell to wholesalers doing business in the state could have to calculate how much CO2 their livestock and fertilizer generate.

Clients of large accounting, legal, insurance and financial firms could be ensnared too. "Know your customer's CO2 emissions" could soon become the new banking industry mantra. Government agencies, however, would be exempt from reporting even though politicians in

Sacramento are the state's biggest emitters of hot air.

### Sacramento moves to enforce CO2 disclosures nationwide.

Microsoft and Apple have endorsed the bill, but they can afford its compliance costs, which aren't small, especially since the CO2 reports would have to be verified by third parties. A large energy company told the SEC that its climate reporting required 7,500 to 10,000 employee hours a year and as much as \$1.35 million annually in fees for external advisory services.

Like SEC Chairman Gary Gensler, Democratic lawmakers claim their goal is to ensure "consistency" in CO2 reporting. But California's disclosure rules would overlay those from the SEC and other voluntary regimes. While the bill instructs the state Air Resources Board to structure reporting "in a way that minimizes duplication of effort," there's no guarantee it will.

The bill's main beneficiaries will be CO2 accounting start-ups such as Persefoni AI and Watershed. Persefoni says in a public comment to the SEC proposal, "to the extent allowable under its authority, the SEC should encourage privately held companies to provide climate disclosure on par with publicly traded companies." You can hear the cash register at Persefoni ring from here.

The SEC doesn't have the legal authority to regulate private companies or CO2 emissions, which is why Democrats in California are trying to do it in case Mr. Gensler's rule is defeated in court. Neither the SEC nor the California rule would have any effect on climate, so their cost and complication are pointless.

The U.S. Supreme Court last term all but invited progressives in Sacramento to reach beyond California's borders by declining to restrict its power to regulate out-of-state farms in *NPPC v. Ross*. California's climate reporting regime could give Justices an opportunity to reconsider whether one state can regulate businesses in the other 49.

## The Children Win in North Carolina

Happy to report: North Carolina on Friday became the tenth state to approve universal school choice. Democratic Gov. Roy Cooper says he won't veto the bill passed by the Legislature, no doubt because Republicans have enough votes to override.

The choice provisions are in the state's much-delayed budget, which includes Medicaid expansion the Governor favors and tax cuts he opposes. North Carolina created the Opportunity Scholarship program in 2013, but this budget increases funding from \$176.5 million to \$520.5 million by the 2032-33 fiscal year. It also opens up eligibility to all North Carolinians, though the amount of the scholarship declines as income rises.

The fight illustrated both the importance of Republican unity and the vulnerabilities of Democrats who take orders from the teachers union and ignore parents. In May, when legislators signaled their intentions, Gov. Cooper released a video declaring a "state of emergency." "It's clear," he said, "that the Republican legislature is aiming to choke the life out of public education."

The emergency stunt did nothing but make the Governor look weak. It also highlighted his double standard. Mr. Cooper was happy to choose private school for one of his daughters. But when the legislators were ready to give North Carolinians the same choice, suddenly it was an attack on public schools.

## Florida Takes the Classic Learning Test

Florida's state university system will now accept the Classic Learning Test in college admissions, after the board of governors voted this month to approve the CLT as an alternative to the national testing duopoly of the SAT and ACT. Whether the classic test will catch on is anybody's guess, but credit to its creators, and Florida, for giving it the college try.

The media coverage has been highly amusing. "The College Board, which oversees the SAT, said there is little evidence proving the CLT can adequately assess college preparedness," NPR reported. Big news: Coke thinks Pepsi doesn't adequately quench thirst. Colleges will surely figure out how to benchmark the CLT as it comes into use, and its makers will probably adjust after getting more data on student outcomes.

Inside Higher Ed said critics argue the CLT "places too heavy an emphasis on biblical passages and traditional Western thought," including texts from "largely white men with questionable positions on race, LGBTQ+ rights and multiculturalism."

Who needs Plato, that bigot? This is the attitude C.S. Lewis once called chronological snobbery, "the uncritical acceptance of the intellectual climate common to our own age and the assumption that whatever has gone out of date is on that account discredited."

The CLT represents the opposite, and readers can flip through a sample test to get a sense of it. The first section, verbal reasoning, features questions that measure comprehension of paragraphs from Aristotle, Benjamin Franklin, John Paul II and others.

Then comes grammar and writing, where students are asked to choose from options that "either correct an error or suggest an improvement in the passage." Last is quantitative rea-

soning, including this math puzzle: "If  $y^2 = x$  and  $8z = xy$ , then what is  $x + y + z$  if  $y$  is half the value of  $z$ ?" No calculators allowed.

The CLT was launched in 2015, and its "author bank" ranges from Homer to Martin Luther King, Jr. Its test scores are accepted by more than 250 schools, the website says, many of them smaller mission-oriented institutions, such as Hillsdale College or Franciscan University of Steubenville. The University of Florida and Florida State represent a step into the wider world, and perhaps other systems will follow.

The countervailing pressure in progressive jurisdictions is for colleges to end testing altogether in favor of "holistic" admissions. This is especially true since the Supreme Court struck down racial preferences. Eliminating test scores is a way to put admissions behind a veil of subjective criteria. Yet a few years ago the University of California released a 225-page faculty report that found test scores were predictive of college success and helped to identify promising underprivileged students.

Testing remains useful, in other words. At the same time, however, the College Board has accumulated a worrisome amount of power, in particular over public high-school curricula via its Advanced Placement program. Florida recently rejected a proposed AP class in African-American Studies because a portion of it was infused with politics and critical-race theory. The College Board then deceived the public about how it intended to re-edit the course.

Competition is one answer to such problems. The CLT, to draw a classic comparison, is a David taking on a Goliath. But the future of K-12 education is choice, from charter schools to learning pods to vouchers for all manner of models, including private religious schools. Why should every student with every curriculum be locked into the SAT or ACT?

## Will Putin Sit on the Human Rights Council?

Your editorial "The Irrelevant United Nations" (Sept. 20) identifies the world body's failure to confront today's gravest threats to world peace, from the rogue nuclear-weapons programs of Iran and North Korea to Russia's merciless war on Ukraine. If the U.N. is ineffectual when it comes to hard power, it should at least use its global pulpit to say the right things. This it did in 1948 by adopting the Universal Declaration of Human Rights, which proclaims fundamental freedoms. Words matter.

Yet the U.N. body mandated to protect these liberties today, the 47-nation Human Rights Council, too often gives brutal dictatorships a free pass. Never once has it condemned serial

abuses committed by China, Cuba or Pakistan. On the contrary, each sits on the council as an elected member.

Now Russia is running for a seat, in an election to be held Oct. 10 at the U.N. General Assembly. If Moscow's prior bids are any guide, it has an 80% chance of winning.

When Col. Moammar Gadhafi's Libya was made chair of the former, discredited U.N. Human Rights Commission in 2003, that proved its death knell. If Vladimir Putin wins next month, while he's wanted for arrest in The Hague for war crimes, its successor body may meet the same fate.

HILLEL C. NEUER  
Executive director, U.N. Watch  
Geneva, Switzerland

## Rural Broadband Is an Opportunity for America

The headline "Broadband for All Comes With Some Sky-High Costs" (Page One, Sept. 6) implies a waste of taxpayers' money. But is it? This reminds me of President Dwight Eisenhower, who initiated the interstate-highway system, connecting east to west, north to south. A giant waste of taxpayers' money? Perhaps at the time. But it was the right vision to make America great. Imagine America without it. Likewise, bringing fiber optics to all corners of this country is the right vision to keep America great.

WIM SELDERS  
San Diego

Your article on rural-broadband subsidies highlights the vast difference in cost-effectiveness across federal programs. The cited \$53,000 average cost per connection in the Winnebago Tribe community is the standout example, and it reflects a decision to ignore other service options such as satellite. While not as high-quality as fiber, satellites would be available immediately while fiber could take years.

Some guidelines can help ensure cost-effective grant allocation. First, use competitive mechanisms, like reverse auctions, to allocate funds. Auctions are unpopular among providers because they reduce subsidies. But that's their purpose: to drive down subsidies and provide more coverage for the same amount of money.

Second, include independent evaluation. These would verify project completion and whether public investments fund otherwise unviable networks.

Third, balance the desire to keep subsidies low with the need to ensure

the long-term viability of funded networks. This means avoiding price regulation, which would give recipients a hook to come back later to request more government money.

Bridging the digital divide requires a fiscally responsible, forward-thinking broadband-subsidy strategy. That means competitive grants, rigorous evaluations and an eye on long-term network sustainability.

SCOTT WALLSTEN  
President, Technology Policy Institute  
Washington

My guess is that most of the article's interviewees, their neighbors, friends and the people who travel near or through their towns are afflicted daily with extraordinarily poor cellular-telephone and mobile-broadband connectivity. While the federal government is busy spending thousands on a per-household basis for broadband fiber connections, it has all but ignored the 81% of rural counties that lack reliable mobile signals or have no coverage at all.

Whole communities are stranded in ever-growing cellular "dead zones" because governments have all but stopped investing in the small, locally owned, cellular-service providers that sew together our country's vast mobile network. The chronic underfunding of mobile infrastructure over the past decade also has resulted in a public-safety crisis for millions of Americans who can't reliably reach 911-emergency services or lack access to mobile 5G networks that would close the digital gap.

SLAYTON S. STEWART  
CEO, Carolina West Wireless  
Wilkesboro, N.C.

## Covid-Era Outdoor Dining Should Stick Around

Ivan Png's op-ed "Free Riders on the Sidewalk" (Sept. 11) makes little sense when a stated public-policy goal in America is to create more vibrant and inclusive outdoor dining cultures than cities like New York had before the pandemic.

New York's high fees were a major factor excluding many restaurants from having outdoor dining before Covid-19 hit. The concrete outside a restaurant shouldn't compel the same real-estate value as a fully built in-

door restaurant, with all its amenities, especially when its utility is weather-dependent and it operates for fewer hours.

In New York, outdoor dining is an economic boon, saving thousands of restaurants, generating tax revenue and fostering economic activity. Its valuation shouldn't be based on the market valuation of private indoor commercial real estate, which often is already too high, shuttering small businesses.

Our city had nearly 8,000 restaurant streeteries at the peak, using about 0.5% of the three million parking spots. Many locations were in nonmetered parking spaces that previously generated no money for the city. Those that removed a metered spot offset the loss of revenue with more active economic use.

ANDREW RIGIE  
Executive director  
New York City Hospitality Alliance

## Customer Is Always Right

James Piereson and Naomi Schaefer Riley's op-ed "West Virginia Budget Cuts Are a Taste of Higher Ed's Future" (Sept. 15) concludes that "the administrators who oversee student life and 'wellness' are now part of the core staff of universities, expected by students." noting that "the customer is always right." The ultimate customer, however, is the real world, which students will encounter after graduation. Schools that ignore it do so at their own peril.

ALLEN NIXON  
Farmington, Conn.

## Pepper ... And Salt

THE WALL STREET JOURNAL



"Are you totally here or multi-tasking?"

## Two Mice Walk Into a Bar

Regarding Allysia Finley's "Day-Quil, Covid Vaccine Boosters and FDA Science" (Life Science, Sept. 18):

Mouse No. 1: Are you getting the Covid vaccine booster?

Mouse No. 2: No, they aren't done testing it on humans.

BOB SPEAR, M.D.  
Coronado, Calif.

Letters intended for publication should be emailed to wsj.letters@wsj.com. Please include your city, state and telephone number. All letters are subject to editing, and unpublished letters cannot be acknowledged.

## OPINION

## Will Bob Menendez Keep His Pension?

By Demian Brady

No member of Congress has ever had his taxpayer-funded pension stripped for corruption crimes committed while holding public office. That could change, as the Manhattan U.S. Attorney's office unsealed an indictment Friday charging Sen. Bob Menendez (D., N.J.) with accepting hundreds of thousands of dollars in bribes from three businessmen. Mr. Menendez said in a statement that he is the victim of a "smear campaign." A lawyer for the senator's wife, who was also indicted, said she denies any criminal conduct.

It isn't the first indictment for Mr. Menendez, against whom the Justice Department dropped earlier charges in 2018 after a mistrial. Nor is Mr. Menendez the only sitting lawmaker to face indictment on corruption charges. Among the others were former Reps. Jesse Jackson Jr. (D., Ill.), Chaka Fattah (D., Pa.) and Chris Collins (R., N.Y.).

**A conviction wouldn't be enough under current law to withhold it. A new bill seeks to change that.**

The case, like those before it, presents Congress with a legitimate opportunity to rectify abuse of taxpayer dollars. Under current law, a member's congressional pension isn't stripped until after all avenues for appeal have run out. That can—and typically does—take years. In July the Senate passed by unanimous consent the No Corruption Act, sponsored by Sens. Jerry Rosen (D., Nev.) and Rick Scott (R., Fla.), which would close this loophole.

Representatives and senators who serve for at least five years are eligible for a taxpayer-funded pension



Sen. Bob Menendez

that pays two to three times as much as pensions offered to employees with similar salaries in the private sector. The pension amount is based on the length of time in office, the average of the three highest years of salary, and an accrual rate that varies depending on when a member was first elected. Mr. Menendez was elected to the House in 1993 and appointed to the Senate in 2006. If he were to resign his seat this month, he could collect a pension of up to \$70,100 a year. This assumes that he took steps to maximize the benefit level.

Congress first attempted to block pensions for felons in 2007 through the Honest Leadership and Open Government Act. The law was a response to corruption scandals involving members who remained eligible for pensions while in prison. HLOGA specified corruption-related crimes that would lead to pension forfeiture. The Stop Trading on Congressional Knowledge Act of 2012, Stock for short, specified additional crimes.

But the pension-stripping provision doesn't kick in until "final conviction"—after all opportunities for appeal have expired—so there is an incentive to keep filing appeals to

collect the pension. I work for an organization that tracks federal spending and have followed this issue for years. I have yet to confirm that any member of Congress has ever had a pension stripped due to a criminal conviction.

Members originally charged for crimes specified in the HLOGA or Stock Act have struck deals with the Justice Department for reduced charges. Former Rep. Corrine Brown (D., Fla.) was convicted in 2017 on 18 felony counts, including wire and tax fraud, conspiracy and lying to federal investigators. After being sentenced to five years in prison, she successfully appealed the conviction for the improper removal of a juror during the trial. Ms. Brown faced a retrial in 2022 but cut a deal admitting guilt to a single charge of corrupt interference of administration of internal revenue laws. That crime wasn't subject to the forfeiture provisions in HLOGA or the Stock Act, leaving her eligible for an estimated \$71,000 annual pension.

In 2017 my organization confirmed that Mr. Fattah remained eligible for his \$55,000 annual pension, plus annual cost-of-living adjustments, despite being sentenced to 10 years for

racketeering, money laundering, bribery and fraud. At the time, the Office of Personnel Management (OPM) told us that "Fattah has not exhausted his appeal rights," and that the office would "wait until any appellate activity has concluded before taking appropriate action."

Mr. Fattah's prison sentence was supposed to run through Aug. 1, 2024, but he was released on June 8, 2020. The Bureau of Prisons inmate locator says he is under the custody of a residential re-entry management facility in Philadelphia.

OPM has been vague about enforcing the HLOGA and Stock Act. The office no longer replies to my questions regarding the pension eligibility of members of Congress. Since June 2020, I have asked on a regular basis if any former member has had a pension stripped pursuant to these laws, but OPM has declined to answer.

Last week the Justice Department said that former Rep. Steve Buyer (R., Ind.) was sentenced to 22 months in federal prison for an insider-trading scheme that netted a profit of more than \$349,000. Mr. Buyer's lawyer plans to appeal, which would let the former congressman continue to collect an estimated annual pension of \$48,000, plus annual inflation adjustments.

The No Corruption Act would cut off pension benefit payments upon initial conviction. Rep. Ralph Norman (R., S.C.) intends to introduce companion legislation in the House. Under the bill, if a member makes a successful appeal, the annuity amount would be fully paid retroactively. This is an important reform that would balance taxpayers' interest with the rights of the accused.

The House should join the Senate in protecting Americans from paying pensions for those who have abused the public trust.

Mr. Brady is vice president of research for the National Taxpayers Union Foundation.

## The SEC Wants to Spy On Your Portfolio

By Warren Stephens And Paul C. Reilly

As an American, you have a right to privacy—unless you own stock. The Securities and Exchange Commission has created a centralized database to track the personal and financial information of every U.S. investor. Congress should immediately stop this unconstitutional power grab.

The scope of the Consolidated Audit Trail, or CAT, a regulation the SEC issued in 2016 but implemented only recently, is breathtaking and unprecedented. In the words of the SEC press release, the regulation instructs regulated financial institutions to identify "every order, cancellation, modification and trade execution for all exchange-listed equities and options across all U.S. markets."

The SEC issued this rule in response to the 2010 "flash crash," ostensibly to surveil markets. If the CAT stopped at that, it would have been a useful tool to protect markets from fraud and manipulation. But the commission decided to collect American investors' personally identifiable information, such as account and Social Security numbers, and share it. The CAT data will be available to self-regulatory organizations, such as stock and options exchanges, and about 3,000 outside contractors as well as to the SEC itself.

We objected to this expansion of the database, and so did many others, including the American Civil Liberties Union. Why should the government, without any evidence of wrongdoing, surveil Americans' balances to see every trade they make? Before CAT, regulators needed legal cause and a subpoena to force a financial firm to divulge a customer's personal and financial information.

As leaders of financial firms with millions of customers across the U.S., we dedicate significant resources to protect customer data and oppose any policy that erodes the personal liberties of Americans safeguarded by the Fourth Amendment.

**The Consolidated Audit Trail will record your Social Security number and all your stock trades.**

We also share SEC Commissioner Hester Peirce's concern that hackers may try to exploit the CAT "for their nefarious ends." The urgency of this threat is clear from the repeated cyberattacks on numerous U.S. government institutions in recent years by hackers backed by China, Russia and North Korea.

We expressed these concerns to the SEC for years and have been ignored, but some in Congress share our objections. Rep. Barry Loudermilk and Sen. John Kennedy recently introduced legislation to stop the unconstitutional collection of U.S. investors' personal information by the CAT. We hope other lawmakers will follow their lead. Regardless of political party, safeguarding Americans' privacy should be ample reason to take action.

The SEC is a securities regulator with a three-part mission: to protect investors; to maintain fair, orderly and efficient markets; and to facilitate capital formation. It doesn't have the legal authority to supersede the Constitution and spy on ordinary Americans' portfolios.

Letting it seize that authority anyway could lead to the addition of a fourth, sinister mission part: to judge investor virtue. The CAT will give the SEC a window into the core values of every American investor. Those values span the political spectrum. As political activism plays a larger role in investing and regulatory agendas, will investors whose holdings don't reflect the values or beliefs of those in power have reason to fear retribution?

Americans have always had a right to privacy and protection from government overreach, thanks to our Bill of Rights and hundreds of years of legal precedents. This legacy has motivated Americans to resist any form of personal surveillance. Our customers have a right to invest without fear—and without the SEC peering into their portfolios whenever it feels like it.

Mr. Stephens is chairman, president and CEO of Stephens Inc. Mr. Reilly is chairman of the American Securities Association.

## California's Smash-and-Grab Politics



LIFE SCIENCE By Allysia Finley

Gov. Gavin Newsom is vowing to crack down on California's "smash-and-grab" robberies. How about stopping the smash-and-grabs he and his fellow Democrats in Sacramento are waging against businesses?

Exhibit A is the lawsuit the state filed Sept. 15 against six large oil and gas companies.

Attorney General Rob Bonta accuses the defendants of misleading the public about climate change and creating a "public nuisance" by emitting carbon. He demands they "pay for the costs of their impacts to the environment, human health, and Californians' livelihoods, and to help protect the state against the harms that climate change will cause in years to come." The state also seeks punitive damages for the "lying to the public."

"California taxpayers shouldn't have to foot the bill for billions of dollars in damages—wildfires wiping out entire communities, toxic smoke clogging our air, deadly heat waves, record-breaking droughts parching our wells," Mr. Newsom declared.

The real culprits, as he doubtless knows, are in Sacramento. Instead of thinning overgrown forests and burying power lines or building more dams to store storm runoff during wet winters, the state has spent tens of billions of dollars on green energy, electric-vehicle subsidies for the rich and a bullet train to nowhere—no offense to the 28,173 inhabitants of Wasco—that may never be completed.

