

THE WALL STREET JOURNAL.

What's News

Business & Finance

- ◆ **Cigna and Humana** are in talks for a combination in a cash-and-stock deal that would create a new health-insurance powerhouse. **A1**
- ◆ **OpenAI's new board** took over and said it would add an observer role for partner Microsoft, capping a dramatic chapter for the startup. **B1**
- ◆ **GM plans to sharply** increase cash return to shareholders, as CEO Barra seeks to reassure investors about the company's core car-making business after setbacks in its electric car push. **A1**
- ◆ **OPEC and its Russia-led** allies are considering new oil production cuts of as much as one million barrels a day, greater than most forecasts, despite tensions in oil markets amid the Middle East conflict. **B1**
- ◆ **Stocks wavered** Wednesday, halting a November rally. The S&P 500 and Nasdaq slipped 0.1% and 0.2%, respectively, while the Dow added less than 0.1%. **B11**
- ◆ **The economy grew faster** than previously estimated in the third quarter at a seasonally and inflation-adjusted annual rate of 5.2%, the Commerce Department said. **A2**
- ◆ **The UAW formally** launched one of the largest organizing drives in its history with campaigns at 13 carmakers, including Tesla. **B1**
- ◆ **Google reached** a settlement with Canada's government over a contentious law that would have forced the tech company to pay Canadian news organizations for links to their content. **B4**

World-Wide

- ◆ **Israel and Hamas** agreed to extend the temporary truce by one day, following the release of 16 hostages, including a U.S. citizen, held by militants in Gaza. Some negotiators have expressed hope that the pause in the fighting could lead to a more lasting truce. **A1**
- ◆ **The former Deutsche** Bank executive who recruited Trump as a client testified that the bank's dealings with him were lucrative and her superiors were eager to expand them. **A3**
- ◆ **An Indian government** employee tried to have a vocal critic of New Delhi assassinated in New York this year, U.S. prosecutors alleged. **A4**
- ◆ **Pressure on the FDIC** over allegations of a toxic work environment mounted this week, as the agency's internal watchdog launched an inquiry and a Republican senator requested records related to settlements and nondisclosure agreements. **A3**
- ◆ **Paul Whelan**, a U.S. citizen who has been held in Russia since 2018, was assaulted by a fellow prison inmate. **A6**
- ◆ **The Russian government** is proposing a law to force foreigners entering the country to sign a loyalty agreement restricting what they can say about government policy and social values. **A6**
- ◆ **A U.S. Air Force** Osprey aircraft with eight people on board crashed into the sea off Japan during a routine training mission. **A9**
- ◆ **Died: Henry Kissinger**, 100, former secretary of state. **A1**

JOURNAL REPORT

Alternative Energy: Formula E drives onto the scene. **R1-10**

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Henry Kissinger oversaw the peace talks to end the Vietnam War, and the U.S. opening to China. At Paris's Élysée Palace in 1973.

1923-2023

Kissinger, Diplomat Who Shaped Cold War History, Is Dead at 100

By ALAN CULLISON

Former presidential adviser Henry Kissinger has died, according to a statement posted on his website, bringing to a close one of the most polarizing and influential diplomatic lives in U.S. history.

He died Wednesday at his home in Connecticut, said a

statement by his consulting firm. He was 100 years old.

The German-born academic was the only American official ever to concurrently serve as both secretary of state and White House national security adviser, giving him immense power during the Richard Nixon and Gerald Ford presidencies. That helped him end

the U.S. war in Vietnam and to shape American foreign policy toward the Soviet Union at the height of the Cold War.

Kissinger's diplomatic coups made him a hero to war-weary Americans fearing nuclear armageddon. But he drew the ire of both the American left, which held him responsible for brutalities com-

mitted abroad, and the right, which regarded him with suspicion for advocating detente with Communist regimes.

Kissinger won the Nobel Peace Prize in 1973, along with the Vietnamese leader Le Duc Tho, for pursuing secret diplomatic talks that forged the Paris Peace Accords, end-

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GM to Give Investors Payouts as EVs Lag

By MIKE COLIAS

General Motors plans to sharply increase cash return to shareholders, as Chief Executive Mary Barra seeks to reassure investors about the health of GM's core car-making business after setbacks in fledgling pursuits such as electric and driverless vehicles.

The company also said Wednesday it would work to offset higher labor expenses from its new contract with the United Auto Workers and unionized employees in Canada. The contracts will add a total of \$9.3 billion in costs over about four years, including \$1.5 billion next year, higher than analysts had estimated.

GM outlined plans on Wednesday for an accelerated \$10 billion share repurchase for next year, its largest stock buyback in recent memory. The company will fund it in part by freeing up capital previously earmarked for development of EVs and autonomous vehicles, which have been the main pillars of Barra's growth strategy.

Barra is trying to jumpstart GM's flailing shares while also refocusing investors on the underlying strength of its main business: selling gas- and diesel-powered trucks and SUVs. It marks a shift in the message from recent years, during which the CEO sought to recast GM as a tech company poised to transcend the messy world of car manufacturing.

GM said it would log strong profits this year despite a six-week strike that shaved \$1.1 billion from its bottom line in the third and fourth quarters. The company expects full-year operating profit of \$11.7 billion to \$12.7 billion, after withdrawing its guidance last month during the strike.

"The profitability and cash

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◆ **China role in market hinges** on EV tax-credit rule..... **A2**

◆ **Heard on the Street: GM's \$10 billion apology**..... **B12**

INSIDE



U.S. NEWS
Indian government agent implicated in plot to kill Sikh activist in the U.S. **A4**

Hamas Releases 16 Hostages, Mideast Truce Extended a Day

Israel and Hamas agreed to extend their temporary truce by a day, following the release of 16 hostages held by mili-

By Jared Malsin, Summer Said and Dov Lieber

tants in Gaza. Qatar announced the extension early Thursday.

Ten Israelis, including one who also has U.S. citizenship,

were released on Wednesday as part of the soon-to-expire deal. Four Thai nationals and two Israeli-Russian citizens who are not considered to be covered by the existing deal were also freed.

In exchange, 30 Palestinian prisoners were freed under the truce deal, the Israeli prison service said.

Some negotiators have expressed hope that the pause in the fighting could lead to a

more lasting truce to ease the humanitarian crisis in Gaza.

Israel is open to a new round of negotiations for the release of Israeli men and soldiers held in Gaza once all the civilian women and children hostages are freed, a senior official said Wednesday, indicating that the current truce

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◆ **Senate Democrats debate aid conditions**..... **A8**

Gaza Protests Open Generational Divide

College activists tie plight of Palestinians to broader concerns; 'I felt I couldn't sit back'

By DOUGLAS BELKIN AND MELISSA KORN

Three years ago, Erin Mullen arrived at the University of Massachusetts, Amherst exhausted by the pandemic and without any appetite for political demonstrations. Last month she sat in a holding cell in an Amherst jail with her

hands cuffed behind her back, one of 57 students arrested while protesting the conflict in Gaza.

Mullen is white, her parents were raised Catholic and she grew up in an upper middle class Boston suburb. Her political awakening—along with those of tens of thousands of her generation now

enrolled at college—is fueling a surge of campus unrest not seen since the Vietnam War.

A wave of pro-Palestinian protests has swept college campuses, leading to heightened tensions, counterprotests and, in some cases, violence. The con-

Please turn to page A10

A Man's Home May Be His Castle, But Did This Guy Go Too Far?

Former Brazilian shoeshine boy holds court amid turrets and golden columns

By SAMANTHA PEARSON

CUBATÃO, Brazil—Once upon a time, in a land far away, there lived a shoeshine boy who planned to become king. No one believed him.

After all, he lived in Brazil, a presidential republic, and more specifically in Cubatão, a dismal industrial town that was so polluted it was nicknamed the "Valley of Death."

But some 50 years later, Ivanio Batista da Silva—now better known as His Majesty Ivan I of Cubatão—has proved them wrong.

After making a small fortune disposing of factories' waste following a 1990s-era government cleanup, Silva built himself a castle on the

edge of the city's mangrove swamps, complete with turrets, chandeliers and ornate golden columns.

Replica brass lions stand guard over his velvet throne, swords and an improvised art collection that includes 32 framed photocopies of the world's most famous paintings.

"People always say they want to live like a king, but they don't actually do anything about it. Well, I did," says Silva, 59, his red cloak billowing behind him as he strides to the window, pointing out a group of fans in his front yard.

It's been some 134 years since the fall of the Portuguese monarchy in Brazil. But much like Silva, many Brazil-

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Salesforce.

#1 CRM.

Ranked #1 for CRM Applications based on IDC 2023H1 Revenue Market Share Worldwide.



Source: IDC, Worldwide Semiannual Software Tracker, October 2023.



salesforce.com/number1CRM

CRM market includes the following IDC-defined functional markets: Sales Force Productivity and Management, Marketing Campaign Management, Customer Service, Contact Center, Advertising, and Digital Commerce Applications. © 2023 Salesforce, Inc. All rights reserved. Various trademarks held by their respective owners.

U.S. NEWS



CAPITAL ACCOUNT | By Greg Ip

Who Will Pay for Green Transition?

In the past few years, Washington and Wall Street started fantasizing that the transition to net zero carbon emissions could be an economic bonanza. “When I think climate change, I think jobs,” President Biden said. When Wall Street heard green energy, it saw profits. As **Ford Motor** launched an electric Mustang and pickup truck, its market value topped \$100 billion for the first time.

This year the fantasy ended. With electric-vehicle demand falling short of expectations, manufacturers are dialing back production plans. Offshore wind developers have canceled projects. The S&P Global Clean Energy Index has fallen 30% this year. Ford’s market cap is down to \$42 billion.

This doesn’t mean the transition to net zero is over. Officials meeting this week at the United Nations climate conference are just as worried about climate change. Renewable energy continues to expand.

But the economics of getting to net zero remain, fundamentally, dismal: someone has to pay for it, and shareholders and consumers decided this year it wouldn’t be them.

Technological transformations are positive supply shocks: a new, more efficient technology comes along, and investment naturally gravitates toward this new technology because it is profitable.