The lawsuit largely launders unsubstantiated claims from green groups that have been aired in the liberal press for years. But the state stands a chance of prevailing since the lawsuit will be heard in state court, and appeals would go to California's Supreme Court, six of whose justices were appointed by Democratic governors and uniformly rule for the left.

The apparent impetus for the lawsuit—besides perhaps Mr.

Newsom's insatiable desire for attention—is Sacramento's irreplaceable need for more money. Lawmakers in June closed a \$32 billion budget deficit by resorting to numerous gimmicks, but the state Legislative Analyst's Office this spring forecast that the state would face \$52 billion in shortfalls in coming years.

Electric rates are also soaring—already two to three times as high as in neighboring states—thanks to California's aggressive green-energy build-out and the need to make

**Thieves are a menace. So are Sacramento officials who are attempting to raid the state's businesses.**

equipment and transmission lines fireproof. Rather than dial back profligate spending and climate policies, Mr. Newsom and his posse are attempting to raid energy companies.

Their smash-and-grab is all the more galling because of their own public misrepresentations that green-energy mandates and subsidies will arrest climate change. They won't. Nor can the state prosper without fossil fuels.

## There's a High in the Middle of Ohio

By Gregg Opelka

First it was the communicator from "Star Trek." Now it's the flying cars from "The Jetsons." Little by little, the fantasy gadgets from the TV shows of my youth have become the reality of my adulthood.

On Monday, Joby Aviation said it would locate its first large-scale factory on a 140-acre site at Dayton International Airport in Ohio. Joby is one of several companies developing an electric vertical takeoff and landing aircraft that can carry passengers and freight.

But Joby, which became a publicly traded company in 2021, is headquar-

tered in Santa Cruz, Calif. The company builds the crafts so far away because of Dayton's connection to Wilbur and Orville Wright, the fraternal pioneers of aviation who grew up there and who in 1909 opened the Wright Co. factory in their hometown to make their flying machines. The Air Force Research Laboratory in the Wright-Patterson Air Force Base is a stone's throw away. In case anyone missed the connection, Joby made its announcement from Hawthorn Hill, Orville Wright's Dayton mansion. Production is slated to begin in 2025, and Joby says the facility will be able to produce 500 aircraft a year. The vehicles will be designed for four passengers and a pilot and capable of traveling 200 miles an hour.

Ohio and aviation didn't end with the Wright brothers. Neil Armstrong, John Glenn, Apollo 13 survivor James Lovell and Judith Resnik, who perished in the 1986 Challenger disaster, are among 25 astronauts born in Ohio. So is my friend Greg Harbaugh, a Willoughby native, who flew four multiday space-shuttle missions, including the first to dock with the Russian space station Mir in 1995.

I met Greg and his wife, Carol, in 2011, when I began a two-year stint playing piano in the band at the Unity church where Carol was pastor. When I first met Greg, I had difficulty believing this low-key Midwesterner had spent more than 800 hours in outer space. (Still, I have a feeling he

found raising his three daughters even more challenging.)

Although it has Lake Erie on its northern border, something about the largely landlocked state of Ohio seems to drive its natives to seek the freedom of the air.

Like the Wright Brothers and the Ohio astronauts, Joby is following the example of another entrepreneur who felt trapped by his surroundings. Daedalus, the mythical ancient Greek inventor and architect of the elaborate labyrinth that trapped the Minotaur, was antiquity's Elon Musk. Imprisoned by King Minos on the island of Crete, Daedalus soon realized there was only one way out. As Ovid tells the story in book eight of his epic "Metamorphoses," Daedalus said of his captor-king: "Let him block the lands and waves—but surely the sky is open. We'll go that way." ("Terras licet . . . et undas / ibstruat, at caelum certe pate; ibimus illac.")

With that epiphany, he began his creation of the fateful wax-and-feathers flying contraption which, although a success—Daedalus escaped Crete—tragically claimed the life of his son Icarus.

From ancient Crete to 21st-century Dayton, flights of fancy have become flights of fact. Here's a possible name for one of Joby's first models: Daedalus.

Mr. Opelka is a musical-theater composer-lyricist.

## THE WALL STREET JOURNAL.

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THE WALL STREET JOURNAL.  
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# BUSINESS & FINANCE

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THE WALL STREET JOURNAL.

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## IPO Market Shows Signs of Life for Now

Arm, Instacart and Klaviyo popped in first trading day but have since cooled

By CORRIE DRIEBUSCH

The initial public offering market has felt surprisingly normal over the past two weeks, at least on the surface.

British chip designer **Arm Holdings** brought fish and chips—and a makeshift British pub—to Nasdaq's Times Square headquarters to cele-

brate its stock-market debut this month. Last Tuesday, executives and employees gathered at grocery-delivery company **Instacart's** San Francisco headquarters to ring in the first day of trading with a carrot-shaped bell. The next day, the floor of the New York Stock Exchange welcomed **Klaviyo** executives and backers to the podium to cheer on the marketing-automation platform's IPO.

These three marquee listings represented the chance to revitalize an IPO market that has long been in disrepair. The

results, though, have been inconclusive.

Arm, Instacart and Klaviyo all priced their offerings at the high end of or above recent expectations, and their shares all rose on their first day of trading. They have since retreated, however, with Arm's and Instacart's stocks briefly falling below their IPO prices. Arm, after jumping 25% on its first trading day, declined for the following six. Tech stocks broadly fell last week, dragged down by investors coming to grips with the fact that the Federal Reserve is serious

about keeping rates higher for longer.

"They all opened strong and then faded. Until that's fixed, it will still be a soft opening for the IPO market," said Renos Savvides, head of equity capital markets at Neuberger Berman.

IPOs are a critical part of the U.S. economy, and when the flow of companies listing shares slows, it can also slow capital formation and job creation. When companies go public, the shares they sell put money in the pockets of employees and early investors. If

companies list shares when they are younger with more room to grow, their IPOs can enable small public investors to reap big future gains.

Advisers for Arm, Instacart and Klaviyo understood the stakes of bringing them to market. They structured the offerings cautiously. For example, all three companies lined up cornerstone or strategic investors who would commit ahead of time to buying a chunk of the IPO.

After all, the IPO market is still sleepy, at least compared with where it was in 2021 be-

fore the Fed started its rate-lifting campaign. In that low-rate world, investors looking for yield were happy to embrace risky growth stocks, driving prices for startups to historic highs. Traditional IPOs in the U.S. raised more money than ever before in 2021, according to research firm Dealogic.

That all came to a halt in November of that year when Fed members expressed concerns about inflation and warned they might raise interest rates faster than expected.

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The embrace of Halloween has become key to the profits of theme parks like Knott's Berry Farm and Disney California Adventure Park.



## Meta to Use Chatbots in AI-Fueled Youth Push

**Meta Platforms** is planning to release artificial intelligence chatbots as soon as this week with distinct personalities across its social-media apps as a way to attract young users, according to people familiar with the matter.

By Salvador Rodriguez, Deepa Seetharaman and Aaron Tilley

These generative AI bots are being tested internally by employees, and the company is expected to announce the first of these AI agents at the Meta Connect conference, which starts Wednesday. The bots are meant to be used as a means to drive engagement with users, although some of them might also have productivity-related skills such as the ability to help with coding or other tasks.

Going after younger users has been a priority for Meta with the emergence of TikTok, which overtook Instagram in popularity among teenagers in the past couple of years. This shift prompted Meta Chief Executive Mark Zuckerberg in October 2021 to say the company would retool its "teams to make serving young adults their North Star rather than optimizing for the larger number of older people."

With the rise of large-language-model technology since the launch of ChatGPT last November, Meta has also refocused the work of its AI divisions to harness the capabilities of generative AI for application in the company's various apps and the metaverse. Now, Meta is hoping these Gen AI Perso-

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## Theme Parks Look to Halloween To Spur Rebound

By WILL FEUER

Theme-park operators are pinning their hopes on a blockbuster fall season, betting that splashy Halloween and Oktoberfest events can make up for a summer season hurt by extreme weather.

Dorney Park-owner **Cedar Fair**, Six Flags Entertainment and **SeaWorld Entertainment** are looking to lure customers this fall by tapping into growing demand for Halloween festivities. Other parks, including **Disney**, rolled out themed events earlier than ever this year. In coming weeks, haunted houses and fleets of ghoulish actors will take over theme parks across the country.

The Halloween season and weeks leading up to it will

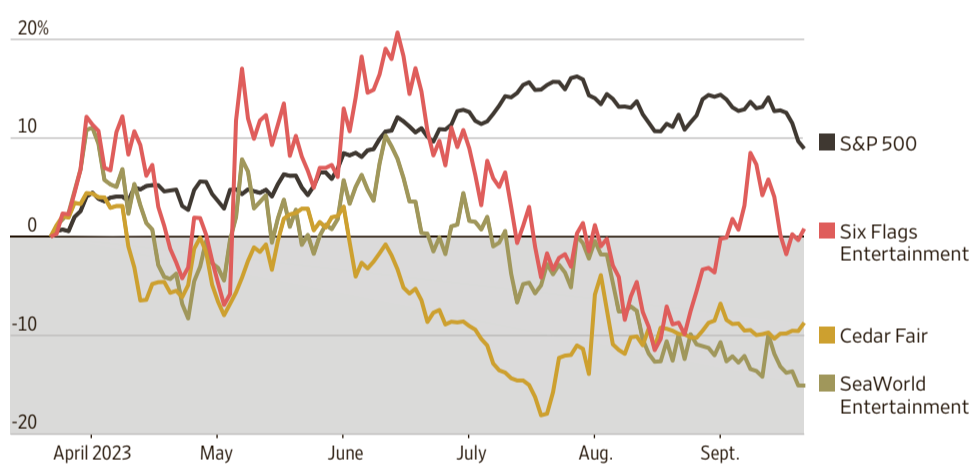
prove critical, after a cold, wet spring and scorching summer heat waves dashed hopes for a booming year. Attendance at the three major regional park chains is still below pre-pandemic levels, even as other travel sectors have fully recovered.

"I have seen through the years where Halloween has made or broken a season," said Dennis Spiegel, a longtime theme-park consultant. This year, Spiegel said, some parks began teasing Halloween events as early as June. "They knew they needed to start thinking ahead and hanging their hat on Halloween."

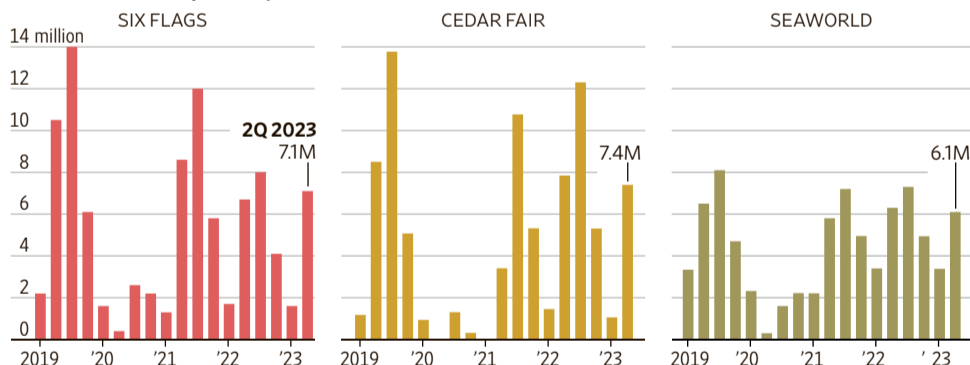
Shares of regional theme-park operators are lagging behind the S&P 500 this year, as

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Share-price and index performance over the past six months



Park attendance, quarterly



Note: Cedar Fair's amusement-park operations were suspended in the first quarter of 2021. Sources: FactSet (performance); the companies (attendance)

## Lululemon's Attraction Bridges Generation Gap

By SUZANNE KAPNER

Most girls won't wear the same clothes as their moms, but they make an exception for **Lululemon Athletica**.

The athletic-apparel maker has a cross-generational customer base that has eluded many other clothing brands. Its high prices and scant discounting have elevated its leggings, sweatshirts and tank tops to status symbols normally reserved for luxury goods, and made them a coveted uniform for children and moms alike.

Lululemon's sales and stock price have surged even as inflation-weary shoppers have cut back on purchases of clothing and other products in favor of travel and experiences. Much of its continued success will hinge on its ability to sustain the interest of young shoppers without turning off older ones, and fend off new entrants like Alo Yoga and Vuori.

"All my friends at school wear Lululemon," said Hannah McMullan, a seventh-grader who lives in Chappaqua, N.Y. "There's no reason to think it's not cool because older people wear it."

Teens can be a fickle bunch. Brands that were once mainstays with this group like **Adidas** and **Under Armour** have lost sway with younger shoppers, according to biannual surveys conducted by investment bank Piper Sandler.

Parents say they are willing to spend upward of \$100 for Lululemon leggings and sweatshirts because the clothes last. They also are happy to have something in common with their children. "There are so few things in those teen years that you can do together," said Jennifer Weitzman, a 53-year-old copywriter and Hannah's mom.

While certain luxury brands hold the same cross-generational pull, most 12-year-olds aren't carrying \$2,000 Louis Vuitton totes to school. Lululemon is more within reach but still signals membership in an exclusive club.

"It's a status symbol," said Sierra Marelia, a 20-year-old sophomore at the University of Pennsylvania who started wearing Lululemon in middle school.

Founded in 1998 by Canadian businessman Chip Wilson, Lululemon tapped into communities

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**BROADCASTING**  
Usher is chosen to headline the halftime show at the next Super Bowl. **B3**



**HEARD ON THE STREET**  
Lessons for investors from a financial crisis 25 years ago. **B10**

## Real-Estate Bust Plays Out On the San Francisco Streets

By SHANE SHIFFLETT AND PETER SANTILLI

As it rolls toward downtown San Francisco, the California Street cable car passes the gothic Grace Cathedral and an 8-foot tall statue of Tony Bennett. Then riders start to see the city's newest landmarks.

Among them is 650 California Street, a 34-story office building that has defaulted on its mortgage.

Further on is 101 California, whose second-biggest tenant left last year and whose biggest is slashing staff and office space.

Go around the corner and Embarcadero Square is for sale for \$90 million. Its owner bought it for \$245 million in 2018.

Walk down Market Street, and you will hit San Francisco Centre, the city's largest mall. An owner's name was pried off the wall when it stopped loan

payments, but traces of the logo remain. Last month the retailer Nordstrom closed its five-story flagship store there.

San Francisco's downtown properties were some of the most valuable in the country. Buyers loaded up on debt to get a piece of the booming city.

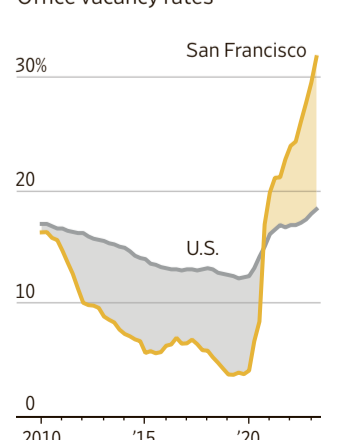
Now vacancies are approaching twice the national rate, according to CBRE Econometric Advisors.

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A selection of commercial properties in San Francisco with debt tied to mortgage-backed securities



Office vacancy rates



Sources: WSJ analysis of S&P Global data (properties); CBRE Econometric Advisors (vacancy rates)

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# BUSINESS & FINANCE



Wearing their Lululemon clothing are: left, Hannah McMullan and her mom, Jennifer Weitzman, and, right, Abby Fernstrom and her mom, Cheryl Fernstrom.

## Moms, Kids Both Wear Lululemon

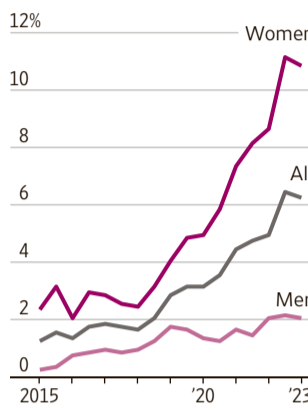
Continued from page B1 by making local fitness instructors its brand ambassadors and by hosting events like 10k runs. Many of the women who grew up wearing Lululemon to the gym—and as athleisure took hold, to the market, the mall and pretty much everywhere else—now have children of their own.

Some brands have turned off older customers in pursuit of younger ones. When Tiffany & Co. ran an ad campaign in 2021 with the tagline “Not Your Mother’s Tiffany,” a backlash ensued on social media with some longtime customers saying they felt insulted. JCPenney in 2018 refocused on middle-aged moms after attempts to court millennials fizzled.

Lululemon so far has managed to straddle the generational divide.

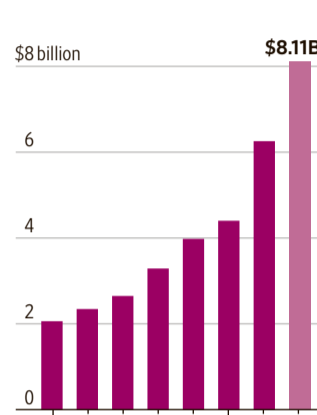
It courts younger shoppers on TikTok and with stores on university campuses. It also pays homage to older customers with clothing lines like one last year called the “Throwback Col-

### Share of teens who view Lululemon as their favorite apparel brand



Notes: Survey conducted in the spring and fall of each year; FY2022 ended Jan. 29 Sources: Piper Sandler (survey); S&P Capital IQ (sales)

### Lululemon Athletica's annual revenue



2.5-inch version. “I don’t feel like I’m trying to be too young,” which is the case with other brands that straddle the mother-daughter divide, said Leonhardt, who lives in New York City.

McDonald said Lululemon has grown its market share in recent years with age groups from Generation Z to baby boomers.

Lululemon was the second-favorite athletic apparel brand behind Nike among teens, and the third-favorite apparel brand overall behind Nike and American Eagle Outfitters, according to the latest Piper Sandler survey.

Lululemon’s sales have more than doubled to \$8.11 billion at the end of its most recent fiscal year, compared with 2019. Sales in its most recent quarter jumped 18%, compared with the same period a year ago.

Its shares are up nearly 150% over the past five years, outperforming a roughly 47% gain in the S&P 500 Index.

For 12-year-old Abby Fernstrom, all that matters is that her friends at school wear Lululemon.

When her mom, Cheryl Fernstrom, came home with three bags of matching outfits for the two of them, Abby was ecstatic. “There are some clothes my mom wears that I don’t want to wear,” Abby said. “But with Lululemon, I was like, ‘Great!’”

## Parks Look To Fall and Halloween

Continued from page B1

hopes for a robust postpandemic recovery meet the reality of heightened competition for leisure spending and uncooperative weather. Analysts say park traffic improved later in the summer, but the fall season remains pivotal.

Theme parks’ embrace of Halloween has been a multidecade trend. In 1973, Knott’s Berry Farm in Buena Park, Calif., now owned by Cedar Fair, introduced “Knott’s Scary Farm” to drum up more fall business. Now, most U.S. amusement parks, and even some in other countries, mark the holiday with their own festivities. Earlier this year, Universal said it plans to open a year-round horror-focused park in Las Vegas, a sign of ambitions to offer scarecentric events beyond Halloween.

The expected fall bump comes with challenges. Kids are back in school and their fall schedules become packed. Apple picking, leaf peeping and other fall activities also compete for families’ leisure time. Hurricane season threatens to disrupt the period, especially in Florida and Texas. In late summer, Hurricane Idalia battered Florida and other parts of the Southeast, while tropical storm Hilary posed a rare threat to Southern California as it approached land.

Still, fall events have become moneymakers. Across Six Flags, SeaWorld and Cedar Fair, the fourth quarter, which runs from the start of October through the end of the year, has become a bigger source of annual revenue over the past decade. In 2019, Cedar Fair generated more than 17% of its annual sales in the fourth quarter, up from 12% in 2013.

Beyond driving traffic, many parks cash in by selling separate tickets for day- and nighttime Halloween events. Many of the evening events have also become more adult-oriented, said Chris Woronka, an analyst at Deutsche Bank. That translates into a boost of high-margin cocktail and beer sales.

“Let’s face it, this is like an adult-beverage-themed holiday,” Woronka said. “Adults will spend more per capita than they will just on their kids.”

Hersheypark launched its haunt-focused event, called “Dark Nights,” in 2022. The event, which started earlier this month, includes a haunted coal-mine attraction and various scare zones.

The event features a haunted house based on a character called Ethel Mortem, a second-generation meat processor running the family business with the help of her sinister nieces and nephews.

SeaWorld runs a not-so-spooky daytime event called “Spooktacular,” which turns into “Howl-o-Scream” at night. “Howl-o-Scream is deliberately NOT for young children or the faint of heart,” a spokesperson said.

The nighttime event features live shows and haunted houses, along with food and drinks available at the “Blood Bar.”

Six Flags gave customers in the spring an early taste of its popular “Fright Fest” event, with its first-ever “Scream Break.” The chain’s bigger parks are rolling out new haunted houses this fall based on popular horror movies like “The Conjuring” and “Saw.” The child-friendly “Boo Fest” features corn mazes and trick or treating. “These events play a vital role in the company’s strategy,” Six Flags said.

Parks also seize on the festivities to get a jump on selling next-year season passes. Six Flags recently marketed discounts of up to 70% on 2024 season passes, which also include admission to Fright Fest and its Oktoberfest parties. At the chain’s park in Arlington, Texas, the highest-grade 2024 season pass was on sale for \$110 a person, down from \$170.

“The companies have just been incredibly aggressive with their sale passes for the next year,” Deutsche Bank’s Woronka said. “It’s not just about what they’re going to spend for Oktoberfest or Halloween. It’s really, ‘Can we also get the pass?’”

Natalie Parrish, a 35-year-old chemist from Greenwood, S.C., typically skips Halloween festivities at the Carowinds park in Charlotte, N.C. A recent visit to the park with her daughters, ages 10 and 16, persuaded them to plan a return trip for October, after they saw decorations for the “SCarowinds” event going up. Admission is included with the roughly \$300 they spent on season passes for next year.

“It looks like it’s going to be really fun,” Parrish said. “And wherever their little run-through scary sections are—that looked pretty cool too.”

Wall Street analysts will be watching closely to see if season-pass deals tempt potential parkgoers, as costs ranging from higher interest rates to the resumption of student-loan payments squeeze consumers. A bright spot for theme parks this year is that consumers have continued paying higher prices for admittance, parking, food and more.

## City Shows Real-Estate Troubles

Continued from page B1

Owners are on the hook for nearly \$12 billion of office bonds, according to S&P Global.

As landlords watch their loans mature, they will have a difficult time paying them off without willing lenders. Banks are already pulling back from making loans to office landlords, and commercial mortgage-backed security issuance plummeted this year.

While the city’s office market recently showed signs of life with sales of properties resuming at much lower valuations, a wave of maturing loans already in distress threatens to extend the city’s economic turmoil.

About half of the retail stores at Union Square, the city’s downtown shopping district, have closed, and government revenue has declined. Ridership last month on Bay Area Rapid Transit was down 61% compared with 2019.

The glittering dome above Market Street is one of the last remaining structures from a century-old building that was replaced by a shopping mall, the San Francisco Centre.

The pandemic hit the mall’s retailers hard, and one of the complex’s biggest tenants, the anime streamer Crunchyroll, gave up its office space on the seventh floor.

Occupancy at the mall is now below 50%. It was 96% when the \$558 million mortgage was issued.

In June, the complex’s owners, Unibail-Rodamco-Westfield, and Brookfield Properties, stopped paying the mortgage. By July, the Westfield logo was removed, leaving traces spelling out the name.

In August, Nordstrom closed its store. Developers are pitching plans to replace the mall with a soccer stadium.

Westfield cited declines in sales, occupancy and foot traffic as reasons for transferring the property back to the lender.

Higher interest rates have hit real-estate values. The investment firm Pacific Investment Management Co., known for its bond funds, got a double whammy at 650 California Street.

Tenants include the buy now, pay later lender Affirm Holdings, which cut 19% of its workforce and is thinking about abandoning its lease. Higher rates, wrote Chief Executive Max Levchin in a letter to staff, “dampened consumer spending and increased Affirm’s cost of borrowing dramatically.”



The San Francisco office market has shown signs of life, but a wave of maturing loans threatens to extend the turmoil.

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BUSINESS NEWS

# Usher Headlines Show At Super Bowl Halftime



Usher will headline the halftime show for Super Bowl LVIII in Las Vegas next winter, the National Football League said Sunday.

The "Confessions" singer will perform at the NFL's annual championship game on Feb. 11, 2024, in what is typically one of the most watched and discussed musical performances anywhere each year.

"I can't wait to bring the world a show unlike anything else they've seen from me before," the eight-time Grammy Award winner said in a statement.

Apple Music became the sponsor of the popular halftime show in 2022 after the NFL signed a multiyear deal with the tech giant's music streaming service, replacing longtime sponsor PepsiCo.

Usher, who has been a star since the 2004 release of the

hit album "Confessions," follows in the footsteps of other Super Bowl performers including Prince, Beyoncé, Bruce Springsteen, Lady Gaga and, earlier this year, Rihanna.

In 2022, the halftime performance featured Dr. Dre, Snoop Dogg, Mary J. Blige and Eminem—stars of 1990s and 2000s hip-hop. Kendrick Lamar, the 34-year-old Pulitzer Prize-winning rapper, also performed.

Usher announced his selection Sunday with an Instagram video featuring reality star and entrepreneur Kim Kardashian, who interrupts him in the studio with a phone call to let him know he got the gig.

"Who should I send my ticket request to?" Kardashian asks.

"I'm going to call you back," Usher replies.

—Ginger Adams Otis

# Ford's Canada Workers Back Deal

By NORA ECKERT

The union representing Ford Motor's auto-factory workers in Canada on Sunday said it secured double-digit wage increases and improved pensions in its labor pact with the automaker.

Unifor, which represents about 5,600 Ford workers across facilities in Canada, outlined terms of the deal it reached last week with the U.S. automaker.

The Canadian union said 54% of its Ford members voted in favor of the new three-year contract, ratifying the agreement.

Workers would receive a 15% general wage increase during the contract—including a 10% bump in the first year, plus cost-of-living adjustments, Unifor said, calling it the largest negotiated wage increase in the union's history.



A Ford plant in Oakville, Ont. A 15% wage rise is on the table.

Ford's contract talks in Canada have been running parallel to its negotiations with the United Auto Workers in the U.S. The American union has been bargaining with Ford, General Motors and Jeep maker Stellantis si-

multaneously, whereas Unifor focused on reaching a deal with Ford first, intending to use that agreement as a template for the other two.

On Friday, the UAW spared Ford from further strikes as it called more walkouts at GM

and Stellantis. UAW President Shawn Fain said union negotiators had made more progress with Ford than the other two companies.

Negotiators for the UAW and companies were expected to bargain over the weekend. More than 18,000 workers are on strike at the Detroit automakers' facilities following Friday's escalation, in which workers walked off the job at dozens of parts-distribution facilities across 20 states.

In Canada, Unifor National President Lana Payne called the new labor deal exceptional. Unifor's temporary agreement improved retirement security for workers by enhancing its pension plans, it said. It also upped retiree healthcare benefits.

Unifor workers will also receive quarterly cost-of-living adjustments, their first since 2008.

# Rite Aid Plans to Close Hundreds of Locations

By ALEXANDER GLADSTONE AND ANDREW SCURRIA

Rite Aid is negotiating with creditors over the terms of a bankruptcy plan that would include liquidating a substantial portion of its more than 2,100 drugstores, according to people familiar with the talks.

Rite Aid has proposed to close roughly 400 to 500 stores in bankruptcy, and either sell or let creditors take over its remaining operations, one of the people said.

A group of bondholders would prefer to liquidate a larger number of stores, the people said. The two sides are in discussions over the number of stores to be closed, they said.

The Philadelphia-based company faces more than \$3.3 billion in debt and over a thousand federal lawsuits alleging it oversupplied opioids.

A number of its stores are stuck in uneconomical long-term leases that the company can't get out of, making bankruptcy an effective tool to shed them.

The company, which competes with larger drugstore players CVS and Walgreens, plans to conduct an auction process in an effort to sell its

Elixir pharmacy unit and other valuable parts of the business, the people said.

Most of the federal opioid lawsuits against Rite Aid have been consolidated into a multidistrict litigation in Ohio. The company also faces similar cases pending in state courts that allege it contributed to the opioid epidemic, as well as a civil lawsuit by the Justice Department that alleges the company dispensed controlled substances in violation of the False Claims Act and Controlled Substances Act.

Rite Aid has asked a court to dismiss the Justice Department's lawsuit and denied the allegations that it filled unlawful opioid prescriptions.

The opioid litigation claims are expected to be treated as unsecured in a potential bankruptcy.

Secured creditors stand to be paid first from any recoveries provided by the company.

Three pharmaceutical manufacturers—Purdue Pharma, Endo International and Mallinckrodt—have filed for bankruptcy in recent years to resolve opioid litigation they faced. Rite Aid would be the first pharmacy chain to seek chapter 11 while facing opioid-related lawsuits.

The chain has proposed to close about 400 to 500 stores in bankruptcy.

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## What Nike's Earnings Tell Us About the State of Retail



WSJ's Take On the Week podcast looks at sneaker giant Nike, which is expected to report earnings this week. Plus: Paris Fashion Week and what's ahead for luxury brands. Scan this code to listen to the podcast.

## TECHNOLOGY

## Musk's Feud With Apple Simmers

X owner's ambitions for his social-media company clash with the iPhone maker

By TIM HIGGINS

Tim Cook was in an awkward position this past week as he launched the latest iPhones. He had Elon Musk to thank.

The Apple chief executive recently was asked on CBS News's "Sunday Morning" why the iPhone maker continues to advertise on Musk's Twitter-turned-X, even as a Jewish civil-rights organization raises concerns about hateful speech on the social-media platform.

"It's something that we ask ourselves," said Cook, who several years ago won the Anti-Defamation League's first Courage Against Hate award. "Generally, my view is Twitter's an important property. I liked the concept that it's there for discourse. And there is a town square. There's also some things I don't like."

Musk has denied promoting antisemitism on X, has criticized the ADL—and has separately been unrelenting about his problems with Apple's business, even after he and Cook reached a detente following some barbs from Musk last November.

In a tweet last month, he said the tech giant's power as wielded through its App Store "will have to be taken from them by force." It is a sentiment he echoes in the biography of him published this month.

Apple controls access to more than one billion iPhone users through its App Store, making it hugely important to X, which Musk bought last year; many X users access the social-media platform by downloading it through the App Store. Musk's company is subject to Apple's rules, including a commission of as much as 30% on revenue generated through the app.

While Cook's style is to engage people he disagrees with, Musk, who also leads Tesla and SpaceX, is prone to put his beefs into tweets. He doesn't like a lot of rules. And defiance is his calling card.



Elon Musk has criticized the power of Apple's App Store.

That was evident soon after he acquired X in late October of last year and began lashing out at Cook, declaring all-out war against the tech giant.

"Apple has mostly stopped advertising on Twitter. Do they hate free speech in America?" Musk tweeted last November. "What's going on here @tim\_cook?"

The ruckus placed even greater attention on the iPhone maker's powerful role as gatekeeper to a large part of the App Economy, as regulators and lawmakers around the world consider curbing its reach. In short order, Washington politicians were amping up their rhetoric against Apple in a political climate that has put big tech under scrutiny.

But Cook's diplomacy—an invitation for Musk to meet in person at Apple headquarters—helped cool things off just as quickly as they erupted.

A detente was reached. Apple continued to advertise on the platform, giving Musk a needed win when many other brands fled amid his dramas and their concerns about content.

In April, at a brand conference, Musk pointed to Apple's continued business with the platform to suggest it is safe for others. "It's worth noting that...Apple has remained a major advertiser," Musk said at the event near Miami. "Disney has remained a major advertiser—they literally advertise

children's shows on Twitter—and they wouldn't do that if it was filled with hate speech."

Still, a question has lingered: How long will the peace last between the world's richest man and the world's most valuable company?

In the book "Elon Musk" released earlier this month, biographer Walter Isaacson writes that the fateful meeting between Musk and Cook last November didn't result in much for X beyond the ad-spending commitment by Apple.

Musk wanted much more. His complaints about Apple taking as much as 30% of in-app revenue through the App Store didn't go far with Cook, who has long heard similar gripes and not bent.

And, according to the book, the men didn't discuss Musk's desire for Apple to grant special access to App Store user data—which Cook's company prides itself on not handing out or using itself—to make it easier for X to pursue its broader ambitions.

"That's a future battle that we will have to fight," Musk is quoted as saying, "or at least a conversation that Tim and I will have to have."

Musk wants to transform X beyond social media into a so-called super app, like China's WeChat, with a host of services including digital commerce. He wants to bolster subscription revenue, too, and has begun offering greater rev-



Apple CEO Tim Cook hasn't bent on App Store commissions.

enue sharing with creators as he aims to make the site appealing for the kinds of content likely to keep users coming back for more.

A business built more on subscriptions would mean Apple would get more of X's revenue.

Musk's agitation against Apple's control over the iPhone user base comes as other companies are trying to chip away at the power around the world.

"Fortnite" maker Epic Games is locked in a legal battle over Apple's ability to block alternative app stores and force apps to use its payment system.

Apple has defended itself, saying its fees are fair for the technology it is providing and are in line with industry norms and that its App Store's rules protect users. While Apple has been mostly victorious in court, each side faces a deadline later this month to appeal various rulings to the U.S. Supreme Court.

A bigger challenge to Apple's power has come from overseas, after the European Union passed legislation last year that intends to create more competition for big tech, including requiring companies like Apple to allow alternative app stores.

It isn't yet clear what the full ramifications to Apple would be of the law, which is expected to go into effect next

year—including whether the company would extend any changes it makes for that market to the U.S.

In the meantime, Musk has been poking at the truce.

"If Apple competes against the whole world, Apple will have the whole world against it. This is not a winning scenario," Musk tweeted in June about its App Store power. Then last month, he tweeted about Apple's 30% commission affecting X's content creators, promising to look into what could be changed.

"I will speak with @tim\_cook and see if that can be adjusted to be just 30% of what X keeps in order to maximize what creators receive," he posted.

About two weeks later, however, Musk suggested Apple would give up control only by force. "Phone demand is flattening out, as there just isn't much more you can do with a black rectangle," Musk tweeted. "That means most of Apple's market cap will be in that 30% fee...Even though 30% is obviously too high, it will have to be taken from them by force. It is basically illegal for the Apple board to reduce that number voluntarily."

Late Friday (hours after we sought comment for this article), he struck a different tone. Responding to tweets from Cook about the new iPhone lineup, Musk wrote: "I'm buying one!"

## Cisco Deal Is a Bet on AI's Role In Security

By JAMES RUNDLE AND KIM S. NASH

With the \$28 billion acquisition of Splunk by network-equipment giant Cisco Systems, Splunk and Cisco hope to build AI-backed cybersecurity monitoring tools that can detect hacking threats closer to real time, letting businesses stop cyberattacks before they damage corporate networks.

Splunk, a 20-year-old technology company that has never been profitable, had been chasing that goal and will benefit from Cisco's resources, including access to troves of data from Cisco's big customer base, Gary Steele, Splunk's chief executive, said in an interview. "This puts us in a really interesting position," Steele said.

Splunk's estimated \$4 billion in recurring revenue from product and service subscriptions immediately gives Cisco a bigger hold in cybersecurity, Cisco CEO Chuck Robbins added, in the interview. "This is a very good deal, financially," he said.

The market for the cybersecurity services Splunk provides, known as security information and event management, has grown substantially just as other areas of cybersecurity services face financial pressure, with Microsoft and Google investing in the area. Google bought cyber giant Mandiant last year for \$5.4 billion.

"Cisco is simply following market demand by offering this technology stack," said Mitchell Schneider, senior principal analyst at consulting firm Gartner. Because Cisco doesn't have significant experience in security operations, it will likely rely on Splunk's expertise, he said.

Splunk uses various forms of AI in its products, which primarily handle threat detection and management, while Cisco is known for hardware such as routers and switches, though it also provides software products and security services.

"AI is nothing without data, and the acquisition of Splunk not only enables Cisco to sell more recurring software, but also moves Cisco out of the plumbing business and into the data business," said Rama Sekhar, a partner at venture-capital firm Norwest Venture Partners who was an engineer at Cisco early in his career.

In July, Splunk said it had incorporated generative AI capabilities via a suite of software named Splunk AI, designed to parse data generated by large networks and assist human staff in detecting potential cyberattacks.

Mergers and acquisitions can help to slim the number of vendors offering similar services, but market consolidation risks locking security chiefs into business with fewer providers, said John-Claude Hesketh, CEO at Marlin Hawk, a global recruitment firm.

To decrease that risk, security chiefs should negotiate the right to review contracts if a key vendor is being acquired, Hesketh said, noting that as the landscape shifts "clients are asking lots of questions, including about the right to exit contracts."

Splunk's customers may face some initial difficulty dealing with a larger company, said Roger Thornton, co-founder and general partner at venture-capital firm Ballistic Ventures. On the other hand, he said, the acquisition could provide stability for Splunk's customers, given its financial difficulties.

Steele and Robbins said their respective large customers welcome the combination of complementary products. "In the long term, it may have just made the Splunk product line more likely to be around for a long time," Thornton said. A giant company spanning hardware and software security may also prompt rivals to seek acquisitions, he said, to keep pace with their new, large competitor.

—Catherine Stupp and Steven Rosenbush contributed to this article.

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## NOTICE OF SALE

## NOTICE OF SECURED PARTY'S SALE AT PUBLIC AUCTION OF INTELLECTUAL PROPERTY RIGHTS TO THE WORKS OF THE ARTIST RICHARD HAMBLETON

NOTICE IS HEREBY GIVEN that Thursday, November 16, 2023, at 10 a.m. New York time, Regera S à r.l. (the "Secured Party") will offer for sale at public auction (the "Foreclosure Sale") to the highest or otherwise best qualified bidder, as determined by the Secured Party, the intellectual property rights in and to the works of the artist Richard Hambleton (the "Collateral") in which the Secured Party has a security interest. Bids are due on Monday, November 13, 2023, at 10 a.m. New York time.

The auction will be held at the New York offices of Morgan, Lewis & Bockius LLP located at 101 Park Avenue, New York, New York 10178-0060. Remote participation will also be available.

The Secured Party has a security interest in the Collateral granted to the Secured Party by Unfiled-1 Copyright Limited, f/k/a AVA Holdings Limited, a Jersey company (the "Debtor"). The Secured Party will offer for sale all right, title and interest of the Debtor in and to the Collateral. The Secured Party understands that much of the Collateral consists of rights relating to unregistered copyrights.

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The Foreclosure Sale will be conducted by Hilo IP Services, LLC, d/b/a Hilo Streambank (the "Intangible Assets Advisor"), on behalf of and as agent for the Secured Party. Any document, statement or information provided to any potential bidder by the Secured Party or the Intangible Assets Advisor is provided solely for informational purposes and no representations or warranties whatsoever as to the accuracy or completeness thereof are made by the Secured Party or the Intangible Assets Advisor.

At such time as the Collateral is sold to the successful bidder, the security interest of the Secured Party in Collateral will be

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The Secured Party reserves the right, whether directly or through an affiliate, to bid for and purchase the Collateral, whether by credit bid or cash, and reserves the right to postpone or cancel the Foreclosure Sale at any time without further notice.

Only persons who complete a Bidder Qualification Form and satisfy the conditions thereunder will be permitted to bid at the Foreclosure Sale. You may contact the Intangible Assets Advisor as provided below to obtain the Bidder Qualification Form and for further information.

Further information as to the terms and conditions of the Foreclosure Sale and the Confidentiality Agreement to be signed by each prospective bidder, the Information Memorandum, and such other information concerning the Collateral which the Secured Party has available in its possession may be obtained upon request and should be examined by prospective bidders through contacting the Intangible Assets Advisor acting on behalf of the Secured Party as provided below.

Gabe Fried, gfried@hiloglobal.com, 617.458.9355  
Rachelle Kalnit, rkalin@hiloglobal.com, 212.993.7214  
Stella Silverstein, silverstein@hiloglobal.com, 646.651.1953  
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## Meta to Use Chatbots in Youth Push

Continued from page B1  
nas, as they are known internally, will help the company attract young users.

Meta is planning to develop dozens of these AI personality chatbots. The company has also worked on a product that would allow celebrities and creators to use their own AI chatbots to interact with fans and followers, according to people familiar with the matter.

Among the bots in the works is one called "Bob the robot," a self-described sassy-master general with "superior intellect, sharp wit, and biting sarcasm," according to internal company documents viewed by The Wall Street Journal.

The chatbot was designed to be similar to that of the character Bender from the cartoon "Futurama" because "him being a sassy robot taps into the type of farcical humor that is resonating with young people," one employee wrote in an internal conversation viewed by the Journal.