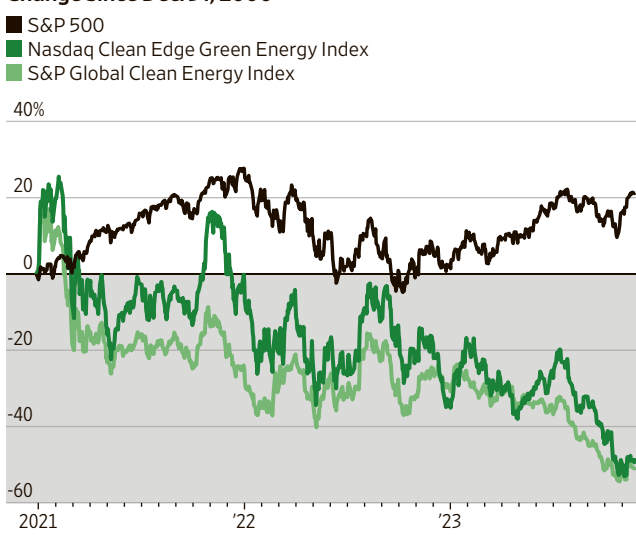
By contrast, the green transition is driven by public policy. It is “a negative supply shock, with an accompanying need to finance investments whose profitability cannot be taken for granted,” French economist Jean Pisani-Ferry wrote in a report commissioned by the French prime minister and released in English in November. “By putting a price—financial or implicit—on a free resource (the climate), the transition increases production costs, with no guarantee that the reduction in energy costs will eventually offset them, while the investments it calls for do not increase productive capacity but must nevertheless be financed.”

Pisani-Ferry, who is affiliated with the Bruegel think tank in Europe and the Peterson Institute for International Economics in Washing-



A chassis for a Ford F-150 Lightning pickup is worked on at the Rouge Electric Vehicle Center in Dearborn, Mich.

Change since Dec. 31, 2020



Source: FactSet

ton, is an uncommonly clear thinker on this issue.

“It would take an incredible act of blindness to fail to recognize that climate change is happening, that it is—and will increasingly become—severely damaging,” he writes. “It would also be incredibly flippant to claim that this urgent and imperative action will have no economic cost by 2030.”

The most efficient way to redirect consumption and investment from fossil fuels to zero-emissions energy is a carbon tax, or a cap-and-trade system. Europe has adopted such a system plus ever more stringent goals, especially after Russia cut off natural gas supplies fol-

lowing its 2022 invasion of Ukraine. But as the cost has grown, so has public discontent, from France’s “yellow vest” protests in 2018 to last week’s first-place finish in Dutch elections by the far-right Freedom Party, which wants to ditch all climate regulations.

U.S. leaders have rejected any federal tax or fee on carbon. Biden’s solution is to not ask consumers to pay for the green transition; his Inflation Reduction Act pours, by some estimates, roughly \$1 trillion into electric vehicles, renewable energy, hydrogen and other zero-emissions technology.

A Treasury spokeswoman

declined to comment. The tax-credit rule comes as demand for electric vehicles has shown signs of cooling, prompting several automakers to adjust their plans for EV investment. While sales of EVs have still grown significantly, the rate of growth has slowed compared with last year.

The Biden administration’s guidance will likely block the subsidy for cars containing batteries, components or minerals made by state-owned Chinese companies. Officials have been weighing how to address companies based in the U.S. or in a third country that are partially owned by private Chinese companies. Whether batteries built with technology licensed from a Chinese company can qualify for the subsidy has been another area of debate.

The prohibition will come into effect in 2024 for manufactured battery components and in 2025 for the minerals that go into them. Regardless of how the Biden administration enforces the rule, auto industry experts expect the requirement will reduce the number of cars eligible for the credit in the near term.

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Quarterly Economic Growth Revised Up

By AUSTEN HUFFORD

The economy grew faster than previously estimated during the third quarter—at a blistering seasonally- and inflation-adjusted 5.2% annual rate—because there was more fixed investment as well as state and local government spending than initially thought, the Commerce Department said Wednesday.

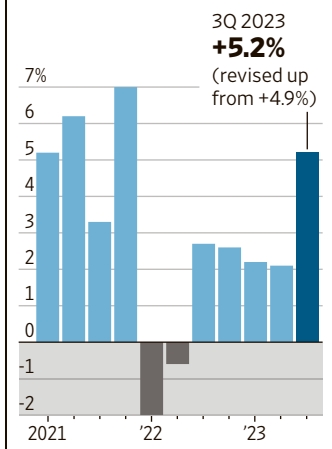
The new figure was revised up from an initial estimate of a 4.9% pace.

It was the fastest quarterly growth rate for gross domestic product since the fourth quarter of 2021, when the country was lifting Covid-19 restrictions.

Consumer spending during the quarter rose at a 3.6% annual rate, compared with the previous estimate of 4.0%.

Economists expect growth to slow in the fourth quarter as consumers pull back on spending. The Federal Reserve Bank of Atlanta’s GDPNow model expects real GDP to expand at a 2.1% annual rate in the fourth quarter.

Annualized quarterly change in U.S. GDP



Note: Adjusted for inflation and seasonality. Source: Commerce Department

CORRECTIONS & AMPLIFICATIONS

Health authorities in Hamas-run Gaza say more than 15,000 people have been killed since Hamas’s Oct. 7 assault on Israel. The figures don’t distinguish between militants and civilians. A World News article on Wednesday about U.S. calls for Israel to modify its military plans incorrectly said civilian deaths in Gaza were more than 15,000.

Jeffrey Romley is a photographer and producer. A Nov. 27, 2021, obituary for Romley’s husband, Broadway composer and songwriter Stephen Sondheim, incorrectly said Romley is an actor.

China Role in EV Market Hinges on Tax-Credit Rules

By ANDREW DUEHREN

The Biden administration is expected to release tax-credit rules on Friday that could shape the American market for electric vehicles, people familiar with the matter said.

The U.S. last year revamped a \$7,500 tax subsidy for people who buy new EVs. One of the changes says consumers won’t be able to claim the credit if they purchase cars containing battery materials from a “foreign entity of concern.” Lawmakers included the rule in the Inflation Reduction Act to push automak-

ers to rely less on dominant Chinese suppliers.

Defining the vague phrase has emerged as a challenge for the Biden administration. How it addresses the term in the proposed rules, expected Friday, could help determine how many Americans will pay for many EVs in the coming years.

The White House hopes the new tax-credit rules will encourage the development of auto-supply chains in the U.S. and distance the industry from China, the most important source of clean-energy technology and a geopolitical rival. At the same time, dis-

qualifying vehicle batteries with even minor contributions from Chinese companies could mean that few, if any, EVs would be eligible for the \$7,500 credit, potentially slowing the transition away from gasoline-powered cars.

“A lot rides on how exactly the Treasury Department defines this rule insofar as it applies to the ability of car manufacturers to use parts from Chinese corporations in their supply chains,” analysts at Beacon Policy Advisors, a policy-research firm, wrote in a note.

A Treasury spokeswoman

GM Plans Big Share Buyback

Continued from Page One generation of our [internal-combustion-engine] business remains strong,” Barra wrote in a letter to shareholders Wednesday.

Several aspects of GM’s strategy for growth, meanwhile, have been running behind plan and hitting challenges, testing investors’ patience.

GM’s stock price had fallen 14% this year through Tuesday, and they hit a three-year low earlier this month. Shares closed up 9% Wednesday, marking the largest percentage increase since mid-January 2021.

GM has joined other companies in delaying investment

and ditching near-term EV-output targets, citing signs that the burst of consumer demand for battery-powered cars in recent years has eased.

Last month, GM said it would push back the opening of an electric-truck factory in suburban Detroit by a year. It also scrapped an earlier goal of producing 400,000 EVs over a roughly two-year stretch, through mid-2024.

Barra also faces questions about the future of Cruise, its San Francisco-based driverless-car business that is trying to establish an autonomous ride-hailing service.

California regulators last month pulled Cruise’s permit to operate driverless cars following an accident in which one of its cars collided with and then dragged a pedestrian. Cruise suspended its operations and has said it would focus on only one city—once it resumes service, although it hasn’t given a timeline.



GM CEO Mary Barra

During an analyst call Wednesday, Barra said EV demand is evolving more slowly than expected, but she expects it to reaccelerate in coming years as new models come out and the charging network improves. She said GM’s bottom line on EVs will improve as it scales up production.

The CEO also said she remains committed to electric

and autonomous vehicles as growth drivers. “Our strategy hasn’t changed,” she said. “Our tactics are changing to align with what’s happening in the marketplace.”

GM said it would significantly reduce its spending on Cruise, which totaled nearly \$2 billion through the first three quarters.

Cruise’s expansion plans will be “more deliberate,” which will cut GM’s losses on the business, while it also redoubles its focus on safety and accountability, Barra said.

The \$10 billion buyback is a significant increase from the \$4.2 billion in cash returned to shareholders over the past seven quarters combined. GM said it would repurchase \$6.8 billion this week, with the balance coming by the end of

next year. It also will boost its common stock dividend by 33% starting in January.

GM’s 46,000 UAW workers earlier this month ratified a contract that bakes in higher costs than company executives had anticipated when negotiations began over the summer. The talks culminated in a strike of more than 40 days, which closed several factories.

The company said it would offset the higher labor costs by reducing capital spending on EVs and other programs, simplifying its vehicle lineup and cutting expenses in marketing, engineering and other areas.

Barra said GM would fully balance the higher labor costs by cutting expenses in 2024, including spending on Cruise.

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9%
GM’s share-price gain on Wednesday, its biggest percentage rise since early 2021.

U.S. NEWS

More Evidence Sought On FDIC Work Culture

By REBECCA BALLHAUS

Pressure on the Federal Deposit Insurance Corp. over allegations of a toxic work environment mounted this week, as the agency's internal watchdog launched its own inquiry and a Republican senator requested records related to settlements and nondisclosure agreements.

The FDIC's inspector general will examine the "leadership climate at the FDIC with regard to all forms of harassment and inappropriate behavior," a spokeswoman said. The IG will also assess the agency's sexual harassment prevention program, including looking at what steps the FDIC has taken since a 2020 IG report found that program was flawed.

A Wall Street Journal investigation published this month revealed allegations of a toxic workplace culture at the agency that drove many female bank examiners to quit. In response, the agency formed a special committee to oversee a review by the law firm BakerHostetler of the workplace culture.