"Bring me your questions, but don't expect any sugar-coated responses!" the AI agent responded in one instance viewed by the Journal, along with a robot emoji.

Meta isn't the first social-media company to launch chatbots built on generative AI technology in hopes of catering to younger users. Snap launched My AI, a chatbot built on OpenAI's GPT technology, to Snapchat users in February. Silicon Valley startup Character.AI allows people to create and engage with chatbots that role-play as specific characters or famous people like Elon Musk and Vladimir Putin.

Researchers and tech employees have found that lending a personality to these chatbots can cause some unexpected challenges. Re-



The Instagram parent is fighting with TikTok for young users.

searchers at Princeton University, the Allen Institute for AI and Georgia Tech found that adding a persona to ChatGPT, the chatbot created by OpenAI, made its output more toxic, according to the findings of a paper the academics published this spring.

"To make a language model usable, you need to give it a personality," said Princeton University researcher Ameet Deshpande, one of the lead authors of the paper. "But it comes with its own side effects."

My AI has caused a number of headaches for Snap, including chatting about alcohol and sex with users and randomly posting a photo in April, which the company described as a temporary outage.

Despite the issues, Snap CEO Evan Spiegel in June said that My AI has been used by 150 million people since its launch. Spiegel added that My AI could eventually be used to improve Snapchat's ad business.

There are also growing doubts about when AI-powered chatbots will start generating meaningful revenue for companies. Monthly online visitors to ChatGPT's website fell in the U.S. in May, June and July before leveling off in August, according to data from analytics platform Similarweb.

Meta's early tests of the bots haven't been without problems. Employee conversations with some of the chatbots have led to awkward instances, documents show.

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BUSINESS & FINANCE

# Japanese Stocks Aren't Popular at Home

Government is pushing its risk-averse citizens to ramp up investing

By AKANE OTANI

TOKYO—Japan's government is on a mission to make buying stocks hot again.

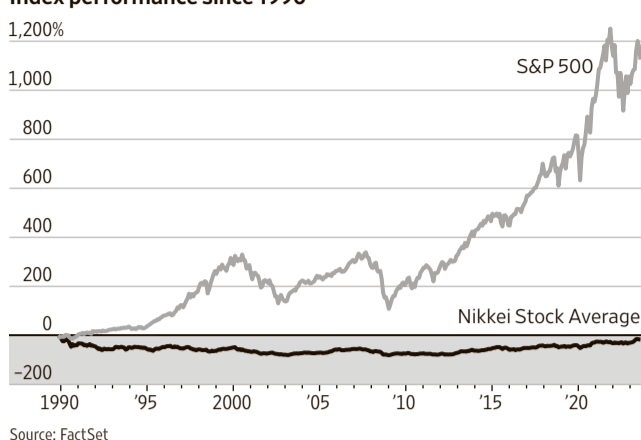
Many of America's biggest investors are bullish on Japan. Warren Buffett shared that he increased his investments in Japanese companies during an April visit to the country. Ken Griffin is preparing to reopen an office in Tokyo for his hedge fund, Citadel, and investment banks **Goldman Sachs** and **Morgan Stanley** have issued optimistic outlooks for Japan's stock market.

Japan's problem is that there are few signs its estimated 125 million residents share in the excitement.

Burned by dismal returns since the bursting of Japan's asset bubble in the late 1980s and early 1990s, generations of families here have stashed most of their money in low-yielding savings accounts rather than try to increase their wealth through the stock market.

Japanese households put an average of just 11% of their savings into stocks and 54% in cash and bank deposits, ac-

Index performance since 1990



Source: FactSet

According to Bank of Japan data released last month. That trails well behind the U.S., where households have about 39% of their money tied up in the market and only 13% in cash and bank deposits, according to Federal Reserve data.

Haruyo Arai, a 62-year-old office worker, began investing in the stock market just last month.

"I was brought up by parents who would say, 'Don't dabble in stocks,'" she said.

Japanese Prime Minister Fumio Kishida has pledged to double households' asset incomes, in part by encouraging people to invest in risky assets such as stocks. The government is raising caps for Japan's tax-exempt invest-

ment system for small investors, the Nippon Individual Savings Account, with changes set to take effect in January. The Tokyo Stock Exchange has been urging companies to boost their valuations and increase shareholder returns.

Arai cited the coming expansion to NISA, along with a desire to save more money for the future, as some of the reasons she decided to begin taking investing more seriously. She has been taking weekend classes at Tokyo-based Financial Academy to learn more about stocks.

Some believe investors like Arai will prove to be the exception, not the rule. Stocks here haven't hit a record in decades. There isn't much buzz among ordinary people



Warren Buffett boosted his investments in Japanese companies.

about investing in Japanese markets.

"I've got the impression that Japanese people don't really think positively about the desire to make money," said Takashi Kawaguchi, a 48-year-old office worker who, like Arai, has been learning about investing at Financial Academy.

While the 2023 rally has helped lift Japanese stock indexes to 33-year highs, long-term returns pale in comparison to what an investor would have gotten by investing in U.S. stocks. The Nikkei closed at 32,402 on Friday, still 17% below its record hit in 1989. The S&P 500 has grown more than twelfold over that time. That has made many investors here turn to foreign

markets instead of focusing their bets within Japan.

"The Nikkei might hit 40,000, god knows when," said Heihachiro "Hutch" Okamoto, foreign equity consultant at retail brokerage Monex. "But most of our investors prefer U.S. stocks."

To Okamoto's point, the most popular names traded on Monex daily aren't Japanese stock indexes like the Topix or Nikkei, brand-name companies like Sony or even the "sogo shosha"—the trading houses that Buffett has invested in. Instead, they are all American names: companies like **Nvidia**, **Tesla**, **Apple** and **Amazon.com**, as well as funds tracking the S&P 500 and the Nasdaq-100.

And that is just among

those interested in investing in the first place. While in past years, everyday investors in Japan made a name for themselves with their forays into the foreign exchange market, the overall trading culture here has been one of hesitation.

"Most people here think investing is very risky," said Hidekazu Ishida, a special adviser at FinCity.Tokyo, which works with the government and the financial industry to try to boost investment in Tokyo. Being into finance comes off as "kakkowarui," he added, referencing a word for uncool.

Even some heads of companies are lukewarm about the idea of encouraging more individual investors to buy Japanese stocks.

"I'm neutral about that," said Takeshi Niinami, chief executive of whisky and beverage giant **Suntory**, when asked if he thought it would be a good idea for more Japanese people to invest in the market. Stock investing is risky, he said. And many Japanese people remain wary of participating in the market, because of the severity of prior downturns.

"I think perhaps increasing interest rates is better for people," he said.

—Chieko Tsuneoka and Alastair Gale contributed to this article.

## IPO Market Shows Signs Of Life

Continued from page B1

The prices investors were willing to pay for high-growth companies—both public and private—plummeted. Last year, traditional IPOs in the U.S. raised the lowest amount of money in at least two decades, Dealogic data show.

When Instacart went public last week, it sold its stock at a price that valued the company at \$9.9 billion on a fully diluted basis. That was far below the \$39 billion valuation Instacart commanded in a funding round in 2021.

Skeptics say that means the 2021 vibes are long gone, at least for now. Investors and advisers say Instacart's willingness to accept such a severe valuation cut in its IPO is actually a good sign for the market, as it might embolden others to do the same.

"Most venture capitalists recognize the last rounds, in many cases, represented stretch goals that are unattainable prior to a public listing," said Mark Caccavo, general partner at Millenia Capital, a firm that invests in late-stage venture-backed companies. "As soon as we get down to valuations that make sense, when we see sellers ca-

pitulating, I think you'll see public investors take notice."

Other big listings within the past year—including **Intel** self-driving car unit **Mobileye**, **Johnson & Johnson's** consumer healthcare business **Kenvue**, Mediterranean restaurant chain **Cava Group** and direct-to-consumer beauty company **Oddity Tech**—also offer a mixed view of the IPO market.

Oddity and Kenvue are trading below their IPO values; **Mobileye** and **Cava Group** are up.

Trendy shoe designer **Birkenstock** is expected to list shares in October, while healthcare-payment-software firm **Waystar** is consid-

ering an offering before the end of the year, according to people familiar with the matter. IPO advisers say the market is open for large companies with proven results.

"Investors are receptive to new issuances but only for a certain type of company," said Chris Donini, managing director at **Raine Group**, which was an adviser to Arm on its IPO. "Investors want to see financial stability, and they want to see a catalyst for growth."

For now, the window is open, even if it isn't clear how wide or for how long.

Savvides, who advises Neuberger Berman portfolio managers about IPOs, said he is now fielding three to five requests a week for "testing the waters" meetings from private companies considering IPOs. Six months ago, he would get maybe one a week or none.

## U.K. Pension Plans Increasingly Pull Away From Private Equity

By ROD JAMES

Higher interest rates are proving a boon to U.K. defined-benefit pension plans, while causing a headache for many of the private-equity firms that manage money for the systems.

The steady increase in U.K. interest rates since the start of last year has resulted in improved funding ratios for the plans that comprise this \$1.67 trillion pool of capital, allowing them to move money out of buyout- and venture-capital funds and into less-risky assets, according to several pension system managers and consultants.

Traditional pensions have been a mainstay source of capital to sponsored funds for decades, but changed market conditions since last year have caused that flow to ebb. In addition, many of those pensions closed themselves to new members long ago and are now able to contemplate an orderly windup.

"Pension managers look at their [improved] financial position and say, 'We don't need as-high returns,'" said Lucy Barron, a partner in the investment consulting team at industry advisory

firm Aon. These managers instead look to invest in assets that predictably match their expected liabilities rather than offer the potential to exceed them, such as corporate and government bonds and in some cases, private credit.

Julie Alexander, head of client investment solutions at **RPMI Railpen**, which provides investment-management services and advice to 107 sub-funds investing the pensions of U.K. railway workers, said she has seen a number of these pools accelerate their move away from riskier assets.

The pension plans of supermarket chain **Tesco** and **British Airways** are among those to have done the same, according to several people familiar with the matter.

Private equity accounted for almost 22% of the equity holdings of the 5,131 U.K. defined-benefit plans with roughly 9.6 million members at the end of March 2022, according to an annual report from the Pension Protection Fund. The PPF helps pay plan benefits when a sponsor becomes insolvent.

The proportion invested in private equity represents an increase of 11 percentage points since 2018, but a decline in real terms; as pensions moved money out of all equity investments and into bonds, private equity loomed larger over a smaller pool. As of last year, unlisted equities accounted for around \$70 billion of total assets in U.K. pensions.

The funding ratios of traditional British pensions—which reflect the value of assets as a proportion of promised benefits—have improved dramatically since the start of last year, when the Bank of England began pushing benchmark interest rates steadily higher to today's 5.25% from 0.25%. The value placed on projected pension liabilities remains closely linked to the interest rate paid for U.K. government bonds, known as gilts, so when long-term rates rise, the financial health of pensions improves.

Corporate pension plans sponsored by companies that comprise the FTSE 350, a stock index that includes the largest London-listed businesses, had aggregate funding ratios of 109% at the end of July, meaning that their as-

sets exceed projected liabilities, and have been fully funded since June 2022, according to pension consulting firm Mercer. Apart from a handful of quarters, these plans had been running deficits since March 2007.

New regulations also play a role in driving traditional pensions to sell illiquid assets such as private-equity investments. In March, the financial policy committee of the Bank of England said liability-driven investment funds, levered vehicles that use derivatives to hedge against a pension's exposure to changes in interest rates and inflation, must show they can weather a 2.5% jump in government bond yields without being forced to sell assets.

For buyout and venture-capital managers, the pension pullback means they have a smaller pool of potential investors to call on at a time when many are struggling to hit fundraising targets for new vehicles. And a dearth of stock-market listings and greatly reduced merger-and-acquisition activity has meant less cash flowing back to pension investment managers from their private-equity bets.

**109%**  
Aggregate funding ratios of pension plans sponsored by FTSE 350 companies



Carnival is expected to report per-share earnings of 76 cents on Friday. A Carnival ship in Miami.

### THE TICKER | MARKET EVENTS COMING THIS WEEK

Monday	Tuesday	Wednesday	Thursday	Friday
<b>Earnings expected</b> Estimate/Year Ago Thor Industries 0.95/5.15	<b>Earnings expected</b> Estimate/Year Ago Cintas 3.67/3.39 Costco Wholesale 4.82/4.20 TD Synnex 2.47/2.74	<b>Durable-goods orders</b> July, previous down 5.2% August, expected down 0.5%	<b>Thursday</b> <b>EIA report: natural gas</b> Previous change in stocks in billions of cubic feet up 64	<b>Friday</b> <b>Personal spending</b> July, previous up 0.8% August, expected up 0.5%
<b>Consumer Confidence</b> August, previous 106.1 September, expected 106	<b>Earnings expected</b> Estimate/Year Ago Concentrix 2.85/2.95 Jefferies Financial Group 0.33/0.75	<b>Earnings expected</b> Estimate/Year Ago Freddie Mac mortgage survey Previous weekly averages 30-year fixed 6.54% 15-year fixed 7.19%	<b>GDP Deflator</b> 2nd qtr. sec. est. up 2.0% 2nd qtr., third est. up 2.0%	<b>Personal income</b> July, previous up 0.2% August, expected up 0.5%
<b>Ratio, days of trading volume of current position, at Aug 31</b> NYSE 4.3 Nasdaq 2.6	<b>Mort. bankers indexes</b> Purch., previous up 2.0% Refinan., prev. up 13.0%	<b>Freddie Mac mortgage survey</b> Previous weekly averages 30-year fixed 6.54% 15-year fixed 7.19%	<b>Initial jobless claims</b> Previous 201,000 Expected 206,000	<b>Chicago PMI</b> August, previous 48.7 September, expected 47.0
		<b>Gross domestic product:</b> Percentage change, annual rate 2nd qtr. sec. est. up 2.1% 2nd qtr., third est. up 2.3%	<b>Earnings expected</b> Estimate/Year Ago Accenture 2.66/2.60 CarMax 0.74/0.79 2.32/2.34 Jabil 0.76/0.93 Nike 0.76/0.93 Vail Resorts (3.32)/(2.70)	<b>U.Mich. consumer index</b> September, prelim. 67.7 September, final 67.7
		<b>EIA status report</b> Previous change in stocks in millions of barrels Crude-oil stocks down 2.1 Gasoline stocks down 0.8 Distillates down 2.9		<b>Earnings expected</b> Estimate/Year Ago Carnival 0.76/(0.58)

\* FactSet Estimates earnings-per-share estimates don't include extraordinary items (Losses in parentheses) ♦ Adjusted for stock split  
Note: Forecasts are from Dow Jones weekly survey of economists

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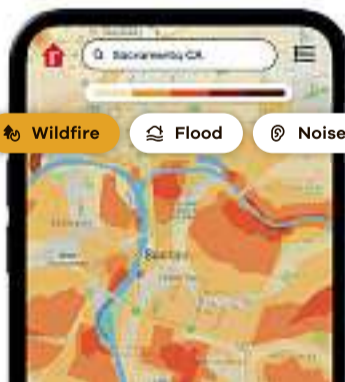
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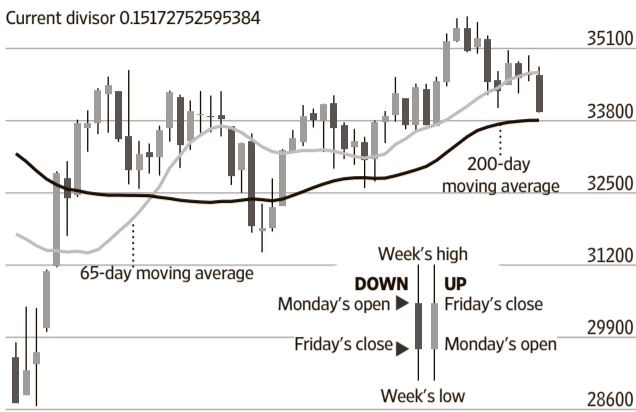
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# MARKETS DIGEST

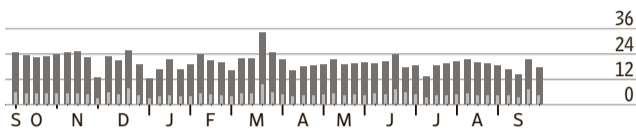
## Dow Jones Industrial Average

**33963.84** ▼654.40, or 1.89% last week  
 Trailing P/E ratio 24.59 17.42  
 P/E estimate \* 18.63 15.77  
 High, low, open and close for each of the past 52 weeks  
 Dividend yield 2.13 2.40  
 All-time high 36799.65, 01/04/22



Current divisor 0.15172752595384

## NYSE weekly volume, in billions of shares



\*Weekly P/E data based on as-reported earnings from Birinyi Associates Inc.; †Based on Nasdaq-100 Index

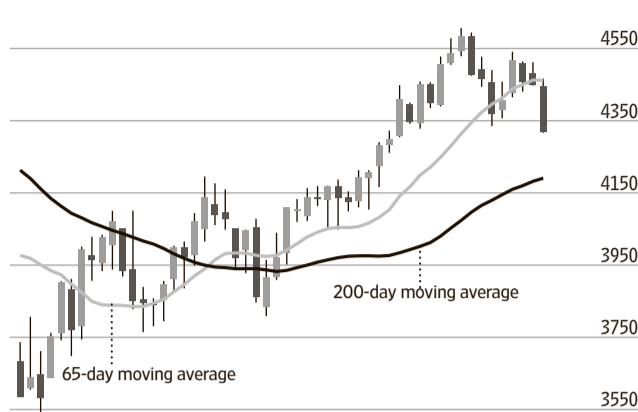
## Major U.S. Stock-Market Indexes

Index	High	Low	Latest Week Close	Net chg	% chg	Low	52-Week Close	High	% chg	YTD	3-yr. ann.
<b>Dow Jones</b>											
Industrial Average	34776.28	33947.24	<b>33963.84</b>	-654.40	-1.89	28725.51	35630.68	14.8	2.5	7.6	
Transportation Avg	15371.40	14958.55	<b>14987.92</b>	-351.51	-2.29	11999.40	16695.32	23.6	11.9	10.1	
Utility Average	896.30	867.62	<b>871.27</b>	-20.86	-2.34	838.99	1002.11	-11.0	-9.9	2.9	
Total Stock Market	44497.12	42990.19	<b>43019.57</b>	-1346.20	-3.03	36056.21	45969.67	16.0	11.7	8.3	
Barron's 400	977.86	954.17	<b>954.29</b>	-25.31	-2.58	825.73	1036.97	13.8	3.7	10.7	
<b>Nasdaq Stock Market</b>											
Nasdaq Composite	13751.28	13200.64	<b>13211.81</b>	-496.53	-3.62	10213.29	14358.02	21.6	26.2	6.4	
Nasdaq-100	15268.96	14686.84	<b>14701.10</b>	-501.30	-3.30	10679.34	15841.35	30.0	34.4	9.5	
<b>S&amp;P</b>											
500 Index	4466.36	4316.49	<b>4320.06</b>	-130.26	-2.93	3577.03	4588.96	17.0	12.5	9.2	
MidCap 400	2581.78	2495.04	<b>2495.51</b>	-71.82	-2.80	2203.53	2728.44	11.4	2.7	10.8	
SmallCap 600	1188.37	1146.37	<b>1146.45</b>	-39.95	-3.37	1064.45	1315.82	6.1	-1.0	10.7	
<b>Other Indexes</b>											
Russell 2000	1847.71	1776.50	<b>1776.50</b>	-70.53	-3.82	1655.88	2003.18	5.8	0.9	5.9	
NYSE Composite	16029.81	15561.79	<b>15569.51</b>	-404.17	-2.53	13472.18	16427.29	12.8	2.5	7.3	
Value Line	557.91	539.62	<b>539.67</b>	-16.97	-3.05	491.56	606.49	7.6	0.6	5.7	
NYSE Arca Biotech	5183.08	5010.06	<b>5011.62</b>	-171.47	-3.31	4390.11	5644.5	11.9	-5.1	-1.7	
NYSE Arca Pharma	921.62	896.07	<b>896.62</b>	-18.73	-2.05	737.84	925.61	19.9	3.3	11.0	
KBW Bank	82.35	78.45	<b>78.51</b>	-3.81	-4.63	71.96	115.1	-20.6	-22.2	3.1	
PHLX <sup>®</sup> Gold/Silver	119.65	114.52	<b>114.58</b>	-4.09	-3.45	91.40	144.37	22.1	-5.2	-7.7	
PHLX <sup>®</sup> Oil Service	98.59	92.82	<b>93.33</b>	-3.633	-3.75	56.08	98.76	61.9	11.3	43.6	
PHLX <sup>®</sup> Semiconductor	3504.03	3337.86	<b>3365.29</b>	-111.10	-3.20	2162.32	3861.63	39.7	32.9	15.6	
Cboe Volatility	17.54	13.57	<b>17.20</b>	3.41	24.73	12.82	33.63	-42.5	-20.6	-13.8	

<sup>®</sup>Nasdaq PHLX

## S&P 500 Index

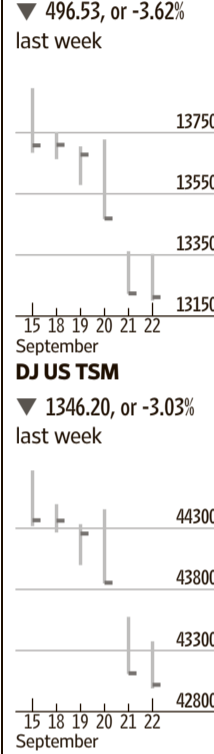
**4320.06** ▼130.26, or 2.93% last week  
 Trailing P/E ratio \* 20.05 18.09  
 P/E estimate \* 19.86 16.42  
 High, low, open and close for each of the past 52 weeks  
 Dividend yield \* 1.59 1.79  
 All-time high 4796.56, 01/03/22



Current divisor 0.15172752595384

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## Nasdaq Composite



<sup>®</sup>Nasdaq PHLX

## New to the Market

### Public Offerings of Stock

#### IPOs in the U.S. Market

Initial public offerings of stock expected this week; might include some offerings, U.S. and foreign, open to institutional investors only via the Rule 144a market; deal amounts are for the U.S. market only

Expected pricing date	Filed	Issuer/business	Symbol/primary exchange	Shares (mil.)	Pricing Range(\$)	Low/High	Bookrunner(s)
9/30	3/21/2022	J-Star Holding Develop and commercialize the technology on carbon reinforcement and resin systems.	<b>YMAT</b> Nq	<b>2.5</b>	4.00/5.00		Maxim Grp, Freedom Capital Markets

#### Lockup Expirations

Below, companies whose officers and other insiders will become eligible to sell shares in their newly public companies for the first time. Such sales can move the stock's price.