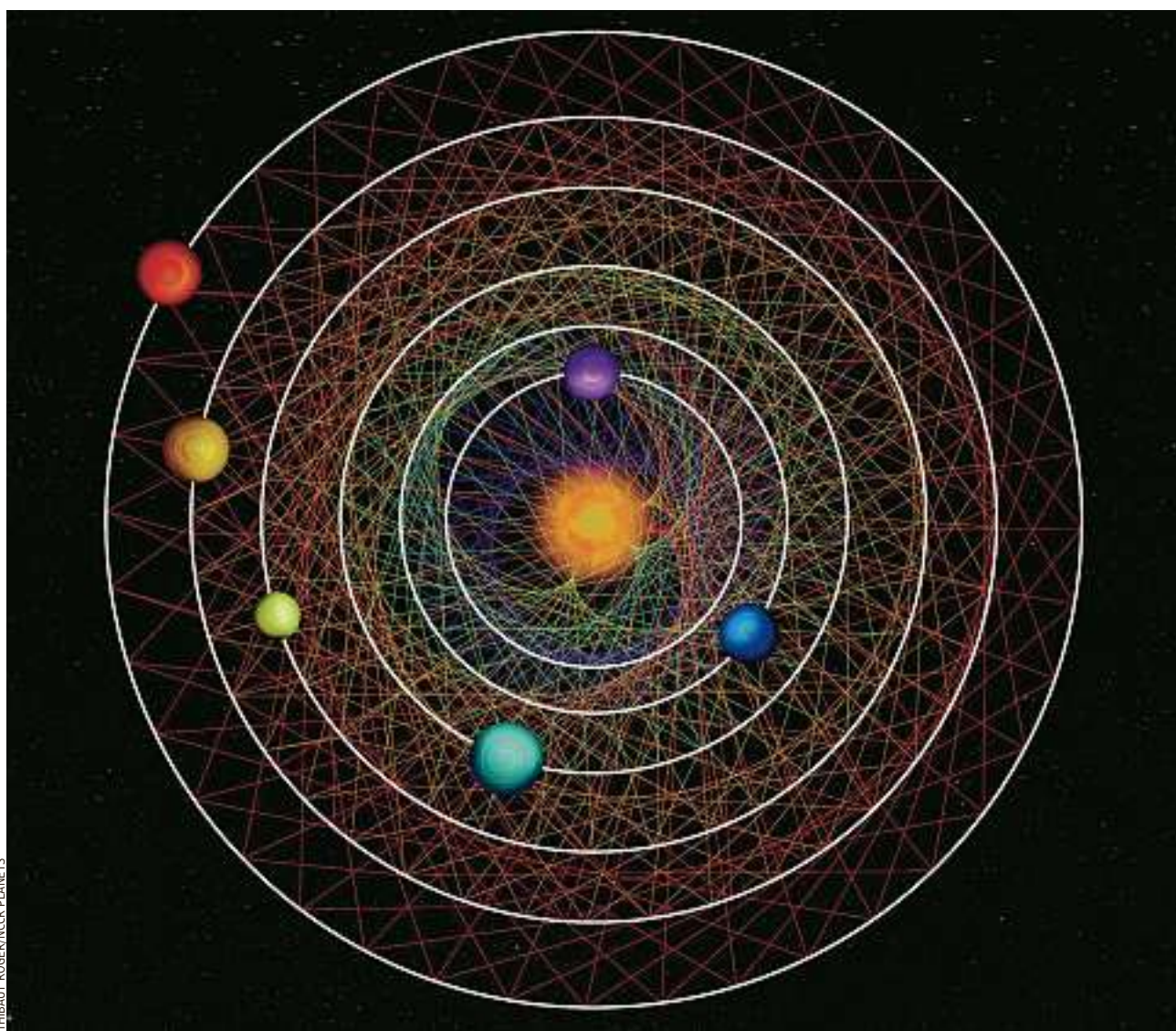
Sen. Joni Ernst (R., Iowa) called on FDIC Chairman Mar-

tin Gruenberg in a letter on Wednesday to resign and for those guilty of misconduct to face "serious consequences, including termination and criminal prosecution when warranted."

The FDIC didn't respond to a request for comment. In response to the 2020 IG report, the agency agreed to improve training and tracking of harassment allegations, among other changes.

Gruenberg, who has served on the FDIC's board since 2005 and was nominated by President Biden last fall to serve a second term as chairman, has signaled he won't resign. Any departure would leave the FDIC's Republican vice chairman in charge and a board evenly split between both parties.

In addition to the records related to settlements and nondisclosure agreements, Ernst requested that the agency provide records related to the annual budget at the FDIC's hotel in Arlington, Va., where employees drank to the point of excess, vomited in the elevator and urinated off the roof, the Journal reported.



An illustration shows the six exoplanets of the HD 110067 system, located about 100 light-years from Earth.

New Six-Planet Star System Offers Clues About Our Own

Worlds that orbit sun-like host can shed light on how they formed, evolved

By AYLIN WOODWARD

A family of six gaseous worlds circling like rhythmic dervishes around a sun-like star will soon help astronomers better understand how planetary systems like our own formed and evolved.

This newly discovered system, about 100 light-years from Earth, is unusual because its planets orbit a bright host star in a pattern that appears unchanged since its birth at least four billion years ago, according to a study published on Wednesday in the journal Nature.

"It offers an opportunity to study an early stage of a planetary system's orbital architecture," said Tansu Daylan, an assistant professor of physics at Washington University in St. Louis, who wasn't involved in the new research.

In 2020, scientists observed some of this bright star's light dimmed every so often—suggesting one or more orbiting

exoplanets were passing in front of it, a term known as transiting. The star was monitored by a National Aeronautics and Space Administration space telescope known as TESS.

Exoplanets, the name given to the more than 5,000 planets now discovered outside our solar system, come in myriad types. The most common in our galaxy are called "sub-Neptunes"—worlds that are larger than Earth but smaller than Neptune that scientists think likely have solid cores with gassy atmospheres.

Additional observations of the star, designated HD 110067, from TESS and a European Space Agency telescope named CHEOPS in 2022 not only confirmed the presence of six transiting sub-Neptunes, but also that these cosmic constituents exert gravitational influence on one another, orbiting in a pattern. Astronomers call this resonance—a configuration that is rarely preserved as a multiplanetary system evolves over time. The planets in our solar system, for instance, aren't in resonance.

For every three rotations around HD 110067 completed

by the innermost planet, the second-closest planet completes two, the study authors reported. The same pattern exists between the second and third and third and fourth planets, while a ratio of four-orbits to three-orbits exists between the fourth and fifth and fifth and sixth planets.

This chain of orbital relationships gives clues about the six-planet system's past, according to Rafael Luque, a University of Chicago astrophysicist and lead author of the research. Host stars and their planets are born at the same time out of a cloud of gas and cosmic dust that starts to flatten into a disk shape, he said.

Most of the gas comes to the center, where a star forms, while baby planets form on the disk's outskirts from dust. Those planets, when they first form, tend to be in resonance to help keep the system gravitationally stable.

"The fact that exoplanets are rarely found in these resonances is what really grabs me," said David Kipping, an associate professor of astronomy at Columbia University who wasn't involved in the study. "It suggests that dy-

namical disruption to these primordial, pristine states is a common outcome of planet formation—and so we are left with precious few of these relics, time machines to how planets are born."

Observations suggest 1 in 100 systems or so have retained their resonance through the present day, Luque said. Typically, some chaotic disturbance—perhaps an asteroid impact or the formation of a giant planet like Jupiter with a strong gravitational pull—quickly destroys the pattern after a system is born.

That HD 110067's planets are still in resonance suggests the system has remained unchanged for billions of years, Luque added, and may provide hints as to which conditions allowed it to maintain that stability—and which conditions ensured that our solar system didn't.

The four outer planets in our solar system—Jupiter, Saturn, Uranus and Neptune—likely once had an orbital resonance resembling that of this six-planet system before their orbits violently changed around 4.5 billion years ago, Luque said.

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U.S. NEWS

Charges Allege Plot to Kill Sikh Activist

Indian government agent is implicated in U.S. in case raising a sensitive issue

An Indian government employee tried to have a vocal critic of New Delhi assassinated in New York this year, U.S. prosecutors alleged, a development that threatens to cause new rifts in the deepening relationship between Washington and New Delhi.

By Aruna Viswanatha and Sabrina Siddiqui in Washington and Tripti Lahiri in New Delhi

The allegation, laid out in an indictment unsealed Wednesday, follows on suspicions Canada aired about a similar plot linked to Indian government agents in which masked gunmen murdered a Sikh activist in the parking lot of his British Columbia temple. Canada in part relied on U.S. intelligence to make that assessment, which was met with official outrage in India.

Both alleged plots unfolded in June, around the time Indian Prime Minister Narendra Modi was making a state visit to Washington designed to herald closer ties between the countries in light of India's importance in the U.S. campaign to counter China.

Since then, senior U.S. officials including CIA Director William Burns have instead traveled to New Delhi to warn counterparts of potential consequences for the U.S.-India relationship over the actions.

In the new case, prosecutors charged Nikhil Gupta with working with an Indian government officer to pay a purported hitman \$100,000 in June to murder a prominent advocate for carving out an independent Sikh homeland from the north Indian state of Punjab.

Gupta appeared to be in-



Hindu nationalists at a recent rally in New Delhi held a banner depicting Gurbatwint Singh Pannun, the target of an assassination plot alleged in an indictment unsealed Wednesday.

Tensions With Modi Government Simmer

The Sikh community lives predominantly in the north state of Punjab and has a large diaspora in Canada. Some members have increasingly clashed with the Indian government, rekindling interest in a separate Sikh homeland, an idea that took violent turns in the 1970s and '80s.

In 2020, India's home

ministry designated both Hardeep Singh Nijjar and Gurbatwint Singh Pannun terrorists and said Pannun was issuing appeals to Punjabi youth to fight for the separatist cause. Pannun has denied advocating for violence.

As part of the Biden administration efforts to strengthen ties between

Washington and New Delhi across defense, trade and climate, the administration has largely shied away from publicly criticizing India over human-rights concerns.

U.S. officials said despite the charges, India remains an important partner and they expect the Indian government to cooperate with continuing investigations.

when directing the plot, U.S. authorities said.

India's foreign ministry said earlier on Wednesday that it had set up a committee to investigate the matter on Nov. 18. A ministry spokesman didn't respond to a request for comment on the unsealed indictment.

Just before his U.S. visit, his first official state visit to Washington after nine years in office, Modi had said "there is an unprecedented trust" between the leaders of the U.S. and India.

The indictment doesn't name the intended target, but details provided there make him identifiable as Gurbatwint Singh Pannun, a New York-based lawyer for a group called Sikhs for Justice, who had also worked with Nijjar.

In a statement Wednesday, Pannun

said the alleged plot was a "blatant case of India's transnational terrorism which has become a challenge to America's sovereignty and threat to freedom of speech and democracy."

The Biden administration became aware of the foiled plot in late July, and national security adviser Jake Sullivan first raised the issue with his counterpart, Ajit Doval, in person, asking the Indian government to investigate and hold those responsible to account. The CIA's Burns also traveled to India to reinforce the message, and Biden pressed Modi directly on the matter at the G-20 summit in New Delhi in September, a senior administration official said.

"He emphasized the seriousness of this issue and the potential repercussions for our bilateral relationship were similar threats to persist," the senior official said of the president's comments.

According to the indictment, Gupta told the Indian security officer about his involvement in international narcotics and weapons trafficking, and the officer asked Gupta to arrange for the murder in exchange for securing the dismissal of a criminal case against Gupta in India. In a May 6 message, the officer initially proposed one target in New York and another in California. "We will hit our all Targets," Gupta replied.

Days later, the officer told Gupta his criminal case "has already been taken care of."

After those assurances, Gupta contacted someone he thought could connect him with a hitman but who was actually a confidential source working with the Drug Enforcement Administration.