Lockup expiration	Issue date	Symbol	Offer price(\$)	Offer amt (\$ mil.)	Through Friday (%)	Lockup provision	
Sept. 27	March 31, '23	Hitek Global	<b>HKIT</b>	5.00	15.0	-53.4	180 days
	March 30, '23	Chanson International Holding	<b>CHSN</b>	4.00	18.8	-37.5	180 days
	March 29, '23	Hongli Group	<b>HLP</b>	4.00	12.5	-62.5	180 days
Sept. 30	April 3, '23	Inspire Technology	<b>ISPR</b>	7.00	21.0	38.0	180 days
	April 3, '23	Multi Ways Holdings	<b>MWVG</b>	2.50	16.0	-83.6	180 days

Sources: Dealogic; Dow Jones Market Data

#### IPO Scorecard

Performance of IPOs, most-recent listed first

Company	SYMBOL	Friday's close(\$)	Offer price	1st-day close	% Chg From	Company	SYMBOL	Friday's close(\$)	Offer price	1st-day close	% Chg From
Turbo Energy	<b>TURB</b>	5.01	0.2	...	...	99 Acquisition Group	<b>NNAGU</b>	10.35	3.5	1.9	...
Klaviyo	<b>KVVO</b>	33.39	11.3	1.9	...	Sacks Parente Golf	<b>SPGC</b>	1.29	-67.8	-95.5	...
Davis Commodities	<b>DTCK</b>	5.05	26.3	...	...	SRM Entertainment	<b>SRM</b>	2.10	-57.9	-57.8	...
Instacart (Maplebear)	<b>CART</b>	30.00	...	-11.0	...	LQR House	<b>LQR</b>	0.54	-89.3	-86.2	...
Neurama Therapeutics	<b>NMRA</b>	11.03	-35.1	-32.1	...	NeurAxis	<b>NRXS</b>	3.35	-44.2	-44.2	...
RayzeBio	<b>RYZB</b>	19.62	9.0	-18.3	...	Fitel	<b>FTEL</b>	2.58	-48.4	-48.9	...
SIMPLE	<b>SPPL</b>	4.83	-8.0	-1.4	...	MIRA Pharmaceuticals	<b>MIRA</b>	4.41	-37.0	-40.6	...
Courtside Group	<b>PODC</b>	2.05	-74.4	-53.3	...	Cheetah Net Supply Chain Service	<b>CTNT</b>	1.92	-52.0	-72.2	...
Solowin Holdings	<b>SWIN</b>	3.70	-7.5	-39.1	...	Hanyu Holdings	<b>HRUY</b>	5.10	-49.0	-34.6	...
Inspire Veterinary Partners	<b>IVP</b>	1.63	-59.3	-46.9	...	SharkNinja	<b>SN</b>	43.78	45.7	3.5	...

Sources: Dow Jones Market Data; FactSet

## Public and Private Borrowing

### Treasuries

Monday, September 25	Wednesday, September 27
Auction of 13 and 26 week bills; announced on September 21; settles on September 28	Auction of 17 week bill; announced on September 21; settles on September 26; settles on October 3
	Auction of 5 year note; announced on September 21; settles on October 2
Tuesday, September 26 <th>Thursday, September 28</th>	Thursday, September 28
Auction of 2 year note; announced on September 21; settles on October 2	Auction of 4 and 8 week bills; announced on September 26; settles on October 3
	Auction of 7 year note; announced on September 21; settles on October 2

## International Stock Indexes

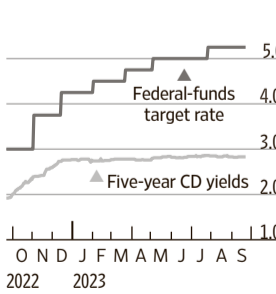
Region/Country	Index	Close	Latest Week % chg	Low	52-Week Range	High	YTD % chg
<b>World</b>	<b>MSCI ACWI</b>	663.14	-2.67	550.37	707.11	9.5	
	MSCI ACWI ex-USA	293.85	-2.20	244.35	314.69	4.5	
	MSCI World	2879.85	-2.74	2367.69	3064.30	10.6	
	MSCI Emerging Markets	964.24	-2.11	842.76	1052.46	0.8	
<b>Americas</b>	<b>MSCI AC Americas</b>	1637.72	-2.98	1363.36	1742.64	12.4	
Canada	<b>S&amp;P/TSX Comp</b>	19779.97	-4.08	18206.28	20767.38	2.0	
Latin Amer.	<b>MSCI EM Latin America</b>	2339.17	-2.16	2027.22	2570.27	9.9	
Brazil	<b>BOVESPA</b>	116008.64	-2.31	97926.34	122560.38	5.7	
Chile	<b>S&amp;P IPSA</b>	3288.65	-2.84	3021.53	3629.67	3.7	
Mexico	<b>S&amp;P/BMV IPC</b>	51677.48	0.63	44626.80	55534.68	6.6	
<b>EMEA</b>	<b>STOXX Europe 600</b>	453.26	-1.88	382.89	471.74	6.7	
	<b>STOXX Europe 50</b>	3947.22	-1.85	3310.09	4079.60	8.1	
Eurozone	<b>Euro STOXX</b>	444.98	-2.03	359.45	470.38	8.5	
	<b>Euro STOXX 50</b>	4207.16	-2.05	3279.04	4471.31	10.9	
Austria	<b>ATX</b>	3158.91	-0.74	2647.43	3557.01	1.0	
Bel-20	<b>Bel-20</b>	3634.80	-2.09	3313.82	3954.16	-1.8	
France	<b>CAC 40</b>	7184.82	-2.63	5676.87	7577.00	11.0	
Germany	<b>DAX</b>	15557.29	-2.12	11975.55	16469.75	11.7	
Greece	<b>Athex Composite</b>	1217.75	-3.24	788.46	1345.95	31.0	
Israel	<b>Tel Aviv</b>	1860.38	0.85	1707.57	1981.04	3.5	
Italy	<b>FTSE MIB</b>	28575.90	-1.11	20353	29645	20.5	
Netherlands	<b>AEX</b>	7309.09	-1.54	630.58	794.27	6.0	
Norway	<b>Oslo Bors All-Share</b>	1503.21	0.02	1247.07	1510.69	10.3	
Portugal	<b>PSI 20</b>	6168.59	-0.57	5190.28	6273.94	7.7	
South Africa	<b>FTSE/JSE All-Share</b>	73398.78	-1.60	63263.94	80791.36	0.5	
Spain	<b>IBEX 35</b>	9501.98	-0.50	7261.1	9694.7	15.5	
Sweden	<b>OMX Stockholm</b>	800.67	-1.40	690.07	886.59	2.4	
Switzerland	<b>Swiss Market</b>	11014.76	-1.63	10072.62	11595.25	2.7	
U.K.	<b>FTSE 100</b>	7683.91	-0.36	6826.15	8014.31	3.1	
<b>Asia-Pacific</b>	<b>MSCI AC Asia Pacific</b>	160.07	-2.35	134.3	170.8	2.8	
Australia	<b>S&amp;P/ASX 200</b>	7068.80	-2.89	6456.9	7558.1	0.4	
China	<b>Shanghai Composite</b>	3132.43	0.47	2893.48	3395.00	1.4	
Hong Kong	<b>Hang Seng</b>	18057.45	-0.69	14687.02	22688.90	-8.7	
India	<b>S&amp;P BSE Sensex</b>	66009.15	-2.70	56409.96	67838.63	8.5	
Japan	<b>NIKKEI 225</b>	32402.41	-3.37	25716.86	33753.33	24.2	
Malaysia	<b>FTSE Bursa Malaysia KLCI</b>	1450.23	-0.60	1373.36	1501.88	-3.0	
Singapore	<b>Straits Times</b>	3204.82	-2.31	2969.95	3394.21	-1.4	
South Korea	<b>KOSPI</b>	2508.13	-3.58	2155.49	2667.07	12.2	
Taiwan	<b>TAIEX</b>	16344.48	-3.41	12666.12	17334.98	15.6	

Source: FactSet; Dow Jones Market Data

## Consumer Rates and Returns to Investor

### U.S. consumer rates

A consumer rate against its benchmark over the past year



### Selected rates

5-year CDs

Bank	Rate	52-Week Range (%)	3-yr chg (pct pts)
<b>Bankrate.com avg:</b>	<b>2.83%</b>		
Barclays Bank	4.50%		
Wilmington, DE	888-720-8756		
First Internet Bank of Indiana	4.59%		
Indianapolis, IN	888-873-3424		
Merrick Bank	4.60%		
South Jordan, UT	866-638-6851		
First National Bank of America	4.65%		
East Lansing, MI	800-968-3626		
Popular Direct	4.65%		
Miami Lakes, FL	800-274-5696		



# HEARD ON THE STREET

FINANCIAL ANALYSIS & COMMENTARY

## How the 'Fed Put' Saved the Stock Market

Long-Term Capital Management's collapse 25 years ago started what turned out to be a hard habit for the central bank to break

Before there was Silicon Valley Bank or Lehman Brothers or the housing meltdown, **Long-Term Capital Management** set the tone for every crisis that would come after it.

The hedge fund, with its dream team of finance luminaries, including Nobel Prize winners, thought it had found a way to make a bundle with what seemed like hardly any risk. The banks that lent it tens of billions of dollars believed them. When the fund's strategy fell apart, Federal Reserve officials coordinated an unprecedented rescue and cut interest rates in a bid to shore up a falling stock market. Even 25 years later, the effects are with us. If there was a time the "Fed put" was born, it was during the LTCM crisis.

The basic idea: By cutting rates in response to a drop in the stock market, the Fed had in effect provided investors with something similar to a put option, an instrument used by traders to insure against losses. Moreover, because the Fed was slow to raise rates again even as stocks surged, it was as though that put kept getting repriced higher, giving investors a pass to take on risks they wouldn't otherwise stomach.

Other episodes followed, such as the rate cuts following the dot-com bust, and the cuts and enormous liquidity infusions that came following the 2008 financial crisis. Now maybe—just maybe—the Fed is weaning the market off of Fed-put thinking. It has only taken a quarter century.

The Fed's first rate cut in 1998 came on Sept. 29, just six days after the Federal Reserve Bank of New York helped arrange a \$3.5 billion bailout of LTCM by a consortium of financial firms. Judging from economic reports from the time, the cut didn't make much sense. The reports showed that the job market was strong and that Americans' incomes and spending were growing robustly.

But stocks had taken a mighty tumble. At the end of August, the S&P 500 was down 19% from the record it had logged in mid-July, and even though words from Fed Chairman Alan Greenspan had

helped soothe markets somewhat since then, the index was still down 12% from its peak. The central bank saw this as a big problem, not so much because it viewed stocks as forecasting trouble for the economy, but rather because it worried about what the selloff could do to the economy.

In material prepared for the September policy-setting meeting, Fed staffers calculated that the rise in wealth powered by the booming stock market had added more than a full percentage point to annualized consumer spending in both the second half of 1997 and the first half of 1998. What would happen if that wealth effect went into reverse?

The trouble in markets wasn't finished—with the S&P 500 returning to its August lows in early October—and neither was the Fed: The central bank dropped its target rate by another quarter point after an emergency meeting on Oct. 15. Stocks were already storming back, though, by the time it cut rates again on Nov. 17. On Nov. 23, the S&P 500 surpassed the record it hit in July. On June 30 of the next year, when the Fed finally started to reverse course, raising its target rate by a quarter point, the index was 13% above its old high.

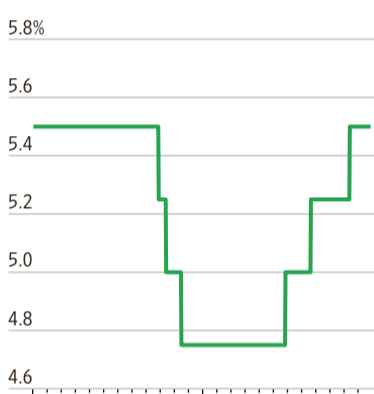
In early 2000, when stocks—especially tech stocks—were even higher and the Fed had only recently lifted its target rate back to the pre-LTCM level, former Merrill Lynch derivatives strategist Steve Kim and former Pimco fund manager Paul McCulley came up with a name for what they saw as the situation: the Greenspan put. They argued that an expectation that the Greenspan Fed would ride to the rescue had led investors to take on more risk, swelling stock valuations.

As we know, the rally soon ended, with the dot-com bubble turning into the dot-com bust, but the idea of the Greenspan put—reduced the "Fed put" after Greenspan retired from the Fed—endured. And perhaps with reason: Economists Anna Cieslak and Annette Vissing-Jorgensen found that stock returns are a powerful



Alan Greenspan testifying before the Senate Banking Committee in 1998.

The federal-funds target rate, 1998-99



Sources: Federal Reserve via St. Louis Fed (rate); FactSet (index)

S&P 500 Index, 1998-99



predictor of changes in the Fed's interest-rate target.

Moreover, when they analyzed Fed meeting transcripts and other documents, they found that officials weren't looking at stocks as a forecasting tool for the economy so much as they were worrying that a drop in the stock market might damage the economy, primarily through negative

wealth effects.

The Fed might now have less cause to worry about the effects of falling stocks. Stock-market wealth effects appear much less pronounced: Last year, the S&P 500 fell by about 25% from its January peak to its October low, but that drop didn't provoke much discussion about how the bear market might affect ordinary Americans'

spending, and it didn't dissuade the Fed from raising rates. A new financial conditions index made available by the Fed this year, meant to measure the economic effects of mortgage rates, the dollar and so forth, puts notably less weight on stocks than similar measures produced by Goldman Sachs and others.

The Fed will probably never stop looking at the stock market. And declines that coincide with severe economic shocks—the 2008 financial crisis, the early days of the pandemic in 2020—will be followed by rate cuts. But investors who think that a market selloff on its own is enough to bring the Fed rushing in might find the net they expected under them is no longer there.

—Justin Lahart

These are the first two of three parts of a *Heard on the Street* series on the 25th anniversary of Long-Term Capital Management's collapse.

## Emerging Markets Burn Investors Decades After LTCM

Emerging markets are in a much better place now than when Russian bonds sank **Long-Term Capital Management** a quarter-century ago. Emerging-markets investments, not so much.

Buying the local debt of developing-country governments and hedging out the foreign-exchange risk was among the most famous quantitative strategies deployed by LTCM. Although the 1990s were a period of constant currency crises—the Mexican "Tequila Crisis" in 1994, the Asian financial crisis in 1997—investors kept pouring money into emerging markets.

It all unraveled when Russia defaulted on its ruble debt in August 1998. Collecting on hedges became impossible when counterparty banks shut down and the government froze ruble trading. What eventually spelled the end of John Meriwether's hedge fund, though, was a flight to liquid assets that toppled other leveraged trades.

Now, some fear a similar complacency. Emerging markets have done surprisingly well this year, despite what would normally be overwhelming headwinds such as high inflation, interest-rate increases by the U.S. Federal Reserve and a global economic slowdown.

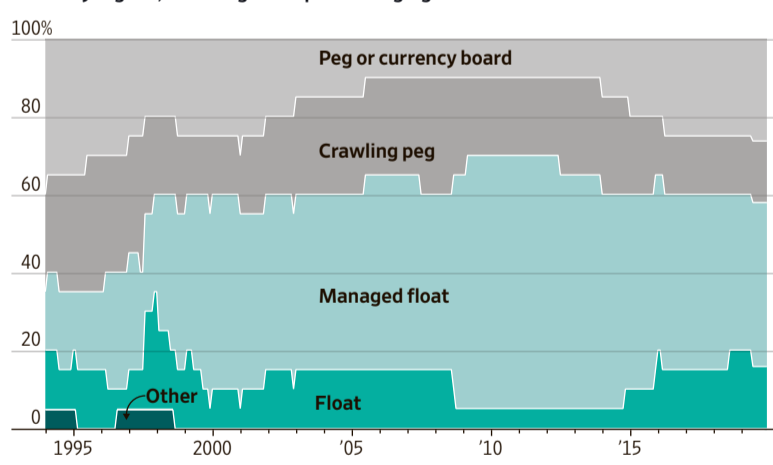
For doomsayers, China's continuing property crisis could play Russia's role in 1998. The yuan is already at its weakest since 2007. A sudden depreciation seems unlikely because the Chinese government and corporate sectors have ample reserves of dollars with which to support the exchange rate. But many analysts fear it might still happen and potentially trigger a painful stampede out of risky assets.

Recent crises in Turkey, Argentina, Sri Lanka and Ghana underscore the fragility of smaller nations with big debt piles.

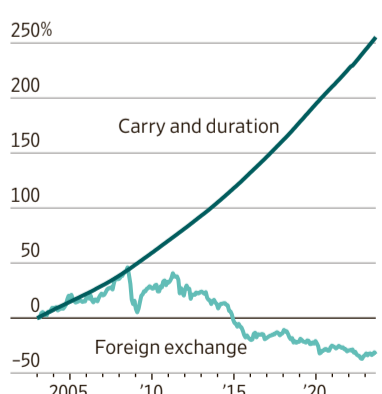
A lesson from the LTCM debacle was that even an apparently self-contained financial earthquake in one part of the world can wreak havoc on less-liquid investments

Top emerging economies

Currency regime, including the top 20 emerging economies



Emerging-market local-currency bonds, cumulative return by component



Sources: E. Ilizetki, C. Reinhart and K. Rogoff, 2019 (regimes); International Monetary Fund (reserves); JPMorgan (emerging markets); ICE Bank of America via FactSet (U.S.)

everywhere.

This time around, however, there are few signs of froth. Having been all the rage before the 2008 financial crisis, emerging markets have been a black spot in portfolios. Stocks have underperformed Western peers, while the JPMorgan GBI-EM Global Diversified Index that tracks domestic-currency bonds has returned a paltry 57%, even falling 5% over the past decade. Hedging the latter into dollars LTCM-style hasn't fared much better. Meanwhile, debt issued by these countries in dollars has returned 142% since

the 2008 trough—still far below the 240% gain generated by U.S. high-yield bonds.