Over the next few weeks, Gupta strate-

gized with that informant, suggested they approach Pannun by pretending to seek legal advice, and said they were ready to pay up to \$150,000 or more for the killing, "depending upon the quality of the work."

The informant connected Gupta with a purported hitman who was actually an undercover DEA officer, the indictment said. The Indian government employee agreed to pay the "hitman" \$100,000, and arranged with Gupta to deliver \$15,000 on June 9 in Manhattan as an advance payment, the document said.

On June 12, Gupta allegedly told the informant there was a "big target" in Canada. Six days later, Nijjar was gunned down in British Columbia. The next day, Gupta allegedly told the informant that Nijjar "was also the target," said "we have so many targets," and relayed that Pannun "will be more cautious, because in Canada, his colleague is down."

Ex-Bank Executive Testifies That Trump Was Lucrative Client

By JACOB GERSHMAN

The former Deutsche Bank executive who recruited Donald Trump as a client testified Wednesday that the bank's dealings with the former president were lucrative and that her superiors were eager to expand them.

Rosemary Vrablic, a former relationship manager with the bank's private-wealth-management division, is one of several witnesses from Deutsche Bank being called to the stand this week by Trump's lawyers as they seek to rebut allegations by the New York attorney general that Trump committed civil fraud by overstating his wealth for financial gain.

The trial in Manhattan, which began in October and is being decided without a jury, is expected to conclude next month. The case has potentially serious consequences for Trump's fortune and family business at the same time he is the front-runner to be the 2024 Republican presidential nominee.

Vrablic, who left the bank in 2021, first connected with Trump in 2011 on the recommendation of the former president's son-in-law, Jared Kushner. At the time, Trump was rolling in cash and fame from his role on the reality show "The Apprentice" and expanding his empire of golf courses. Deutsche Bank, which had an earlier rocky history of

lending money to Trump, was at that point eager to do business with Trump and his family, Vrablic said.

"We are whale hunting," Vrablic wrote in a 2011 email that was read in court, a reference to landing the billionaire as a client. By that December, Trump had parked \$20 million into a Deutsche Bank account. The next year, Deutsche had lent Trump more than \$200 million, financing his acquisition of Miami's Doral golf resort. By 2013, the bank was generating millions in revenue from its business with Trump, she said.

On cross-examination, she said she never examined Trump's financial statements herself but had an expectation that her clients wouldn't submit false or misleading statements to the bank, as the state alleges Trump did.

Her testimony came a day after David Williams, a Deutsche Bank loan underwriter who worked on annual credit reviews of Trump, testified that it wasn't unusual for the bank and a client to arrive at sharply different net-worth estimates. In 2013, Trump estimated his net worth at \$4.9 billion while the bank put the figure at \$2.6 billion after doing its own analysis, according to documents cited in court.

Williams said he saw nothing out of the ordinary with the bank's downward adjustment. The presiding judge, Justice Arthur Engoron, already has found that Trump and his co-defendants wildly exaggerated the value of his skyscrapers, estates and golf courses by concealing appraisals, ignoring land-use restrictions, misrepresenting his control over cash holdings and using misleading investment metrics.

Engoron is conducting the trial largely to determine the size of any financial penalties and whether Trump should be restricted from doing business in New York.

lives in India and was arrested on the charges in the Czech Republic on June 30.

A Justice Department spokesman declined to say whether U.S. authorities were working to extradite him or what the status of such efforts were.

Gupta was allegedly recruited in May by an Indian security officer who described himself as having previously served in India's Central Reserve Police Force, a unit often deployed to areas of insurgency, and was an active Indian government employee

U.S. WATCH



COLD WAIT: People seeking shelter bundled up outside a migrant assistance center in New York City on Wednesday.

WISCONSIN

Cardinal Critical Of Pope Punished

Pope Francis is punishing one of his most vocal conservative critics in the Catholic hierarchy, U.S. Cardinal Raymond Burke, by taking away his stipend and rent-free apartment in Rome.

The punishment of Burke, who has opposed the pope's leniency on divorce and his conciliatory approach to LGBTQ people, follows the pope's firing of another conservative critic, Texas Bishop Joseph Strickland, and underscores the tensions between Francis and the U.S. church.

While Burke and Strickland have been especially outspoken, the American bishops as a whole have emerged as the most prominent conservative bloc in the Catholic hierarchy under the current pontificate. Burke, speaking on Wednesday from Wisconsin, said he hadn't heard anything about the matter from Francis or the Vatican.

—Francis X. Rocca

NEW YORK

Subway Worker Killed by Train

A New York City subway worker was dragged under a train and killed early Wednesday, officials said.

The fatal accident happened at about 12:15 a.m. just south of the 34 Street-Herald Square station in Manhattan, Metropolitan Transportation Authority officials said.

The 57-year-old employee was working as a flagger when he somehow got dragged under a northbound D train, officials said. He was taken to Bellevue Hospital, where he was pronounced dead.

"There was work taking place, scheduled work. The fellow was flagging, and it's very much still under investigation on what went wrong," MTA Chair Janno Lieber said at a meeting of the MTA board's safety committee.

Flaggers are supposed to help promote safety by alerting oncoming train crews to track work further down the line.

—Associated Press

MAINE

Tuition Waived for Families of Victims

Maine's public university system is offering free tuition to family members of those who died and to those who were injured in the deadliest mass shooting in state history, officials said Wednesday.

The Lewiston Strong Tuition Waiver program covers more than 80 people. It also creates a fund that the public can donate to that will cover other post-secondary educational expenses. The Oct. 25 shootings left 18 people dead after a gunman opened fire at a bowling alley and a restaurant.

"Through their boundless generosity, Maine people are demonstrating that our state will stand by those who were injured and the families of those who were killed in the months, years and decades to come," said Gov. Janet Mills.

In-state tuition and fees in the University of Maine System average around \$10,200 this academic year.

—Associated Press

OHIO

Three People Killed In Auto-Shop Blast

An explosion at an auto repair shop in Ohio killed three people and sent a fourth person to a hospital, and sparked a massive fire that burned for hours, spewing thick, black smoke into the air.

The Tuesday afternoon blast at Jimbo's Auto Repair in Hillsboro was felt at several nearby sites, including the Paint Creek Joint EMS & Fire District, whose crews quickly responded to the scene. The heavy smoke was visible miles away.

Information about the three people who died wasn't immediately released by the Montgomery County Coroner's Office. The injured person remained hospitalized Wednesday in stable condition.

The cause of the explosion remained under investigation Wednesday. The State Fire Marshal's Office is the leading the probe into the explosion.

—Associated Press

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U.S. NEWS

Supreme Court Weighs Curbs on SEC Powers

By JESS BRAVIN
AND DAVE MICHAELS

WASHINGTON—The Supreme Court appeared ready Wednesday to scale back the Securities and Exchange Commission's power to enforce securities laws through administrative hearings rather than jury trials, in a case that could threaten similar executive-branch procedures Congress authorized for consumer protection, workplace safety and other areas.

Critics have complained about the SEC's special courts for years, saying they rob defendants, including those accused of fraud, of their right to a jury trial. Administrative law judges, who preside in the in-house courts, are supposed to be independent but are appointed by the same commissioners who authorize the enforcement cases the judges hear. Last year, a federal appeals court in New Orleans found the SEC courts unconstitutional for several reasons, including violating the Seventh Amendment, which provides a right to jury trials in certain circumstances.

Under current law, the SEC has the option of bringing some enforcement actions in federal court, where the jury right applies, or at an in-house hearing, where it doesn't. On Wednesday, the court's conservative majority signaled that it found the commission's ability to make that choice troubling.

The government is much more likely to "proceed against you before one of its own agencies than in court," said Chief Justice John Roberts. He said it was "curious

that unlike most constitutional rights," an SEC investigatory target was entitled to a jury trial "until the government decides that they don't want you to have it."

Supreme Court precedents have given Congress flexibility to devise new enforcement systems to deal with new situations. In a 1977 case, *Atlas Roofing v. Occupational Safety and Health Administration*, the court unanimously agreed with then-Solicitor General Robert Bork that it was constitutional for federal law to impose civil penalties for workplace-safety violations through administrative proceedings rather than jury trials.

"Atlas Roofing simply resolves the issue," said Justice Elena Kagan, and Congress has relied on the precedent in subsequent legislation.

Since that precedent, she said, society's "problems have only gotten more complicated and difficult and it is usually Congress that decides...whether administrative agencies with the kind of expertise they have are the appropriate way to solve those problems."

Although jury trials are central to American law and the English law it was based on, they aren't required in all legal actions. The Seventh Amendment provides for jury trials "in Suits at common law," and much of Wednesday's argument addressed whether SEC enforcement actions qualified as such, triggering the jury-trial right.

Justice Ketanji Brown Jackson suggested adjudicating enforcement actions on matters like fraud, which resemble the kind of common-law suit known in the 18th cen-

tury, in federal court, while those involving newer regulations and sanctions created by Congress could be handled through the administrative system.

"If I'm right about this, then I think it solves a lot of the concerns that my colleagues have about Congress shifting certain things into administrative proceedings" from the federal courts, she said.

Justice Samuel Alito put that question to Michael McColloch, a lawyer for George Jarquesy, the target of an SEC administrative action who challenged the commission's in-house courts.

"Could we decide this case on the narrow ground that the statutory securities fraud claims are sufficiently close to a common-law fraud action?" Alito asked.

"Yes, your honor," McColloch said. He added that in recent years, the SEC had read "the writing on the wall" and largely dropped using the in-house courts, instead pursuing fraud claims in federal court.

Deputy Solicitor General Brian Fletcher, representing the Biden administration, said the SEC currently has only three in-house judges. Most administrative judges, he said, some 80%, work for the Social Security Administration, where they decide disputes over federal benefits.

A high-impact case

Depending on its scope, the decision in *SEC v. Jarquesy*, expected before July, could open the door to attacks on administrative courts at other federal agencies that enforce environmental, consumer-protection and market-integrity laws. At the Federal Trade Commission, for instance, an in-house bench considers complaints about anti-competitive mergers and



Chief Justice John Roberts signaled he was troubled that the SEC can choose whether to bring enforcement actions in federal court or in house. Justice Ketanji Brown Jackson suggested a possible solution would be to adjudicate enforcement on matters like fraud in federal court while letting the administrative system handle those involving newer regulations and sanctions.

Agency Has Faced Recent Setbacks

The SEC has litigated far fewer enforcement cases in the administrative courts in recent years as defendants challenged aspects of their structure. The pullback began after the Supreme Court ruled in 2018 that SEC judges were hired in a way that violated the Constitution.

The legal assault on in-

house judges is part of a broader pattern of cases decided by the high court in recent years that question the growth of independent regulatory agencies.

Such agencies have rule-making, prosecutorial and judicial functions, violating the Constitution's separation of powers doctrine, according to groups such as the

U.S. Chamber of Commerce.