While net fund flows into emerging-market stocks have risen lately, data from EPFR shows that money continues to trickle out of both local-currency and hard-currency debt.

And yet emerging markets have improved a lot in the past 25 years. They have curbed the old habit of relying on hard-currency debt that did so much damage back in the 1990s. Local-currency paper now makes up most of their bond markets. That might not

fully insulate emerging markets from capital flights—during the onset of the pandemic, borrowing costs still shot up—but it helps pare blows.

Their central banks also have become more effective at managing risks. During the Covid-19 crisis, emerging markets deployed quantitative easing to support domestic markets, and then got ahead of Western officials by raising rates as soon as global inflation jumped. That helps explain why local-currency bonds had an easier 2023: By getting painful rate increases out of the way, they es-

caped the Fed's gravitational pull.

Many big developing countries have moved away from currency pegs and crawling pegs, which set exchange rates between bands that change slowly. They have instead tended to embrace more malleable "managed float" regimes with flexible bands, data by economists Ethan Ilizetki, Carmen Reinhart and Ken Rogoff show. Emerging markets also have built huge foreign-exchange reserves.

Indeed, the likes of Brazil, Mexico and South Africa have shown far greater resilience after the pandemic than most analysts expected. It is only smaller "frontier" countries, as well as those with distinctive political situations such as China and Turkey, that have run into trouble.

Still, global investors aren't wrong to be wary. Rates of economic growth in middle-income countries have been on a downward trend, and the rewards of a better funding model are hard to reap.

As Francesc Balcells, head of emerging-market debt at FIM Partners, points out, there is a paradox here: Weaker exchange rates have become both a cushion against financial crises and the key driver of poor performance for local-money debt.

Yes, emerging markets' greater resilience means that foreign investors should give them another chance. The irony is that most should probably stick to the old-school hard-currency bonds that issuers are better off eschewing: Within the JPMorgan EMBI Global Index, the investible universe has changed radically since 1998, becoming far more diversified and geared toward highly rated Gulf nations—with bulletproof balance sheets backed by oil—rather than the always-troubled Argentina.

Or, perhaps, they can keep investing in rich countries with the peace of mind that developing markets probably won't spark the next LTCM meltdown.

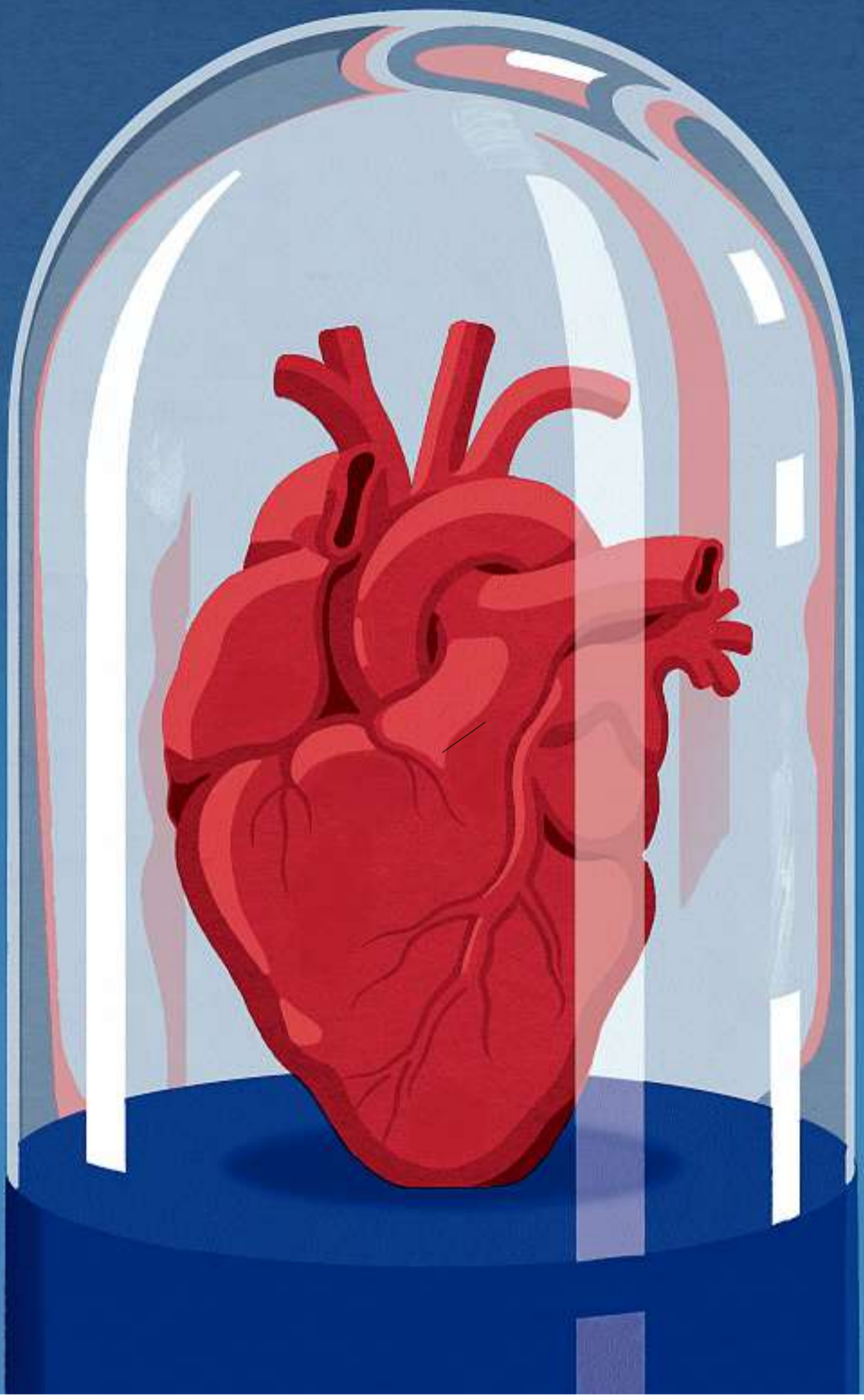
—Jon Sindreu

# JOURNAL REPORT HEALTHCARE

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THE WALL STREET JOURNAL.

Monday, September 25, 2023 | R1



PETE RYAN

## A New Way to Protect Against Heart Attacks

It is increasingly clear to researchers that inflammation can raise the risk of a heart attack. Now doctors have a drug that addresses that risk.

BY RON WINSLOW

**T**HE DRUG COLCHICINE has been used for more than 2,000 years to treat the fiery joint-pain ailment called gout. It also is a remedy for a genetic disorder called familial Mediterranean fever, and for pericarditis, an inflammation of the sac around the heart.

Now colchicine may be set for a surprising new role. In June, the Food and Drug Administration approved a new low-dose version of the drug as the first-ever medicine to treat cardiovascular inflammation, marking a new approach for heart-attack prevention.

*Please turn to page R6*

## How Trauma Can Become A Catalyst for Personal Growth

As I discovered, adversity isn't something to just get past. It can be something positive.

BY BETH DECARBO

**T**HE LOSS of a loved one, a brutal attack, a crippling accident. Trauma comes in many shapes and forms. It can also be a series of hardships over a short period. That's what

happened to me. For over a year, in 2021 and 2022, I was involved in a situation where I feared for my physical well-being. Then in October of 2022, my father died. The day before my dad died, my dog died. Two months later, my cat died. Then, my husband suddenly and unexpectedly underwent

open-heart surgery, followed by a long recovery. This relentless series of negative events over just four months led to symptoms of post-traumatic stress disorder. I couldn't sleep, I lost interest in my hobbies, I was snappish and I neglected my family and social life. I remember being so tense that chewing food was difficult. In the ensuing months, however, something curious

*Please turn to page R4*

## Inside

**DENTAL THERAPISTS**  
Can these new types of workers, similar to physician assistants, help ease the shortage of dentists in many places? **R2**

**AI DIAGNOSES**  
Artificial intelligence is increasingly used in diagnoses. But while AI can process and interpret massive amounts of medical data, there's a human art to diagnosis. **R4**



**MEDICINE IN SPACE**  
Biotech research in space and interest in aerospace medicine are helping doctors learn about treating people on Earth. **R8**



Scan this code to see how stressful exercise helps our bodies to stay healthier for longer.

## JOURNAL REPORT | HEALTHCARE



# 10 Questions to Ask Yourself About Experimental Drugs

Should any seriously ill person have access to unapproved drugs? The answers to this and other questions may be more complicated than you think.

BY BETSY MORRIS

**I**N RECENT years, there has been a push to cut the time it takes to get promising experimental drugs to people who are seriously ill or have life-threatening conditions.

Patients are encouraged to join clinical trials that should eventually help determine whether the drugs are safe, effective and warrant approval by the Food and Drug Administration. But those trials are often time-consuming and have strict criteria for who can participate.

Many people don't qualify for clinical trials or don't have time to wait for the results. In such circumstances, patients and their doctors may petition a drug company for individual access to a drug.

The effort to speed things up has given some very sick people more say in their treatment, and quicker access to new drugs and treatments. But the use of these drugs raises tough ethical questions, especially at a time when drug development is happening so fast—and, thanks to artificial intelligence, is likely to accelerate in the years ahead.

Here are some questions to ponder. There are no right or wrong answers, but they offer a glimpse at some of the difficult decisions that doctors, medical ethicists, policy makers and consumers will have to face.

**1.** Should anybody be able to use experimental drugs before they have cleared clinical trials and gotten full FDA approval? Would your answer change if you knew that most clinical trials fail? How well-developed do you think a drug needs to be before it is available to everybody?

**2.** Should somebody who is seriously ill have the same opportunity to take a promising but experimental drug if that drug is being made available to others? Would your answer change if you knew that it's the drug company that is deciding who gets to use it?

**3.** Doctors frequently use FDA-approved drugs off-label, meaning for diseases or conditions for which the drugs haven't been tested or approved. Should the FDA allow this type of experimental but common drug use or should it be left to the judgment of the doctor?

**4.** Instead of asking a drug company for an experimental drug, should a seriously or

terminally ill patient be required to join a clinical trial? What if a patient in a trial has a good chance of getting a placebo?

**5.** Should patients be granted access to an experimental drug even if special access can make it harder to recruit enough people to conduct the clinical trials needed to determine whether the drug works and is safe? Does the benefit of a group of individual patients outweigh the potential future benefit to society of a treatment that has been fully vetted?

**6.** Do parents who have given informed consent to use an experimental drug on their terminally ill child give up their right to sue if the treatment backfires and kills the child prematurely? What if the parents were desperate, and unable to understand the poor odds of success?

**7.** Should a seriously or terminally ill child have an advocate separate from the parents and doctor when the decision is made to administer an experimental drug?

**8.** Is it all right to give an experimental drug to a terminally ill patient if the only reason to do so is to give the patient hope, even if there isn't any?

**9.** Often patients who get access to experimental drugs are those who are well-educated and savvy enough to know of clinical trials or experimental drug options. Should drugmakers be required to test experimental drugs across different demographic groups? What if the effort improves the efficacy of drugs among people of different groups, but slows drug development?

**10.** Once an experimental drug gets the FDA's partial approval (called accelerated approval), a drugmaker is free to market the drug at almost any price. Are drug companies justified in charging whatever they can given the steep cost of drug development? What if paying for the drug will almost inevitably bankrupt the seriously ill person?

*Betsy Morris is a writer in San Francisco. She can be reached at [reports@wsj.com](mailto:reports@wsj.com).*

BRIAN STAUFFER

## Are Dental Therapists a Solution To the Shortage of Dentists?

Advocates say they can provide care, especially in underserved areas. Critics say there are easier solutions.

BY CHERYL WINOKUR MUNK

**M**ANY Americans lack proper access to dental care. Could creating more dental therapists—clinicians who have less training than dentists but can provide some routine dental care like exams and fillings—help?

There's a push in several states to permit dental therapists to practice, creating a tier of providers comparable to physician assistants. Where they're authorized to perform basic procedures, supporters say, dental therapists could increase access to care in underserved communities, reduce wait times and free up dentists to do more complex procedures.

"We just don't have enough practitioners that are willing to see patients who don't have insurance or can't pay out-of-pocket," says Robin Yang, division chief of oral and maxillofacial surgery and dentistry at Johns Hopkins Medicine. "If there's a backlog of patients being seen for preventive care, practitioners don't have time to treat the more complicated problems they are trained to do."

Around 74 million people live in areas of the country where a dental shortage has been identified, according to federal government

data.

But not everyone believes dental therapists are the right solution to the problem. Critics, who include some dentists and certain state dental groups, say the process to authorize, educate and license therapists is time-consuming, and they would rather focus on other, potentially faster efforts to address dental shortages and care issues. These could include expanding the role of dental hygienists, starting the first visit to the dentist at age one to improve long-term oral health, changing Medicaid reimbursement rates or giving incentives to dentists to accept Medicaid.

Without changes to Medicaid, "it won't move the needle in terms of access, regardless of whether you add another type of provider or not," says Greg Hill, executive director of the New York State Dental Association.

Dental therapists currently practice in five states—Washington, Minnesota, Oregon, Alaska and Maine—according to data from the Oral Health Workforce Research Center at the School of Public Health at the University at Albany, part of the State University of New York system. Some 14 states have legalized the practice, but there can be a long wait before it actually arrives because of a lack of infra-

structure, such as local training options. Indeed, currently there are only five schools in the U.S. that offer training of dental therapists, who differ from dental hygienists in training and responsibilities, which can include simple extractions or placing temporary crowns.



Sarah Chagnon, president of the American Dental Therapy Association.

Over the past few years, bills seeking to authorize dental therapists have failed in several states including Florida, Kansas and Maryland. This year, legislatures in New York, New Jersey and Massachusetts are considering such authorization.

In most states where dental therapists are allowed to practice, meanwhile, there are restrictions

on whom they can treat, with the focus of care generally placed on tribal or underserved populations.

Dental therapists "can make access to routine care more accessible, so people won't need more expensive procedures down the road," says Laura Hale Brannon, a project manager for the Dental Therapy Project, a part of the Dental Access Project at Community Catalyst, a nonprofit national health advocacy organization.

The movement has been slow to gain momentum for multiple reasons, including interruption by the pandemic. The dearth of available education is also a factor. Of

tion programs.

Despite the critical need to connect underserved people seeking oral healthcare with qualified providers, there haven't yet been a significant number of individuals being trained and working in those states, says George R. Shepley, president of the American Dental Association. Even Minnesota—which has been at a forefront of the dental therapy movement—had only had 146 licensed dental therapists as of mid-August, according to Rhonda Gravitist, president-elect of the Minnesota Dental Therapy Association.

Proponents of expanding dental therapy agree that other options for alleviating the provider shortage and access-to-care issues should be pursued. These could include Medicaid changes and earlier visits to the dentist, says Catherine Hayes, chair of the department of oral health policy and epidemiology at Harvard School of Dental Medicine.

Still, dental therapy, these advocates say, should remain as part of the tool kit.

"Nobody is suggesting that dental therapy is a panacea that's going to solve all the problems," says Karl Self, an associate professor at the University of Minnesota and director of the division of dental therapy. "It doesn't have to be one or the other. Let's take that shotgun approach and try anything that's going to work."

It took time for physician assistants to be recognized, "but I couldn't imagine healthcare without them," says Sarah Chagnon, president of the American Dental Therapy Association. "I think communities, over time, will see dental therapists the same way."

*Cheryl Winokur Munk is a writer in West Orange, N.J. She can be reached at [reports@wsj.com](mailto:reports@wsj.com).*

M. SCOTT BRAUER FOR THE WALL STREET JOURNAL

## JOURNAL REPORT | HEALTHCARE

BY ALEXANDRA SAMUEL

**I'M NOW IN FULL** swing on the hot-flashing, tossing-and-turning, skin-splotching and fretting stage of midlife that leads up to menopause. Even though my symptoms and experience have been

mostly bearable, I'm not one to miss a chance to nerd out.

I've always used technology to tackle the challenges of life as they have come along, including parenting, dieting and staying fit. Now, at 52, as I deal with perimenopause—the years when the body makes the transition to menopause—here are the ways I've used technology to make this phase a little easier.

**Temperature control**

It's hard for me to predict when I'll suddenly feel overheated, so I've indulged in an ever-expanding high-tech set of temperature controls.

Since we live in the relatively cool Pacific Northwest, we didn't use the air conditioning much until I entered the era of hot flashes. Now I keep the house cool with a Wi-Fi-enabled controller for our AC unit: It starts the living room cooling before I wake up in the morning, then shuts it down later in the day to save power. Since the controller syncs to a mobile app, I can even use my phone to turn down the temperature if I'm suddenly overwhelmed by heat.

**Sleep hygiene**

Nighttime is when my temperature surges have the biggest impact. For a while, I was experiencing frequent sleep disruptions because I would go to sleep cold, then wake up boiling hot. No sooner did I fall back asleep when I'd be woken by the sound of the dog, the birds outside or



## How Technology Is Helping Me Deal With Approaching Menopause

By using tech tools to control the temperature, sleep better and stay informed, I've been able to make the life transition a bit less uncomfortable

just a bit of morning light seeping into the bedroom.

Then I got serious about sleep hygiene. After two decades of being the one who was always cold in bed, I'm now freezing my poor husband each night by keeping the window wide open. So we use a two-sided heated mattress pad that is set up to keep his side of the bed toasty, while my side stays switched off.

My best investment was an inexpensive smart plug that now powers a bedside table fan. Before I got the smart plug, I found myself struggling with the fan's controls if I woke up hot in the middle of the night. Now, I can

just whisper, "Alexa, turn on bedside fan," making it much more likely that I'll fall back asleep quickly.

**Self-care**

I've long depended on a mix of regular exercise, disciplined eating and mental-health support to stay on an even keel. But approaching menopause has somewhat rocked my mental-health boat: I'm not exactly a moody teenager, but I'm feeling life's ups and downs a little more keenly than I have in recent years.

So I have doubled down on all the tech tools that have long

helped me sustain my self-care practices. I've returned to wearing (and looking at!) my fitness tracking watch, to make sure I'm getting the daily exercise that does more for my mood than any other habit.

And on a practical level, I rely on a period tracker to help me have some sense of where I'm at in this whole menopause process, although it's no longer useful for predicting when I'll actually get a period. In addition, since my cycles seem to reboot when I travel (a not uncommon side effect of jet lag or the stress of travel itself), I set up an online automation app to watch my

email for messages about future trips. As soon as I get an email reminding me of pending travel, it automatically adds a reminder to my phone, telling me to pack menstrual supplies.

**Information and advice**

Simply navigating menopause is a big project. Even though it's now more openly discussed, and there are lots of resources available on everything from medication to temperature control, it's easy to get overwhelmed, and hard to know who to trust.

In addition to buying books on how to navigate menopause, I joined a couple of Reddit and Facebook groups that act like a menopause clearinghouse. I've yet to post a question, because every question I have has always been answered by just searching the group for past Q&As.

But once in a while I have questions that are too specific for a general-purpose group, either because I'm looking for feedback from people who know me well, or because I'm looking for a resource that's local to my community. That's when I'll post a general request for input on my own Facebook wall, asking for practitioner recommendations or a simple "Am I menopausal or....?" reality check.

There's another tech trick that comes in handy on those occasions: The ability to limit who can see a specific Facebook post. My mom is young enough to use Facebook, but old enough to hate seeing me discuss menopause publicly; whenever I post something about menopause on my Facebook wall, I set its visibility so my mom won't see it.

So please, whatever you do: Don't share this article on Facebook.

*Alexandra Samuel is a technology researcher and co-author of "Remote, Inc.: How to Thrive at Work...Wherever You Are." She can be reached at [reports@wsj.com](mailto:reports@wsj.com).*

MIRIAM MARTINEC

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# Can AI Help Doctors Come Up With Better Diagnoses?

The answer is yes, but only if doctors follow some clear lessons that researchers are learning

BY LAURA LANDRO

**A**RTIFICIAL intelligence is being hailed as the holy grail for one of the toughest challenges facing doctors today: making the right diagnosis.

Despite years of advances in medical imaging and other technology, diagnostic errors are still the most commonly reported medical mistakes, affecting an estimated 12 million adults in outpatient care each year. Data from hospitalized patients indicate there are close to 250,000 harmful diagnostic errors annually, and most people are likely to experience at least one diagnostic error in their lifetime, sometimes with devastating consequences.