The Supreme Court has repeatedly ruled against the SEC in recent years. In April, the justices said people and businesses subjected to SEC administrative proceedings can seek to enjoin, or block, those proceedings by suing in a federal-district court and raising constitutional arguments there.

consumer-protection violations.

The Jarquesy case has generated interest among high-profile SEC critics and big-business groups, which have urged the justices to remove the agency's freedom to file enforcement actions outside of federal court. Billionaires Elon Musk and Mark Cuban, who have both been sued by the SEC, told the high court in a brief that regulators began using the administrative courts more around 2015, after losing a string of insider-trading trials in federal court.

The SEC's courts once only heard claims against stockbro-

kers and money managers—people who had submitted to the SEC's oversight. But after the 2008 financial crisis, Congress passed the Dodd-Frank Act, named for its authors, that empowered the SEC to sue any defendant in administrative court, including people who didn't work in finance but had, for instance, been accused of insider trading.

"Dodd-Frank really expanded the ability of the SEC to bring virtually any type of case in its administrative courts," said Deborah Meshulam, a partner at DLA Piper, who previously worked at the SEC. "It made these

constitutional challenges much more ripe."

Like trial court verdicts, decisions by SEC hearing officers can be appealed, first to the commission itself and then to a federal appeals court.

The SEC accused Jarquesy of fraud in 2013. An administrative judge found he "testified in an evasive manner" and told investors the funds' auditor was KPMG when it was a much smaller Houston-based accounting firm. The judge barred him from the securities industry and ordered penalties totaling \$1.72 million.

—Jan Wolfe
contributed to this article.

Humana, Cigna Talk Merger

Continued from Page One
The Wall Street Journal.

Joining forces would give the pair scale to rival that of UnitedHealth Group and CVS Health, and vault the combined company into the top tier of integrated healthcare companies.

Cigna, which had revenue of about \$181 billion last year, would be able to marry its huge pharmacy-benefit unit, which manages drug plans, and its strength in commercial insurance with Humana's big position in the fast-growing Medicare segment, something Cigna has long sought.

Humana also could help Cigna accelerate a strategy that is core to the managed-care business, a move toward paying doctors and hospitals in ways that aren't tied to the volume of service provided. These "value-based care" setups are increasingly central to Medicare plans, but have advanced far more slowly in commercial insurance.

Humana, with revenue of about \$93 billion last year, is the No. 2 Medicare insurer, after UnitedHealth, while Cigna's existing Medicare Advantage unit falls well short of that scale.

Humana also owns a major home-health business and a growing array of primary-care clinics that could bolster Cigna's growing Evernorth health-services arm.

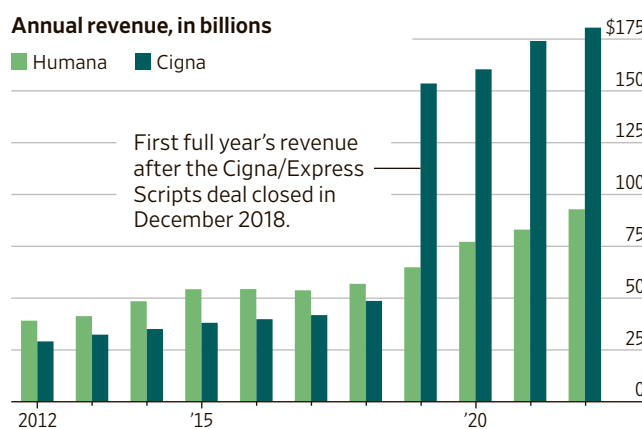
Cigna and Humana previously explored merging in 2015, but Humana instead struck a deal with another rival, Aetna, that was blocked by a judge on antitrust grounds. That left Aetna to be scooped up by CVS in 2018.

Another deal that would have combined Cigna with Anthem, now known as Elevance Health, also died after an adverse antitrust ruling.

The antitrust issues have made national insurers leery of large-scale combinations for years, and the Biden administration has signaled it would give scrutiny to health-



Cigna focuses largely on commercial insurance.



industry consolidation—and indeed mergers in general.

In a move that could serve to diffuse antitrust concerns, Cigna has been exploring the sale of its existing Medicare Advantage business, which could fetch several billion dollars in a divestment. Reuters previously reported on that process.

Bloomfield, Conn.-based Cigna focuses largely on commercial insurance, the type provided by employers and bought by individuals. The company's \$54 billion acquisition of Express Scripts Holding in 2018 made it one of the biggest players in pharmacy benefits, and it has been building up the Evernorth unit, which includes an array of noninsurance businesses.

But Cigna has failed to gain strong traction in Medicare, which is viewed as the biggest growth engine in the insurance realm.

The Humana deal would fix that, and make Cigna a major provider of healthcare too.

Louisville, Ky.-based Humana also has made moves that could clear the deck for a possible combination, announcing in February that it

would divest its commercial business and focus on its core Medicare Advantage line.

Humana has said its home-health unit and expanding primary-care footprint support its Medicare patients.

The company is in the midst of its own succession handoff. Humana said in October that Jim Rehtin—previously chief executive officer of Envision Healthcare—would take over as president and chief operating officer, effective Jan. 8. Rehtin was then to take over as CEO from Bruce Broussard in the back half of 2024.

A tie-up between Cigna and Humana would breathe new life into a mergers-and-acquisitions market that has been beset by high interest rates and concerns over the direction of the economy, among other factors.

It would be the biggest deal of the year, topping Exxon Mobil's \$60 billion agreement to acquire Pioneer Natural Resources, unveiled last month.

Merger volume in the U.S. is down 16% so far this year, at about \$1.2 trillion, according to Dealogic.



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WORLD NEWS

Former U.S. Marine Whelan Is Assaulted In Russian Prison

By MATTHEW LUXMOORE

Paul Whelan, a U.S. citizen who has been held in Russia since 2018, was assaulted by a fellow inmate after a conflict at his prison east of Moscow, according to the Russian prison service and Whelan's family.

The former U.S. Marine and corporate security executive from Novi, Mich., who is serving a 16-year sentence on espionage charges that he denies, was taken to the prison's medical unit on Tuesday with a graze under his eye following a minor altercation with another inmate, said Russia's state news agency RIA.

In a statement, the U.S. State Department voiced concern about the assault on Whelan, and it said the embassy in Moscow had been in contact with the 53-year-old by phone.

"We call on Russia to ensure Paul Whelan and all U.S. citizen detainees are safe," it said. "Russia should immediately release Paul Whelan."

Whelan was arrested during a trip to Russia in 2018. After a trial that was held entirely in secret, he was convicted in 2020. The U.S. considers Whelan to be wrongfully detained and has said that it believes his espionage conviction to be trumped up. His family has been campaigning for his release.

The U.S. has also designated as wrongfully detained Wall Street Journal reporter Evan Gershkovich, who has been behind bars awaiting trial since he was detained by Russia's Federal Security Service on March 29 while on a

reporting trip in the city of Yekaterinburg.

Gershkovich also is being held on an allegation of espionage that he, the Journal and the U.S. government vehemently deny.

A Russian court on Tuesday extended Gershkovich's pretrial detention until at least Jan. 30. President Biden said in April that his administration is working to secure the release of Gershkovich and Whelan.

Whelan was working at a sewing table on Tuesday afternoon at his prison colony, when an inmate interfered with his work, according to a statement released by his sister, Elizabeth Whelan.

After Whelan repeatedly asked the other inmate to move away, the man hit him in the face, breaking his

His sister said he is concerned that he is a target because of his nationality.

glasses, Whelan's sister said. Whelan stood up to block a second blow before other prisoners broke up the fight.

In a statement to Russian state media, the prison service said it launched a probe into the incident.

Whelan's sister said he is concerned that he is a target because of his American nationality, and that further attacks could occur.

Since his arrest, Russian state media has depicted Whelan as a Western spy.

In August, a report on Russian state-controlled TV channel RT contained footage of Whelan going about his day in the prison colony. Whelan is shown in the report refusing to be interviewed by the Russian reporter, who nonetheless asks him questions on camera.



Police in March 2022 detained demonstrators in St. Petersburg who were protesting Russia's attack on Ukraine.

DIMITRI LOVETSKY/ASSOCIATED PRESS

Kremlin Weighs Loyalty Law For Foreigners Entering Russia

By ANN M. SIMMONS

The Russian government is proposing a law to force foreigners entering the country to sign a loyalty agreement restricting what they can say about government policy and social values, the latest clampdown on freedom of expression by the Kremlin since its 2022 invasion of Ukraine.

The draft legislation set out by the Interior Ministry also states that foreigners must not discredit Russian authorities or officials, contradict Soviet military history or disrespect the country's "spiritual and moral values," the TASS state news agency reported.

If the law is enacted, foreigners would need to sign a consent form to enter the country. It couldn't be determined what repercussions they would face if they sign the agreement and then violate it.

The proposed measures sig-

nal a further tightening of the screws on free speech in Russia, where voices of dissent have been increasingly silenced since President Vladimir Putin ordered the invasion of Ukraine in February 2022. The Kremlin refers to its invasion as a special military operation and has made it illegal to publish information it considers to be false about the conflict or to describe it as a war. The law carries a maximum penalty of 15 years behind bars.

The Ministry of Internal Affairs, which governs law and order, didn't respond to a request for details on the draft legislation or when it would be submitted to parliament.

Kremlin spokesman Dmitry Peskov declined to comment.

In the past 21 months, several independent Russian news outlets have closed their doors and hundreds of journalists have fled the country, while other Russian-language

publications were shut, started to work in secret or went into exile. Many Western news organizations stopped operating in Russia and moved their staff out of the country.

The detention in March of Wall Street Journal reporter Evan Gershkovich had a further chilling effect on Western media in Russia. Gershkovich, a 32-year-old U.S. citizen who was accredited by Russia's Foreign Ministry to work as a journalist, was detained while on a reporting trip by Federal Security Service agents on an espionage allegation. Gershkovich, the Journal and the U.S. government vehemently deny the claims.

Several Western news outlets have brought staff back to Russia in recent months, while others opted to have their reporters travel in and out of the country.

Civil-rights activists and legal experts said that, if

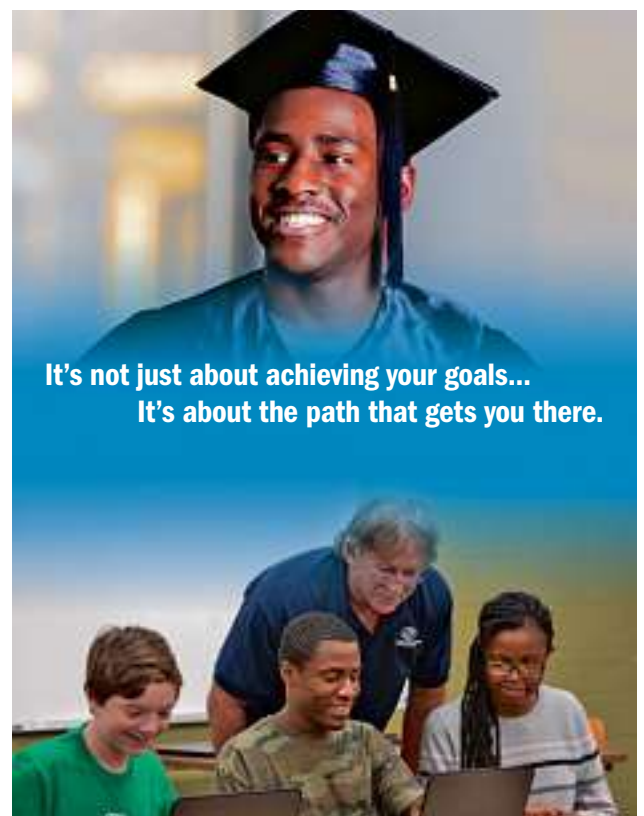
passed, the law essentially would muzzle the foreign press, making it difficult for them to work in Russia unless they adhere to Moscow's narrative about the war in Ukraine and other issues.

"By signing this ban, they will lose the right to objective coverage of events taking place in the country. And if they refuse to sign this, they simply will not be able to stay in the Russian Federation," Perviy Otdel, a community of lawyers and human-rights activists, said on Telegram.

The Kremlin has sought to blame the West for trying to destroy what it calls "traditional values" in countries that are more socially conservative. Senior Russian officials and the Russian Orthodox Church have portrayed gay-rights activism as a symbol of the West's moral decline, which they say is directed at uprooting conservative beliefs in countries such as Russia.



Paul Whelan is serving a 16-year term for espionage. He denies the charge, and the U.S. considers him to be wrongfully held.



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WORLD WATCH



HOTHOUSE FLOWERS: A woman on Wednesday prepared some of the eight acres of poinsettias, traditional Christmas plants, that had been grown for six months before selling wholesale at Uniplumo Wyestown nursery in Dublin.

EUGENIA KILCOINE/REUTERS

ARGENTINA Ex-Central Banker Picked for Minister

Argentina's president-elect, Javier Milei, on Wednesday said he has chosen Luis Caputo, a former finance minister and central bank chief known as an expert in markets, to lead the Economy Ministry when the right-wing leader takes office Dec. 10.

The pick confirms that Milei, a libertarian outsider, is building a more orthodox team to manage Argentina's economy, which is suffering from red-hot inflation running at an annual rate of 143%.

As the first finance minister in former conservative President Mauricio Macri's government, Caputo was in charge of a debt restructuring and later became central bank chief. The market has welcomed signs of Milei's more orthodox choices for key cabinet positions.

—Associated Press

HONG KONG Activists' Trial Is Winding Down

A Hong Kong court on Wednesday started hearing the final arguments of some of the city's best-known pro-democracy activists tried under a law imposed by China's ruling Communist Party to crush dissent.

The activists' subversion trial is the biggest prosecution yet under the national-security law. They could face up to life in prison if convicted.

The defendants were among 47 activists arrested in 2021 under the sweeping law imposed by Beijing after massive antigovernment protests in 2019. They were charged in connection with an informal 2020 primary election to pick candidates who could win control of the city's Legislative Council.

—Associated Press

FRANCE Court Clears Justice Minister

A special court cleared France's justice minister of conflict of interest, ruling that he wasn't guilty of having used his office to settle personal scores.

Eric Dupond-Moretti had denied wrongdoing and refused to resign before or during his trial, defying what had been an unwritten rule until recent years that members of government quit when under investigation.

Dupond-Moretti, speaking on France 2 television, said, "This trial was an ordeal for me and at the same time a relief."

The minister had been accused of abusing his position to order probes targeting magistrates who investigated him, his friends and his former clients.

—Associated Press

NEPAL Gay Couple Get Marriage Status

A gay couple in Nepal on Wednesday became the first in the nation to receive official same-sex marriage status.

Sunil Babu Pant, an openly gay former parliamentarian and leading LGBTQ+ rights activist, was present with Surendra Pandey and Maya Gurung when they registered their marriage at the Dorje village council office, located west of the capital, Kathmandu.

This year, Nepal's supreme court issued an interim order allowing same-sex couples to wed for the first time.

The couple married six years ago at a temple following Hindu tradition, with a priest conducting the rituals among friends and family. But they had no certificate showing their marriage was legal until Wednesday.

—Associated Press

WORLD NEWS

Henry Kissinger Dies at 100

Continued from Page One
ing the U.S. military campaign in Southeast Asia.

Le Duc Tho refused his award, saying that peace wasn't achieved. Kissinger accepted his prize "with humility," and offered to return it after the fall of South Vietnam two years later.

Kissinger still won gratitude for helping to extricate the U.S. from the war with its power mostly intact. In 1974, he was featured as a diplomatic superman on the cover of Newsweek, clad in tights, a cape, and a "Super K" emblazoned on his chest.

"Henry Kissinger...literally wrote the book on diplomacy," John Kerry, who was then secretary of state, said at a ceremony in 2014. Kissinger "gave us the vocabulary of modern diplomacy, the very words 'shuttle diplomacy' and 'strategic patience.'"

In half a century, Kissinger never lost his love of the public spotlight and global politicking. He parlayed his contacts with foreign governments and global business leaders into a lucrative consulting firm, Kissinger Associates, which he established in 1982.

He maintained an ambitious writing career into his 90s. In 2022, he published "Leadership: Six Studies in World Strategy," in which he profiled post-World War II leaders whom he called visionary.

Among his lasting achievements was overseeing the Nixon administration's clandestine outreach in the early 1970s to the People's Republic of China, resulting in the restoration of full diplomatic relations between Washington and Beijing.

That successful execution of the "China card" was credited with helping to tip the global balance against the Soviet Union and accelerating Beijing's integration into the



Kissinger at the White House in 1972 with President Richard Nixon and this summer with Chinese leader Xi Jinping.

Kissinger's escape from Germany and the Holocaust influenced his scholarship and statecraft. The diplomat and academic placed the pursuit of global stability above lofty ideological goals. His distrust of Communism was formed, in part, by his witnessing of the radicalization of German society in the Nazi era.

Kissinger used his platform at Harvard to transition into Washington political circles. He found a patron in this pursuit in the millionaire businessman and Republican politician Nelson Rockefeller, whom Kissinger advised during several unsuccessful runs for the presidency. After Nixon was elected president in 1968, he asked Kissinger to serve as his national security adviser.

Nixon and Kissinger emerged as an odd power couple in the White House. While Nixon was ill at ease in public and wary of the press, Kissinger reveled in his celebrity status and was known for one-liners and a quick wit, despite maintaining a thick German accent throughout his life.

On domestic politics Kissinger observed that "Ninety percent of the politicians give the other 10% a bad reputation." On overconfidence: "To be absolutely certain about something, one must know everything or nothing about it." On decision-making: "Each success only buys an admission ticket to a more difficult problem."

Kissinger, a divorcee during most of his service in the Nixon White House, was a regular on the Georgetown cocktail circuit, at times appearing with Hollywood starlets on his arm. He once famously called himself a "secret swinger" and told a reporter that "power is the ultimate aphrodisiac."

Friends of Kissinger said his image as a ladies' man was in fact a front. After his divorce from his first wife in 1964 he was in a carefully hidden long-term relationship with the woman who eventually became his second wife, Nancy Maginnes.

Kissinger is survived by his wife, Nancy, and his two children, David and Elizabeth Kissinger, whom he had with his first wife, Ann Fleischer.

international economy.

Kissinger also negotiated an end to the 1973 Yom Kippur War that was sparked by Egypt's and Syria's joint attacks on Israel. The cease-fire followed the dramatic U.S. airlift of weapons to the Jewish state that proved crucial to warding off the initial advances of the Arab armies. He and other U.S. officials worried the conflict could escalate into the first direct military conflict between the U.S. and Soviet Union, the chief patron of Cairo and Damascus.

For his eight years of government service, which ran from 1969 through 1977, Ford awarded Kissinger the Presidential Medal of Freedom.

A one-time Harvard University professor, Kissinger earned as many critics as he did admirers during his academic, diplomatic and business careers.

Kissinger was the practitioner of a form of international statecraft called realpolitik, which his critics say placed the goal of balancing the interests of world powers above the pursuits of democracy and human rights. While facing criticism at times for pursuing détente with the Soviets, Kissinger also oversaw fierce anticommunist campaigns in



Asia, Africa and Latin America.

Kissinger supported military coups against democratically elected governments in Chile and Argentina in the 1970s, fearful their politicians were growing too close to Moscow, according to declassified White House documents. He also tacitly supported the Indonesian military's 1975 invasion of East Timor, a former Portuguese colony in Asia, spooked by fears its government was tilting toward Communism, according to these documents.

Human-rights campaigners long argued that Kissinger should have been charged

with war crimes for his role in overseeing the Nixon administration's secret bombings of Cambodia and Laos during the height of the Vietnam War. The American military operations killed thousands of Cambodians and Laotians, experts on Southeast Asia estimate, and inadvertently helped bring the radical Khmer Rouge movement to power in Cambodia.

"The bombing campaign began as it was to go on—with full knowledge of its effect on civilians, and with flagrant deceit by Kissinger in this precise respect," the historian Christopher Hitchens wrote in

his 2001 book, "The Trial of Henry Kissinger."

Kissinger was born Heinz Alfred Kissinger in 1923 to a family of German Jews in Bavaria.

His parents fled to New York in 1938 following the rise of the Nazi party and the widespread persecution of the Jews. Henry Kissinger assimilated through his achievements in academics and sports, according to his biographers. Drafted into the Army in 1943, he saw combat in France and Germany. After the war, he studied and taught political science at Harvard University, earning his Ph.D. in 1954.

FROM TOP: WHITE HOUSE; GETTY IMAGES; CHINA DAILY/GETTY IMAGES

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FREEMAN'S

WORLD NEWS

Democrats Weigh Conditions on Israel Aid

White House has faced calls to limit casualties among Palestinian civilian

By PAUL KIERNAN

WASHINGTON—Senate Democrats are engaged in an intraparty debate on whether to attach strings to military aid for Israel in hopes of limiting further civilian casualties in Gaza, with a vote on a foreign-aid package that also includes assistance for Ukraine and Taiwan coming to the floor as soon as next week.

The debate within the party comes as the Biden administration is pressing Israel to modify its plans for the next phase of its campaign in Gaza to better protect civilians. The White House has faced criticism that it has given Israeli forces free rein to wage their war with Hamas.

The Democrats' discussions have gathered steam since mid-November, when Sen. Bernie Sanders (I., Vt.) called on Congress to put conditions

on any supplemental spending bill for Israel to end what he called its "indiscriminate bombing" of Gaza. Other Democrats and most Republicans have argued that the U.S. shouldn't try to impose any rules as Israel tries to eliminate Hamas following a deadly attack and kidnappings of civilians that kicked off the fighting.