Now, researchers at academic medical centers are teaming up with AI developers and information-technology giants to figure out how to best pair machine learning and human know-how to improve diagnostic accuracy. They are training doctors on integrating the technology into their daily workflow, pitching it as “augmented intelligence”—a tool to help doctors make the correct diagnosis and find the right treatment, rather than replace their own judgment.

But as hospitals begin to adopt new algorithms and chatbots, they are also recognizing the limitations and risks of the technology. While AI can process and interpret massive amounts of medical data, there is a human art to diagnosis—and the new technology can't duplicate many of the nuances that doctors see. What's more, patients as well as doctors need to trust AI amid concerns about its accuracy.

Here are some early lessons about combining doctors and AI to reduce diagnostic errors.

## AI can't replace experience

So-called predictive AI, trained with data by medical experts for a specific task, is being used to find patterns in images including X-rays, CT scans and MRIs, as well as pathology slides and other medical tests, to help predict cancer risk and recognize certain diseases. But another type, generative AI, includes chatbots trained on a trove of information from the internet and other sources, enabling it to suggest diagnosis and alert doctors to patterns or trends they might not easily notice about a patient's condition.

For now, diagnostic experts say, no form of AI can replace a human clinician's ability to strike up a personal bond with a patient, observe subtle cues and

nuances in a physical exam or test result, spot gaps in a patient's story or medical history and revisit things that don't add up.

“AI has potential to reduce diagnostic errors, but current AI is unable to navigate the real-world messiness associated with making a clinical diagnosis, which involves dynamic interactions with patients and more uncertainty than diagnosing visual images,” says Dr. Hardeep Singh, who studies diagnostic accuracy as the co-chief of health policy, quality and informatics at the Michael E. DeBakey Veterans Affairs Medical Center and is a professor at Baylor College of Medicine, both in Houston.

“Good diagnosticians don't take anything at face value,” such as a patient who is uncomfortable or unwilling to talk about issues like substance abuse or trauma, says Dr. Ziad Obermeyer, an associate professor of health policy and management at the University of California, Berkeley School of Public Health. “Algorithms are never going to see how a patient looks or if they are avoiding a certain set of questions or topics.”

## AI is only as good as the data it uses

A major concern for AI in diagnosis is the quality of the data used to create, or train, AI algorithms. ChatGPT, the best known chatbot model, is trained on articles, images, and other data and can produce conversational text. It has shown an impressive ability to answer medical exam

questions and suggest diagnosis from patient case studies. But its sources aren't fact checked and it relies on human feedback to improve accuracy.

Chatbots can also have so-called hallucinations, generating false or irrelevant information. And one U.K. study found that while a chatbot fed simulated patient cases could produce relevant diagnoses, it missed one or more important diagnoses in 21 out of 35 cases for reasons that could not be determined. “The danger is that it misses crucial, often life-threatening, diagnoses that would be at the forefront of every seasoned clinician's mind,” says Dr. Joshua Au Yeung, a clinical AI researcher at Guy's and St. Thomas' Hospital in London.

Advancements in technology could help solve some concerns. In one study, researchers at Stanford found that GPT-4, the current version of ChatGPT, did much better than earlier version GPT-3.5 in answering exam questions that required clinical reasoning—it didn't produce any hallucinations, and it outperformed first- and second-year medical students.

ChatGPT developer OpenAI says the new version is 40% more likely to produce factual content than GPT-3.5, but there

is much more work to do to further reduce the likelihood of hallucinations. OpenAI's official position is that its models are not fine-tuned to provide medical information and should never be used to provide diagnostic services for serious medical conditions.

Dr. Eric Strong, clinical asso-

ciate professor at Stanford University School of Medicine, and an author of the study, says the improvement between the two versions suggests the AI will continue to get better. “We aren't saying chatbots are going to replace doctors soon,” but if research demonstrates physicians perform better with the help of AI, “wouldn't it be unethical not to use it in their practice?” Dr. Strong says.

Some healthcare providers are turning their own electronic patient records to create reliable algorithms. But patient information that is incomplete or inaccurate has the potential to introduce new risks of diagnostic errors and oversights.

At the Mayo Clinic in Rochester, Minn., researchers spent several years ferreting out errors and inconsistencies in vast troves of medical data. “You have to curate and clean up data before you develop AI models,” says Dr. John Halamka, president of the Mayo Clinic Platform unit.

To design algorithms that can help diagnose a range of diseases, Mayo is working with another large health system, St. Louis-based Mercy. They are sharing patient data with identi-

fying information stripped out to search for patterns from millions of patient encounters, to pinpoint disease earlier and identify the best treatment options.

## AI must be easy to use

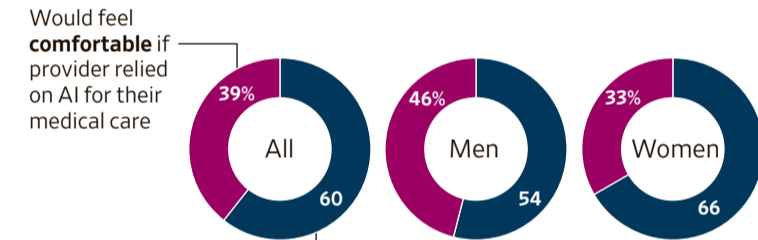
AI models have to fit seamlessly into doctors' everyday practice, in order for them to adopt the decision aids. “Adding it into the workflow is an art,” says Mayo's Halamka. “The last thing you want to say to a clinician is, ‘Go to a separate app, take even more time out of your day.’”

For example, Mayo designed an algorithm that can detect signs of atrial fibrillation, or AFib, which would be undetectable during routine care. The irregular heart rhythm can increase the risk of a blood clot or stroke and worsen existing heart disease. The algorithm is currently available for doctors to review with one click on an AI dashboard embedded in Mayo's electronic health record for all patients who have an EKG for any reason.

Cardiologist Dr. Peter Noseworthy, a co-author of Mayo studies of the technology, says the information helps assess

## Comfort Zones

In a survey of U.S. adults' attitudes toward using AI to do things like diagnose disease and recommend medical treatment:



Note: Respondents who did not give an answer are not shown. Totals may not equal 100 because of rounding. Source: Pew Research Center, survey conducted Dec. 12-18, 2022.

risk, but it is up to doctors to decide what further tests and treatments might be warranted, “to make the best decisions for the individual patient.”

## AI can be biased

Research by UC Berkeley's Obermeyer has also shown how racial bias can creep into healthcare algorithms. For example, if an algorithm is trained to predict healthcare costs rather than illness as a way to gauge healthcare needs, it will de-prioritize Black patients because they have

lower costs. But that is because they don't have equal access to care so less is spent on them. This led one algorithm he studied to falsely conclude Blacks are healthier than equally sick white patients and need less care. Re-programming the algorithm to focus on more relevant predictors could eliminate the racial bias in predictions, the study concluded.

Other researchers are trying to address inequities in diagnoses. Take peripheral artery disease, a condition that affects as many as 10 million Americans, but is underdiagnosed and undertreated—especially in minority patients. Known as PAD, it narrows the vessels that circulate blood to the legs and feet, causing foot wounds and ulcers that can lead to amputations and death.

At the Duke Institute for Health Innovation, based at Duke University, researchers developed an algorithm to identify PAD patients based on diagnosis codes and other medical history, using data that included a substantial number of its Black patients. In a pilot program, a team that includes a PAD specialist uses the algorithm to identify new patients and update the status of existing patients, giving priority to high-risk patients with forthcoming medical visits so they can send recommendations to their primary-care providers.

Dr. Mark Sendak, a Duke physician who specializes in population health and data science, says one aim of the project is to close the racial gap in both diagnoses and care by identifying patients who need more tests to

images, studies suggest AI can perform better than radiologists in diagnosing certain diseases, while falling short in others. But the increasing use of AI has led to fears about job security for radiologists and some resistance to using the technology.

In a recent study, researchers at Harvard and MIT randomly assigned 180 radiologists into four groups to diagnose chest X-rays, giving them different information at the start. Two of the groups got either a chest X-ray with AI predictions only or medical-history information only. The other two got either both the AI predictions and medical history, or neither.

The radiologists were asked to provide the probability of a given disease and a recommendation for treatment or follow-up, with accuracy measured by a prognosis from five board-certified radiologists.

The study found that the AI predictions were more accurate than nearly two-thirds of the radiologists in the group that had access to the medical history, though that group performed better than those without the information. However, on average, access to AI predictions didn't improve radiologists' diagnostic accuracy. The radiologists' biases included underweighting AI's assistance and ignoring any correlation with their own predictions. There were other downsides. Radiologists with AI assistance took longer to make decisions. And AI predictions hurt the accuracy of radiologists who were confident in their own conclusion (although predictions did help radiologists who weren't confident).

“Both AI models and radiologists have their own unique strengths and areas for improvement,” says Dr. Nikhil Agarwal, a co-author of the study and a professor of economics at MIT. For example, radiologists often spot so-called incidental findings—medical concerns the AI isn't programmed to look for—which can result in the need for further testing for disease.

The optimal collaboration, the researchers concluded, would be to have an AI algorithm make an initial prediction on a chest X-ray; if the prediction has a more than 90% confidence level, the diagnosis could be relied on without radiologist review. For less-confident predictions, a radiologist without access to the prediction would review the X-ray, and if they agree with the AI, use the diagnosis. If they disagree, the case would be escalated for a second opinion.

*Laura Landro, a former Wall Street Journal assistant managing editor, is the author of “Survivor: Taking Control of Your Fight Against Cancer.” Reach her at reports@wsj.com.*

## Impact of Trauma

Continued from page R1

has happened. My overwhelming feelings of anxiety and exhaustion have been replaced with boundless energy and creativity, along with a deeper connection to people, even strangers. In short, my PTSD has evolved into what psychologists call post-traumatic growth, or PTG.

## Transformative change

Less well-known than PTSD, post-traumatic growth describes what happens when people who struggled psychologically after adversity in time come to experience positive, transformative changes in their mind-set and behavior. The concept was developed in the mid-1990s by psychologists Richard G. Tedeschi and Lawrence Calhoun. Their research identified five major ways people experienced growth after trauma: a wellspring of personal strength; the ability to relate to others more deeply; an openness to new possibilities; a greater appreciation of life; and spiritual and existential change.

These outcomes reflect more than just resilience—what's thought of as just “getting over it.” PTG generally involves a changed worldview and new, positive behaviors. “You don't necessarily become “happy,” but you become more fulfilled in your life,” Tedeschi says. “There are still difficulties.”

That resonates with me. I didn't set out to “grow” from adverse experiences. That's why some of my behavioral changes came as a surprise. With help from my husband (who has fully recovered, by the way), I built a hiking trail on the steep, wooded terrain behind my house. I became more deeply involved in my church food pantry. And countless hours have been spent making complicated greeting cards with interactive elements and mailing them to friends and family members. Over the summer, I hosted “crafting camps” for my friends' grandchildren in

which we marbled paper, made bath bombs and “sold” homemade ice cream to neighbors from a DIY ice-cream stand.

What makes this remarkable is that I am somewhat of a loner who values solitude. Before this “rebirth,” I shied away from social gatherings and community involvement.

“Service to others seems to be a hallmark of this growth process,” says Tedeschi, who is executive director of the Boulder Crest Institute for Posttraumatic Growth, a Bluemont, Va., nonprofit

direction he wanted it.” He rekindled his love for art and eventually developed art programs for youths as a way to give back to his community. “His life took a whole new direction,” Tedeschi says.

## How it happens

PTG is increasingly the subject of academic research to better understand how it happens and what it means. While many people show resilience after adversity, not everyone experiences post-traumatic growth, says Eranda Jayawick-

wickreme says. So any positive changes stemming from the divorce may take longer to show up.

Deeper knowledge of PTG can help therapists and other professionals pave the way for positive recovery after trauma. It also offers insights on how people can facilitate transformative growth on their own after suffering a trauma—making it more likely that they won't just get past the trauma but will benefit from it.

“You can learn it with practice,” says Arielle Schwartz, a Boulder, Colo., clinical psychologist who

encourages trauma survivors to visualize a time when they felt safe and the people who make them feel safe. “In doing this, they're surrounding themselves with imagined resources,” she says.

Still, some people need professional help working through trauma and developing what Schwartz calls a “growth mind-set,” adding that overcoming adversity takes time. “You don't have to process all of the elements of trauma at once,” she says.

Personal growth after trauma comes more naturally to some people than others, Jayawickreme says. “One predictor is the ability to think creatively,” he says. Also key is the ability to create an emotional distance from the traumatic event and know that it doesn't define who you are. “They

say to themselves, ‘How can I learn and move on from this?’” Conversely, neurotic people and those who struggle with emotional stability are more likely to need professional help to overcome adversity.

What's encouraging to me is that feelings of well-being and a greater appreciation of life don't typically fade over time, Tedeschi's research shows. “Post-traumatic growth isn't an achievement,” he says. “It's discovering a new way of going about your life.”

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with training campuses for military veterans and emergency responders. “Part of the process which leads to a meaningful life involves something that has an impact, something that matters,” he says. “And that usually involves other people.”

In his book “Transformed by Trauma: Stories of Posttraumatic Growth,” Tedeschi recounts the story of a military veteran who was badly wounded in Iraq. Thinking that he would bleed to death on the field, the soldier wondered, “Is this it?” After medics saved him, Tedeschi says, “He thought back about how he lived his life and realized it wasn't going in the

reme, a psychologist and professor at Wake Forest University. Jayawickreme founded the Growth Initiative Lab at the university to delve deeper into the phenomenon. “A lot of studies track people after they have gone through a traumatic event,” he says. But, he adds, much of the research documents perceptions of change and not actual behavioral changes. They also may not track changes that emerge long after the traumatic event.

“If you go through a negative event like a divorce, there's a long time spent reflecting” on what went wrong and how you could have been a better spouse, Jaya-

specializes in trauma recovery. Author of the “Post-Traumatic Growth Guidebook,” Schwartz calls attention to the importance of developing strong connections with people via support groups, family members and compassionate friends. “If you stay socially engaged, that is linked to a positive outcome,” she says.

## Good listeners

Tedeschi stresses the importance of what he calls “expert companionship.” These may be close friends, family, clergy or mental-health professionals who listen for extended periods to trauma sur-

## How Well People ‘Think’ They Slept Might Matter More Than How They Actually Slept

A new study finds a connection between how satisfied a person is with their previous night's sleep and their feelings of well-being the next day

BY BARBARA SADICK

**H**OW SATISFIED people are with their night's sleep has a major impact on how well they feel the next day, regardless of what a tracking device might indicate about the quality of that sleep.

So says a new study conducted by researchers from the University of Warwick in England. The research involved 109 university students ages 18 to 22 who took part in a two-week study.

The students wore wrist devices that used movement to estimate their sleep efficiency, or the amount of time they were asleep during the period between the time they were ready to fall

asleep (for example, if someone is reading a book in bed and then puts it away) and the time they

woke up. Study participants also used smartphones to answer questions about their previous night's sleep and their well-being on the current day.

Once a day, participants were asked five questions on a mobile-phone application: what time they went to bed, what time they were ready to fall asleep, what time they woke up, what time they got out of bed and how satisfied they were with their sleep. Information from wrist-worn devices that measured sleep quality wasn't visible to the students.

Five times a day, at random times, participants were asked how

they were feeling at that moment and answered the questions on the same mobile app. Questions were about their moods and about how satisfied they were with their lives.

Findings showed that self-reported sleep satisfaction was con-

sistently linked to well-being. The better a student reported to have slept, the better their mood and satisfaction with life was the next day. By contrast, the information provided by the sleep device wasn't associated with the students' reported well-being the next day.

“It is people's evaluations of their sleep quality and not the actigraphy-derived [device-derived] sleep efficiency that's important to their well-being,” says Anita Leneis, psychologist and honorary research fellow at the University of



Warwick and lead author of the study. The results suggest that thinking more positively about one's sleep might increase well-being, says Leneis, who adds that it isn't uncommon for a person to report feeling refreshed in the morning even if a sleep tracker indicates something different.

There were some limitations to the study's findings, Leneis says. For one, the homogenous study group makes it impossible to generalize results to a broader adult population. In addition, wrist-worn devices don't measure sleep exactly, but rather the movements that are used to estimate sleep. Additionally, because participants had 24 hours to answer questions about a previous night's sleep, that amount of time could have influenced memory and thus influenced the findings.

What is most important, says Neomi Shah, program director of sleep medicine at Icahn School of Medicine at Mount Sinai in New York, is to pay attention to how you feel about your sleep instead of looking at what devices say. In fact, the study could infer that wearables and technology might negatively affect well-being in some individuals, adds Shah, who wasn't involved in the research.

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JOURNAL REPORT | HEALTHCARE

# Drugs For The Heart

Continued from page R1

Several things could limit the adoption of colchicine by cardiologists, at least at first, including side-effect concerns and the emergence of several other new options for reducing the risk of heart attacks. But the drug's approval provides fresh validation for a concept that has been gaining momentum in cardiology over the past 25 years—that inflammation is a key culprit in atherosclerosis, the artery-clogging disease, and that treating it can reduce the risk of a heart attack.

The bedrock strategy for heart-attack prevention has long been lowering LDL cholesterol with drugs called statins. Adding low-dose colchicine—which in one study reduced cardiovascular risk by 31% in patients already treated with statins and other preventive medicines—would enable doctors to simultaneously hit two biological targets that cause heart attacks.

"This is about combining therapies" that are both effective ways to reduce risk, says Dr. Paul Ridker, director of the Center for Cardiovascular Disease Prevention at Harvard-affiliated Brigham and Women's Hospital, Boston. "They're not in conflict, they're synergistic."

Ridker is a scientific adviser to **Agepha Pharma**, the company that owns the rights to market 0.5-milligram colchicine for cardiovascular-risk reduction, but wasn't involved in the studies that led to the drug's approval.

### Making it personal

More broadly, colchicine is now part of a burgeoning arsenal of medicines that will enable cardiologists to personalize treatment as they seek to maximize heart protection for their high-risk patients beyond that achieved with statins. For example, new drugs that treat diabetes and obesity, two major risk factors for cardiovascular disease, are among medicines doctors say could play an important role in reducing heart risk. Nonstatin drugs that lower cholesterol are also in the mix.

"The pivot here is to precision cardiology as opposed to one-size-fits-all cardiology," says Dr. Richard Kovacs, a professor at Indiana University, Bloomington, and chief medical officer of the American College of Cardiology. Instead of routinely doubling down on cholesterol-lowering for most patients already taking statins, "we need to tailor treatment to the individual risk factors of the patient."

The baseline strategy for high-risk patients won't change, doctors say: statins, blood-pressure control, and aspirin or antiplatelet drugs to prevent clots. Add to that quitting smoking, a healthy diet and regular exercise.

"After that, it's personalized approaches," says Dr. Michael Blaha, director of clinical research at Johns Hopkins Ciccarone Center for the Prevention of Cardiovascular Disease, Baltimore.

He envisions a scenario in which doctors consider inflammatory risk—which can be measured with a high-sensitivity test for a marker called C-reactive protein—cholesterol levels and diabetes and weight status to determine what's driving a patient's risk and then prescribe a drug best targeted to address that risk.

"Preventive cardiology is undergoing a renaissance," Blaha says. "We can do more than ever for our patients who have high risk."

Like Ridker, Blaha is a scientific adviser to Agepha Pharma but wasn't involved in the studies that led to the drug's approval.

### Hurdles to clear

Colchicine is cheap and safe and would be an effective option for many patients, study data indicate. But it faces challenges carrying the banner for a poten-

tially important shift in medical practice. Diarrhea is associated with much higher doses typically used to treat gout flares and could make doctors hesitant, though researchers said it wasn't a big issue with the once-a-day low dose tested in the heart-related trials. Updated treatment guidelines from the American College of Cardiology and American Heart Association gave colchicine a weak endorsement.

Another hurdle: lack of pharmaceutical companies marketing muscle to get the word out to clinicians and patients.

The FDA gave approval for the drug to Agepha Pharma, a tiny family-owned company based in Dubai that has neither a sales force nor a presence in the U.S. market. It hasn't been able to find a partner to co-promote the drug, which it calls Lodoco.

The potential market for an anti-inflammatory agent to reduce heart risk is huge. Data from clinical trials indicate that about half of patients with atherosclerosis have elevated levels of C-reactive protein, or CRP, despite being on intensive sta-

'The more you look and the deeper you look, you have to believe that inflammation matters,' says Dr. Steven Nissen, chief academic officer at the Heart Institute, Cleveland Clinic.

tin therapy. Such patients are significantly more likely to suffer a heart attack or other cardiovascular event than those with low CRP and low LDL.