Sen. Chuck Schumer (D., N.Y.) on Tuesday said lawmakers had a meeting with White House national-security adviser Jake Sullivan on the issue. But he declined to weigh in on the issue of conditions, telling reporters that he would discuss it with the administration and fellow Democrats but that his focus was on passing the broader foreign-aid bill.

The Biden administration has requested \$106 billion of emergency aid, of which \$14 billion is security assistance for Israel. The administration generally opposes conditions from Congress on any international legislation or funding, preferring to preserve its own leverage with foreign countries.

Congressional Democrats are feeling pressure from voters to take a stronger stance against perceived excesses in Israel's campaign to eradicate Hamas following the Oct. 7 attacks.

Secretary of State Antony Blinken on Wednesday said the U.S. wants to see the current pause of Israel's bombardment of Gaza extended to secure the release of additional hostages and get more humanitarian aid to civilians.

In a social-media post Tuesday night from his campaign account, President Biden said: "Hamas unleashed a terrorist attack because they fear nothing more than Israelis and Palestinians living side by side in peace. To continue down the path of terror, violence, killing, and war is to give Hamas what they seek." The comments mirrored those he made when hostages were released on Nov. 24, showing

the administration's continued emphasis on the need for Israel to negotiate a solution to the crisis.

Sen. Jeff Merkley (D., Ore.), a member of the Senate Foreign Relations Committee, said Democrats are "starting to have a debate about what our standards are in this relationship, and that could include conditions on aid."

"I think a discussion about what we expect Israel to do is appropriate," said Sen. Jeanne Shaheen (D., N.H.), another member on the foreign-relations panel.

Other Democrats, including Oregon Sen. Ron Wyden, Maryland Sen. Ben Cardin and Delaware Sen. Chris Coons, said they opposed the idea of attaching strings to further aid to Israel.

"You don't condition the aid on an ally," Cardin said. "We're not going to try to mi-

cromanage their defense." But Coons said he expects the matter to be "vigorously debated" by Congress. "This is a difficult issue that will require further conversation," he said.

Leading Republicans have shown few qualms about unconditional support for Israel, a longtime U.S. partner in the Middle East. Senate Minority Leader Mitch McConnell (R., Ky.) on Tuesday characterized the idea of conditioning aid as "ridiculous."

"Our relationship with Israel is the closest national-security relationship we have with any country in the world," McConnell said. "To condition, in effect, our assistance to Israel on their meeting our standards, it seems to me is totally unnecessary."

It wasn't clear if Democrats' disagreements over Israel aid are strong enough to scramble negotiations with Republicans over the year-end package. Those talks are already being complicated by proposed changes to U.S. border policy and some Republicans' opposition to further funds for Ukraine.

Still, the debate underscores the sensitivity of the issue for Democrats.

"In the past, the perspective has been to never publicly recommend changes in Israel's policies in order to give them maximum confidence," Merkley said.

Now, by contrast, U.S. officials say they are urging Israel to conduct airstrikes more discriminately with precision munitions when fighting resumes after the recent hostage exchange with Hamas. Early in the war, Israel's military acknowledged that its capacity for precision strikes was limited because its forces were stretched thin.

"It is striking that this dynamic would now arise with Israel since we've always had such close faith in how they manage their military operations and really everything about their country," said Michael O'Hanlon, a director of foreign-policy research at the Brookings Institution.

Few details have been discussed about how the U.S. might condition aid to Israel, lawmakers said.

Hamas Frees More Hostages

Continued from Page One could extend beyond this week, even as the Israeli government said it is prepared to resume its war with Hamas if necessary.

Israeli leaders have come out strongly against a permanent cease-fire, in a demonstration of how the government is caught between Israelis' conflicting desires to eradicate Hamas and bring home some 200 people captured on Oct. 7.

In public comments, Prime Minister Benjamin Netanyahu of Israel, along with members of his cabinet and coalition partners, laid down a marker that talks brokered by the U.S., Egypt and Qatar were only about releasing hostages taken during Hamas's Oct. 7 attacks. Once that process is over, Israeli leaders said, they would go back to war with the goals of removing Hamas from power and ending a security threat from Gaza.

"There is no situation in which we do not go back to fighting until the end. This is my policy. The entire security cabinet is behind it. The entire government is behind it. The soldiers are behind it. The people are behind it—this is exactly what we will do," Netanyahu said on Wednesday.

After weeks of war, the steady release of hostages has uplifted the Israeli public, who have devoured pictures and videos of emotional reunions between freed hostages and their families. Still, despite the respite from the war, many Israelis said they support the government's stated goal of destroying Hamas.

"It has created this new dynamic where most Israelis still feel that Israel has to get rid of Hamas, but the fact is, there is a new mechanism where Israel and Hamas can actually negotiate through mediation," said Mairav Zonszein, a senior analyst with the International Crisis Group, a conflict resolution think tank.

While the release of some hostages has amplified pres-



Palestinians spend time on the beach in the Gaza Strip during the lull in fighting Wednesday. At right, destroyed houses in the besieged enclave.

sure to allow the negotiations to play out, Netanyahu also faces threats of a revolt from within his ruling coalition if he pursues a prolonged cease-fire with Hamas.

"Stopping the war = breaking apart the government," said Itamar Ben-Gvir, Israel's national security minister and one of Netanyahu's primary coalition partners.

The bellicose public stance contrasts with Israeli negotiators' posture in talks in the Qatari capital Doha, where participants said Israeli intelligence chief David Barnea and others listened carefully to a host of proposals, including a permanent cease-fire, without giving a firm no. The current cease-fire is set to expire at 7 a.m. local time Thursday, but negotiators were pushing to extend it for another few days to allow for the release of more hostages.

Earlier Wednesday, a senior official familiar with the hostage negotiations said Israel isn't yet willing to discuss a new round of negotiations until all 100 women and children



hostages in Gaza are freed under terms of the original agreement; 27 remain in captivity. Israel has accused Hamas of violating the current agreement by not releasing some mothers and daughters together, as well as child hostages it transferred to other Palestinian militants.

"It's not going to be possible for us to neglect and abandon 27 people in order to discuss a new agreement that will

also be violated the same way," the official said. "If it's working, we'll be more than eager to discuss the other groups of people that are still there."

The exchange of Israeli hostages for Palestinian prisoners in recent days has presented Netanyahu and his cabinet with difficult questions that could influence the course and outcome of the war. With more than 80 hostages released so far, diplomacy has brought results that have amplified calls from the families of the remaining hostages and a section of the Israeli public to bring home more Israelis held in Gaza.

When the last Israeli women, children and elderly are released, there remains the prospect of freeing over 100 Israeli men that Hamas considers of fighting age, including some active duty or reservist soldiers. In return for freeing them, Hamas would likely ask for the release of thousands of Palestinian prisoners from Israeli jails and an extended or even permanent cease-fire, negotiators said.

The dilemma for the Israeli government comes as the Biden administration has shifted increasingly toward urging Israel to limit its attacks on Gaza to prevent large-scale civilian casualties.

President Biden himself, facing growing criticism from within the Democratic Party of his policy on the conflict, issued a statement that some commentators interpreted as a call for an end to the war after nearly two months of fighting.

"To continue down the path of terror, violence, killing, and war is to give Hamas what they seek," his election campaign posted on X, formerly Twitter, late Tuesday.

Biden has previously expressed strong support for Israel's campaign against Hamas in Gaza, earning him adulation within Israel.

The social-media post amounted to an appeal for an extension of the pauses and a plea to the Israelis to moderate the next phase of the campaign in south Gaza to avoid civilian casualties, a U.S. official said. But officials said it wasn't meant as a request for Israel to end the fight against Hamas.

The senior Israeli official said on Wednesday that Israel had already made an effort to limit civilian casualties in Gaza, but the reality of war means Israel cannot refrain from attacking its enemies wherever they might be.

"We are not going to change the basic rules of war,

which is to engage your enemy and to get rid of your enemy. I don't think there's any way that we are going to invent magical rules of engagement that we are not going to attack the places where the terrorists are fortifying themselves," the official said.

The official said Israel is optimistic that it can get civilians in southern Gaza to move out of harm's way once the Israeli military begins ground operations there. He said unlike the first few weeks of the war, when Gazans had to make a long trek from the north to the south, in southern Gaza they will be closer to safe areas near the sea and the Rafah border area.

"It's going to be different from what happened several weeks ago in the north where it was not easy for people to understand that we mean business and we're going all the way in," the official said.

More than 15,000 Palestinians, most of them women and children, have been killed since Israel launched the current operation, according to authorities in the Hamas-run enclave. The numbers don't distinguish between militants and civilians. The war began after Hamas militants killed more than 1,200 people, mostly civilians, according to Israel, in armed assaults on Israel on Oct. 7.

U.S. Secretary of State Antony Blinken arrived Wednesday in Israel, where he was scheduled to meet with Netanyahu and other officials before traveling to the West Bank to talk with Palestinian Authority leaders. Later this week, Blinken is scheduled to travel to Dubai, where he will attend the U.N. climate conference and meet with regional leaders to discuss efforts to prevent a broader conflict.

The visit follows one by the director of Israel's Mossad intelligence service who met with CIA director William Burns, Egyptian intelligence chief Abbas Kamel and Qatari officials in Doha to discuss a potential extension of the cease-fire and the release of more hostages held by Palestinian armed groups in Gaza.

Before the meeting in Doha, Egyptian and Qatari negotiators discussed with Hamas leaders what the group might agree to if they were to take the conversation beyond releasing women and children, according to senior Egyptian officials.

Hamas told the negotiators it was ready to extend the truce by an additional four days, the officials said, and discuss the release of fighting-age men in exchange for senior Palestinians jailed in Israel, in addition to the terms of a longer-term cease-fire. Hamas representatives also assured negotiators they would be able to locate all hostages held by them and other groups in Gaza, and that those groups have already agreed to release the hostages as part of a longer-term deal with Israel.

Watch a Video

Scan this code for a video on the talks to extend the pause in fighting.



An Israeli man on Wednesday surveys damage to his house from a rocket fired by militants.

WORLD NEWS

Multiple Wars Put Fresh Strain on NATO

U.S., allies discuss limits of support to Kyiv, divisions over Israel-Hamas fight

By VIVIAN SALAMA
AND DANIEL MICHAELS

BRUSSELS—NATO members are grappling with the complexities of several simultaneous crises in the Middle East and Ukraine.

After a temporary cease-fire was extended this week in Gaza, members of the North Atlantic Treaty Organization sought to reaffirm their commitment to eastern Mediterranean countries closest to the conflict amid concerns it could spread across the region.

The new threat drew the attention of NATO foreign ministers gathered for a scheduled meeting of the military alliance dominated by the slow and grueling conflict in Ukraine. Among emerging concerns are the safety of NATO forces in Iraq, turmoil in NATO's Middle East partners including Jordan, and renewed tensions in the former Yugoslavia.