Colchicine "is the first practical option we have now" for these patients, Kovacs says. Danish drugmaker **Novo Nordisk** is among several companies with new anti-inflammatory drugs in development to reduce heart risk.

### Establishing a link

Inflammation is a normal part of the immune system's response to injury and generally subsides once its healing work is done.

But when the walls of the coronary arteries are under constant assault—from LDL cholesterol or, say, the effects of smoking or dietary fat—the inflammation that comes with the immune system's response

doesn't subside. It becomes a chronic part of a process that causes accumulation of fatty deposits in the artery walls called plaques, which can rupture and cause heart attacks. Cholesterol can also crystallize in atherosclerosis, further provoking an immune-system response.

As research brought the link between inflammation in the coronary arteries and the risk of heart attacks into focus, the question was, would a drug that targeted inflammation lower that risk?

The answer came in a 10,061-patient study called Cantos, published in 2017 and led by Ridker, that tested canakinumab, an antibody from **Novartis** that targets an inflammatory immune-system protein called interleukin 1 beta. In patients with elevated CRP already on statin therapy, those treated with canakinumab

had a 15% reduction in major cardiovascular events compared with those on a placebo, even though the drug had no effect on LDL cholesterol.

Dr. Steven Nissen, chief academic officer at the Heart Institute, Cleveland Clinic, who wasn't involved in the study, says the result was "a landmark" because it was the first to show that inhibiting inflammation could reduce cardiovascular risk without lowering cholesterol. "The more you look and the deeper you look, you have to believe that inflammation matters," he says.

### Winning approval

But canakinumab was already on the market under the brand name Ilaris for several rare diseases at a price that would be prohibitive for use as a preventive therapy. The drug also sharply reduced new cases of lung cancer, but led to a slightly higher number of fatal infections, compared with a placebo. Novartis ultimately decided against pursuing an FDA indication for heart-risk reduction for the drug, leaving cardiologists with a proven new target but no drug to use against it.

Enter colchicine. Its path to FDA approval began in a hospital ward in Western Australia in 2006, where Dr. Mark Nidorf, a cardiologist at the Harry Perkins Institute of Medical Research, in Perth, was treating a patient with severe pericarditis. He gave him a single dose of colchicine.

"The next day he just felt fantastic," Nidorf says. He wondered if a drug that had such a rapid impact on pericarditis might be useful against atherosclerosis by treating arterial inflammation.

He recruited a group of his own patients who were on statins and had high CRP levels and randomly allocated them to take colchicine or no colchicine. A month later, CRP levels of those given the drug had come down "quite dramatically," Nidorf says.

Nidorf was also struck by research describing the role of cholesterol crystals in cardiovascular inflammation. Colchicine

treats gout pain, which is caused by a similar biology—uric-acid crystals that attack the joints. On that basis, he and his colleagues launched—without drug-company funding—a four-year pilot study called Lodoco that recruited some 500 patients from his own practice, using a commonly available 0.5 milligram dose of colchicine.

The results, which Nidorf presented at an American Heart Association conference in 2012, were so encouraging that the Australian team, together with colleagues in the Netherlands, mounted a major randomized double-blind study, called Lodoco2. They enrolled 5,522 patients with stable cardiovascular disease.

About the same time, researchers in Canada mounted their own colchicine study, called Colcot. It enrolled 4,745 patients to test whether colchicine added to statin therapy would reduce recurrent events in patients who had suffered a heart attack within the previous 30 days.

The positive canakinumab results came out in 2017, part way through Lodoco2.

"We were thrilled," Nidorf says. Colchicine works differently, but hits canakinumab's main target, providing optimism that the Lodoco2 trial would be positive too.

Sure enough, Lodoco2's 31% relative reduction in cardiovascular events was reported in 2020. A few months earlier, the Colcot study found a 23% reduction in risk.

In absolute terms, Colchicine prevented 2.5 to 3 heart attacks or other events for every 100 patients treated.

Agepha Pharma, which had acquired rights to market 0.5-milligram colchicine for cardiovascular-risk reduction from an Australian company, used the data to make its case for FDA approval.

The company launched the drug in the U.S. earlier this month at a list price of \$99 a month. It is still negotiating arrangements with insurers, but plans to make it available at no charge to anyone who can't afford it. Lacking a sales force or a budget for television marketing, it began promoting the drug to cardiologists online last week.

"We're a small company trying to do big things for patients," says Antonia Riel-Köllmann, Agepha's managing director.

### A tough market

Colchicine faces a challenging

market. Other potential candidates for risk reduction beyond statins include Wegovy, from Novo Nordisk, and other so-called GLP-1 agonists that treat

obesity and diabetes, as well as another class of diabetes drugs known as SGLT2 inhibitors. Full details on their risks and benefits in heart prevention aren't

yet known.

**Amgen's Repatha** and **Regeneron's Praluent**, drugs known as PCSK9 inhibitors, and bempedoic acid, marketed as Nexletol by **Esperion Therapeutics**, are other options. They are nonstatins that achieved modest additional reductions in LDL and heart risk in clinical studies when added to intensive statin treatment.

At \$99 a month, Lodoco is much cheaper than drugs such as Wegovy, which lists for more than \$1,600 a month at a Walgreens drugstore (before insurance coverage or discounts), or a PCSK9 inhibitor such as Repatha, which runs about \$650 a month. Studies suggest the relative reduction in heart risk achieved with Lodoco is at least as large as with any of the other options.

### Caveats and hesitation

Ridker and other cardiologists familiar with the drug say doctors may take it slow in prescribing it. The drug "is not for everybody," Ridker says. It shouldn't be given to patients with kidney or liver disease, for instance.

The approved once-a-day 0.5-milligram dose is slightly lower than 0.6-milligram generic colchicine already on the U.S. market and may mitigate kidney risks associated with the higher dose. But there are other reasons cardiologists may take time to get used to colchicine before adopting it as a regular option for their patients.

One is the history of other anti-inflammatory treatments. The painkiller Vioxx, once viewed as a potential candidate to curb cardiovascular inflammation, was pulled from the market in 2004 after it was found to have caused heart attacks and death from heart attacks. And soon after canakinumab's success in reducing coronary events was reported, Ridker presented data from another study showing methotrexate, a generic drug for treating the inflammatory disorder

der rheumatoid arthritis, failed to curtail heart risk.

The updated treatment guidelines from the American College of Cardiology and the American Heart Association, issued in July, acknowledged inflammation's role in the development of atherosclerosis for the first time. But the guidelines stopped short of recommending colchicine, saying only that "it may be considered" as an option to reduce "recurrent" cardiovascular events. Citing among other reasons potential interactions with other drugs and a slight increase in non-heart-related deaths, the guidelines say use of colchicine should be limited to patients at very high risk "until further data become available."

Cleveland Clinic's Nissen, who has been prescribing the 0.6-milligram dose for selected patients, says he'll likely give one of the two versions (depending on price) to more patients in the wake of FDA approval.

"I think it is going to have a role to play, but it's going to come after we've done other things we can do," he says.

Indiana University's Kovacs cautions that high-risk patients already on several medicines may resist adding another, especially one that while potentially reducing a serious risk, doesn't make them feel better, a challenge facing many preventive drugs.

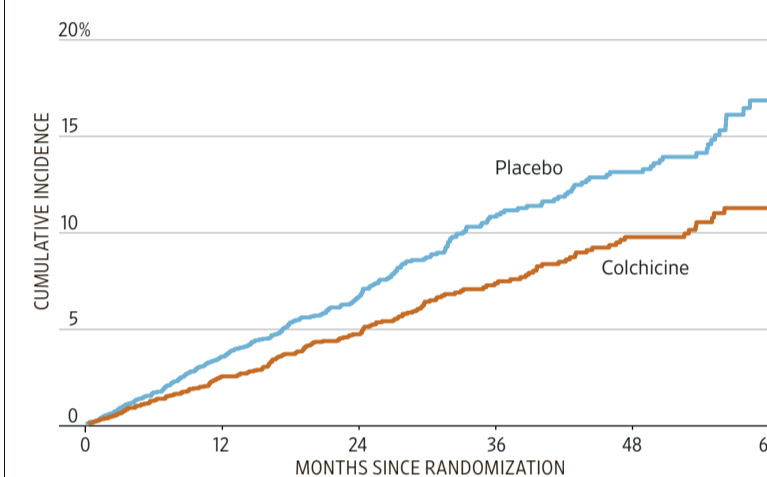
Dr. Roger Blumenthal, director of the Ciccarone Center for the Prevention of Cardiovascular Disease at Hopkins, says given the lukewarm advice from the new guidelines, he'll likely urge patients to work harder on healthy lifestyle changes—quitting smoking, weight loss and exercise all lower inflammation—before prescribing the drug.

With growing interest in Wegovy and other obesity drugs, colchicine "is going to enter a crowded space," Hopkins's Blaha says. "But it will be a unique drug—the only anti-inflammatory drug approved for heart disease."

Ron Winslow is a writer in North Conway, N.H. He can be reached at [reports@wsj.com](mailto:reports@wsj.com).

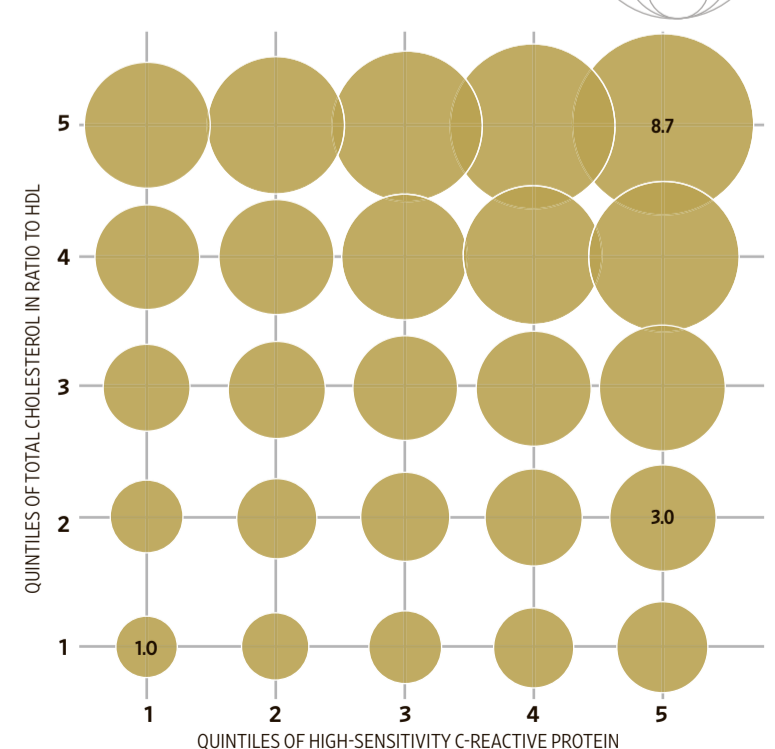
### Anti-Inflammatory Trial

In a randomized trial, roughly 5,500 patients with chronic coronary disease were divided into two equal groups; one received 0.5 mg of colchicine once daily, the other a placebo. The results showed a reduction in cardiovascular incidents, including heart attacks, for the patients taking colchicine.



### Dangerous Combination

When found together in the blood, increasing levels of C-reactive protein, a marker for inflammation, and higher ratios of total cholesterol (including LDL, HDL, and triglycerides) to HDL raise the risk of cardiovascular disease.



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## JOURNAL REPORT | HEALTHCARE



Astronaut Dr. Serena Auñón-Chancellor works on the Angiex study on the International Space Station in 2018.

# What Research in Space Is Teaching Doctors About Treating People on Earth

Removing gravity allows researchers to do experiments they could never duplicate on the ground

BY BRIAN GORMLEY

**M**EDICAL research in space is leading to advances that could help patients on Earth.

Several technologies developed for space exploration have afterward contributed to medical products. Infrared thermometers, for example, stem from infrared sensors created to remotely measure the temperature of distant stars and planets.

But increasingly, scientists aim to perform research in space specifically for human health. Interest has grown as researchers recognize possibilities enabled by microgravity, in which objects appear to be weightless, aboard the International Space Station, or ISS, which orbits the Earth about 250 miles from its surface.

Removing gravity's influence alters biological systems, enabling experiments that can't be done on the ground. Researchers are sending materials into space to study treatments for cancer, heart disease, neurological disorders, blindness and other conditions.

Such investigations extend beyond civilian medicine. With preparations under way for long-term missions to the moon, and eventually to Mars, scientists are advancing technologies to help astronauts endure extended space travel and confront illnesses and medical emergencies.

## Justifying the expense

Several factors complicate space-based research. The cost of transporting materials, for one, as well as preparations needed to convert experiments conducted on Earth into ones that can be run on the ISS, which is itself a complicated partnership of five space agencies from 15 countries.

Space studies' potential to discover cures and create tools that make healthcare more accessible justify the expense and complexity, some scientists say.

"Everything we do onboard has potential applications for healthcare on Earth," says Dr. Dave Williams, who conducted neuroscience research on space shuttle Columbia, and is now chief executive of Leap Biosystems, a developer of medical de-

VICES for virtual clinical care in space and on Earth.

Space travel, for example, is known to cause bone and muscle loss, immune suppression, central nervous system changes and other effects. Detrimental as these effects are, they are of particular interest to scientists.

For the most part, health concerns astronauts develop in space resolve when they return, says Dr. Christopher Austin, former director of the National Center for Advancing Translational Sciences and now CEO of biotechnology startup Vesalius Therapeutics. Studying how this reversal occurs could provide insight on turning back the clock on disorders of aging, he adds.

Exposure to microgravity seems to replicate the effects of aging at the cellular level, says Michael Roberts, chief scientific officer of the U.S. National Laboratory on the ISS. As a result, investigators in months can glean insights from studies that might take years of research on Earth.

"What happens in space is akin to accelerated aging," says Arun Sharma, assistant professor at the Board of Governors Regenerative Medicine Institute at Cedars-Sinai Medical Center, who says his experience with space research includes sending stem-cell-derived heart cells to the ISS.

## Anticancer drug

Meantime, companies including drugmaker **Merck** and biotechnology concerns **Axonis Therapeutics** and **LambdaVision** aim to capitalize on microgravity to improve existing treatments or optimize experimental ones.

Merck has been conducting experiments aboard the ISS to determine whether it can come up with a crystalline form of an anticancer drug in its portfolio, Keytruda. The drug, which treats several cancers, generated \$20.9 billion in sales in 2022. Patients receive it in 30-minute intravenous infusions. Its active ingredient, pembrolizumab, a large molecule known as a monoclonal antibody, isn't highly soluble, so developing a high-concentration liquid formulation for a simple injection is difficult, says Paul Reichert, a Merck Research Laboratories scientist.

One solution is to produce it in crystallized form, a routine process for small-molecule drugs taken as pills. But making an op-

timal crystalline suspension is challenging for large-molecule, antibody drugs, Reichert says.

So Merck decided to attempt it in space. In 2017 it sent pembrolizumab to the ISS to see whether crystals would form better in space. Without gravity, molecules move more slowly and forces including convection currents are limited. Crystals produced on the ISS were smaller and more uniform than Earth counterparts, Reichert says.

Such studies could lead to a lower-cost version of Keytruda that is easier to administer and cheaper to transport, Reichert says. "That would be a game-changer for biologics drug delivery," he adds.

## Surprising results

Sometimes space research yields surprising results.

Biotech startup **Angiex** sought to better understand how an experimental cancer drug inter-

acted with normal cells lining blood vessels, known as endothelial cells, says Paul Jaminet, co-founder, president and chief operating officer. The problem was these cells, when cultured on Earth, typically die quickly unless cultured with growth factors and changed to a proliferative state similar to that of endothelial cells in tumors. As a result, there is no good cell-culture model for the normal endothelial cells in which Angiex's drugs are expected to have their toxicity.

Angiex's team hypothesized that culturing endothelial cells in microgravity would be a solution, and sent the cells to the ISS in 2018. The cells grew in space but took on unusual characteristics that may not have a counterpart on Earth, Jaminet says.

The findings may advance understanding of how microgravity affects astronauts, he says. But since it appears the cells cultured in microgravity don't resemble normal endothelial cells, and acquired a novel pathological state, it isn't yet clear if these cells are useful for drug development.

Axonis in August had good luck with a project to coax two kinds of human brain cells, neurons and astrocytes, to unite into a three-dimensional model of the brain in microgravity. It used the model to test a gene therapy designed to restore neural connections damaged by diseases or

## Selected medical technologies developed with help from the space program



### ◀ 1970s - Cochlear implants

An electronics instrumentation engineer from NASA's Kennedy Space Center used experience gained on the job to help him invent an implanted hearing device for people with severe-to-profound hearing loss.

### 1980s - Heart-assist device ▶

Collaboration among NASA, Baylor College of Medicine and Drs. Michael DeBakey and George Noon, begun in the 1980s, led to the invention of a device that pumps blood for patients needing a heart transplant.



### ◀ 1990s - Infrared thermometer

Technology from NASA's Jet Propulsion Laboratory to measure the temperature of stars and planets became the basis for an infrared thermometer introduced in 1991 that delivers results in about two seconds.

### 2000s - Medical Light ▶

Light-emitting diode technology used to grow potatoes on the space shuttle in 1995 is incorporated into a device that received Food and Drug Administration clearance in 2003 as a treatment for pain.

### 2010s-Today - Cancer test

NASA-funded research helps life sciences company Promega develop test for DNA changes that are used to screen for the inherited condition Lynch syndrome in colorectal cancer patients. The FDA cleared the test, OncoMate MSI Dx Analysis System, in 2021.



spinal-cord injury.

The experiment provided evidence that Axonis's gene therapy travels to its intended target, neurons, and avoids astrocytes, says co-founder and Chief Scientific Officer Shane Hegarty. In labs on Earth, neurons and astrocytes would form a carpetlike, two-dimensional layer. This doesn't fully represent the brain's complexity and is less useful for advancing the gene therapy, Hegarty adds.

The implications of this research are that scientists could use patients' own cells to create models of their disease in space to speed their search for treatments, he says.

## Restoring sight

One long-term research program on the ISS is LambdaVision's effort to restore vision to people blinded by diseases of the retina, the light-sensitive tissue at the back of the eye.

LambdaVision has flown eight payloads to the ISS since 2016, says Chief Scientific Officer Jordan Greco, adding that the company has found that its artificial retina seems to come together better in microgravity.

Microgravity enables more ordered and even packing of protein molecules onto the scaffold, says CEO Nicole Wagner. If its artificial retina earns regulatory approval, LambdaVision will make it on the ISS or a commercial space station, she says.

Considering the demand for vision-restoration therapy, reimbursement from insurers should be sufficient to justify this expense, Wagner says.

To convert its lab process into one viable for the ISS, LambdaVision teamed with space-biotech company **Space Tango** to condense the process into a device that looks like a metal shoebox. The automated system contains proteins, polymers and solutions to assemble the artificial retina layers, and cameras that let researchers monitor and control the process from the ground, Wagner says.

Also using Space Tango is **Encapsulate**, a biotech with grant funding to launch into space biotech containing microtumors made from patient cancer cells. The chips could predict an individual's response to drugs, helping tailor treatment, Encapsulate co-founder and CEO Armin Rad says.

When adapting scientists' projects for space "we have to take the human out of it and stuff it all into a box," Space Tango Chief Strategy Officer Alain Berinstain says. Biotech also express interest in the automated system for ground use, which was unexpected, he says. "It's turned into a new business opportunity for us," he adds.

The National Aeronautics and Space Administration plans a crewed mission to the lunar surface in 2025 and eventually a mission to Mars. Astronauts will require medications for the trip, and they can't pack every drug they might need, says Phil Williams, a professor of biophysics in the School of Pharmacy at the University of Nottingham.

Medications degrade faster in space because of high radiation levels, says Williams, who is working with NASA researcher Lynn Rothschild on an astropharmacy, a briefcase-like system enabling astronauts to produce medications on demand.

In one version under study, cellular machinery that certain microbes use to make proteins would be combined with genetic sequences that code for specific biological medicines, Williams says. This could be paired with a production system to express the therapeutic protein and DNA-synthesis technology, he adds.

The notion of an astropharmacy extends to other extreme environments. If the technology proves effective in space it could also be used in hard-to-reach locations on Earth, he says.

"If we can make the drug for the astronaut, then we can make it for anybody," Williams says.

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