A panel of NATO experts is looking at strategies for bolstering the security of its southernmost members, which a senior U.S. official said goes beyond the current conflict. European officials at NATO

said the bloc was concerned about vulnerabilities because of instability in the Middle East and Europe's ability to counter those threats given the strain created by its commitments to the war in Ukraine, and long-running efforts to tackle illegal immigration from the south.

Secretary of State Antony Blinken, in Brussels for the meetings at NATO and with ministers from Ukraine and the Group of Seven alliance, attended a meeting briefly on Wednesday of the Organization for Security and Cooperation in Europe in Skopje, North Macedonia, before departing to the Middle East for meetings in Israel and the West Bank.

Blinken and other senior U.S. officials have had an almost constant presence in the region since Oct. 7, when Hamas militants attacked southern Israel.

"We certainly had conversations about Gaza, but it in no way took away from the intense focus that we've had over the last couple of days on Ukraine as well as Western Balkans and preparing for the NATO summit in Washington next spring," said Blinken before departing Brussels.

NATO Secretary-General Jens Stoltenberg, speaking during the assembly of 31 foreign ministers and candidate-member Sweden, restated



Secretary of State Antony Blinken, second left, at the Foreign Ministers' Council in Brussels.

NATO policy that the Middle East is outside the alliance's area of responsibility and it has no intention of getting involved in the Israel-Hamas war.

But the individual delegations stressed that NATO as an organization shouldn't be blind to the potential security implications of that conflict, and some countries voiced frustration with the U.S. and United Kingdom for supporting Israel's bombardment of Gaza at the expense of heavily populated civilian areas.

While grappling with the two wars drawing global attention, alliance members also tackled new flare-ups in a decadeslong conflict between Serbia and Kosovo, where NATO has played a peacekeeping role since 1999. NATO's Kosovo Force has roughly 5,000 troops, where fighting repeatedly has flared since the breakup of Yugoslavia in the early 1990s.

"One thing we don't need is a return to the future," Blinken said at NATO, noting the alliance's interest in avoiding fu-

ture conflicts in the Balkans.

NATO's mission in Iraq, launched in 2018, includes several hundred military personnel and civilian advisers training Iraqi forces, the safety of whom is causing growing concern among various NATO missions, who point to the uptick in recent attacks against U.S. military bases in Iraq and Syria.

The U.S. has significantly downsized its diplomatic footprint in Iraq since Hamas's Oct. 7 attack in Israel over concern that Washington's support for

Israel would make it a target for other militant groups seeking to capitalize on growing instability.

Jordan also has joined with NATO on regional security since 1995, and King Abdullah visited the headquarters of the alliance and met with Stoltenberg this month.

Turkey is the only NATO member that directly borders the Middle East, but the U.S., U.K. and other nations have deployed military assets to the eastern Mediterranean, near NATO's southern flank, seeking to deter other groups—particularly Lebanon-based Hezbollah—that could try to join the fight.

"One of the messages from NATO is that it's important that this conflict does not escalate to a bigger regional conflict," Stoltenberg said. "The message to Iran is...they have to rein in their proxies." Hamas and Hezbollah are supported by Tehran.

EU foreign-policy chief Josep Borrell, who met with Ukrainian Foreign Minister Dmytro Kuleba on Tuesday, said the bloc can handle both crises.

The Gaza war "has been high in the international agenda, but I wanted to assure Minister Kuleba that it is not distracting us from our firm and unequivocal support to Ukraine," Borrell said.

Site of U.S. military aircraft crash



Source: Japan Coast Guard

U.S. Military Aircraft Crashes Off Japan's Coast

By ALASTAIR GALE
AND DOUG CAMERON

TOKYO—A U.S. Air Force Osprey aircraft with eight people on board crashed into the sea off southern Japan during a routine training mission on Wednesday, the Air Force said.

The condition of the airmen was unknown, the Air Force said, but the Japanese coast guard said one person was confirmed dead, with search-

and-rescue efforts continuing.

Debris from the plane was sighted near the crash site, east of the island of Yakushima. Japanese public broadcaster NHK quoted a witness as saying the plane suddenly flipped over and was aflame before plunging into the sea.

The tilt-rotor CV-22 aircraft, which can take off and land like a helicopter and fly like an airplane, came from Yokota Air Base in Japan and was assigned to the 353rd

Special Operations Wing.

The U.S. military said it was looking into the crash.

A Japanese government spokesman said the aircraft disappeared from radar at 2:40 p.m. local time.

Since entering service in 2007, the Osprey has been involved in accidents that have killed dozens of U.S. service members, leading to changes in its design and operating procedures.

In August, three Marines

were killed when an Osprey crashed during a training exercise in Australia.

The aircraft's safety record also reflects its use in some of the most challenging environments, including deserts, at sea and on missions for special-operations forces.

The Pentagon has been trying to improve safety after a congressional commission in 2020 identified failings with training, aging aircraft and spare-parts shortages.

Officials have said the rate of aviation accidents involving fatalities and destroyed aircraft has improved.

A joint venture between Boeing and Textron has built more than 450 Osprey aircraft.

Aviation-accident investigations typically take months, if not years. The military conducts its own probes with cooperation from federal-aviation regulators and manufacturers.

—Chieko Tsuneoka
contributed to the article



Thousands are expected to attend the United Nations' annual climate summit in Dubai.

U.A.E., Climate Talks Host, Faces Questions as Oil Giant

By ED BALLARD
AND ANNA HIRTENSTEIN

Dubai, a desert city known for private jets, giant yachts and other symbols of carbon-heavy high living, is an awkward location for a conference on climate change. It is hardly a surprise that the man in charge also runs the national oil company.

Hosting the United Nations' annual climate confab—known as COP28—is the latest step in the United Arab Emirates' bid to establish itself as a global power broker. The gambit is drawing attention to the country's Jekyll-and-Hyde energy strategy.

The U.A.E. is preparing to increase production of the oil and gas that made it rich, despite calls for it to cut fossil-fuel use by the thousands of attendees descending on the city for the meeting that begins on Thursday. The country also is pitching itself as a champion of renewable energy.

It says there is no contradiction. The world will need oil and gas for decades, and the U.A.E. says its fuels are the greenest around. It says it uses renewable energy to power some of its oil-and-gas

production, and is investing in carbon-capture technology.

This is a hard sell. Climate Action Tracker, a research group, says it is impossible for the U.A.E. to meet its target for cutting emissions if it increases oil production as planned. State-owned Abu Dhabi National Oil Co., or Adnoc, last year said it would raise its production capacity to five million barrels a day by 2027, up from four million barrels in 2020. A fraction of its \$150 billion investment plan is slated for green projects.

At the center of it all is Sultan al-Jaber, the chief executive of Adnoc, as well as chairman of Masdar, the U.A.E.'s renewable-energy company. He also is running the climate conference, a post that has drawn criticism that he will steer negotiations away from ambitious commitments to end fossil-fuel use.

Leaked briefing notes published by the BBC and the Centre for Climate Reporting this week showed that the COP28 organizing team plans to promote deals for Adnoc and Masdar in meetings ahead of the conference with countries slated to attend. A spokesperson for COP28 said

the documents were inaccurate and weren't used in meetings.

Climate-advocacy groups such as Oil Change International are skeptical. Romain Ioualalen, the organization's global-policy lead, said Jaber could use his position at the conference to promote carbon-capture technology, a key part of Adnoc's climate strategy. The technology is untested on a scale that would make a dent in global emissions, though the International Energy Agency says it could do so in the future. At the largest carbon-capture facility in the U.A.E., captured CO₂ is used to squeeze more oil from wells.

"His company's investments are being reflected in his approach to the negotiations and what he's pushing as potential outcomes," Ioualalen said.

Jaber has declared that a "phase down" of fossil fuels is inevitable, but sometimes qualifies that by referring to "unabated" fossil fuels—phrasing widely interpreted as blessing oil and gas that is coupled with carbon capture.

◆ Heard on the Street: Oil majors bet on hot air.... B12

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FROM PAGE ONE

Protests Divide Generations

Continued from Page One

Conflict has also exposed a generational divide, with many older Americans surprised at the protesters' scope and intensity.

Mullen and other pro-Palestinian college demonstrators say their activism is rooted in a deeply held conviction that the world is divided between the oppressed and their oppressors.

That view frames the suffering of an array of populations, they say, including low-income families being evicted from their homes, Black and brown people who encounter brutal treatment by the police, migrants turned away from safe haven at the border and, in the current conflict, Palestinians struggling to wrest control of territory from the Israelis.

"Gaza is not a two-sided war," said Mullen, who is 21. "What is happening is the resistance of the oppressed against their oppressor."

The protesters' sympathy for Hamas, designated by the U.S. as a terrorist group, sometimes astonishes and rankles bystanders. Roughly half of Americans 18 to 24 years old think Hamas's October attack was justified by grievances of the Palestinians, according to a Harvard Harris Poll. Just 9% of people aged 65 and older feel the same.

Broad concerns

The activists at pro-Palestinian events include a range of student groups who say they can draw a direct line from the causes they support to the plight of Palestinians in Gaza.

In one protest earlier this month, University of Pennsylvania Students Against the Occupation were joined by groups including Fossil Free Penn, Police Free Penn, Save UC Townhomes and Students for the Preservation of Chinatown at a demonstration outside a board of trustees meeting.

Participants seamlessly shifted between calls for a cease-fire in Gaza and concerns about fair wages for graduate students, the police presence on Penn's campus, the university's endowment choices and opposition to the construction of a new 76ers basketball arena in center-city Philadelphia.

"Occupation is a crime, from West Philly to Palestine!" the group of about 50 students and others shouted.

"All oppressed and displaced people are fighting for their right to return," declared one speaker, who, like most people in the audience, wore a mask covering his face. "From 40th and Market to Palestine, this is the same struggle."

Last month, Brown University's Students for Justice in Palestine chapter issued a statement that said the group held "the Israeli regime and its allies unequivocally responsible for all suffering and loss of life, Palestinian or Israeli." It was endorsed by more than 40 other student groups, including the Teaching Assistant Labor Organization, Burlesque at Brown, Brown Beekeeping Society and Poler Bears, a pole-dancing performance group.

Today's college students entered elementary school as fire drills gave way to active-shooter drills and their parents navigated the 2008 recession. They came of age as the climate crisis gained attention and the 2016 election of Donald



Student Association.

Last month he stayed on after a club event, as some of the students began discussing plans for a rally.

"I sat in for a few hours on that, just in the corner, listening," Little recalled. He said being in that room was a galvanizing moment. "This was not something where I knew the brutal extent of all of it. That's when it became more of an active mission for me," he said.

A few weeks ago, Little joined in a pro-Palestinian rally, his sign reading, "Queer Muslims for Palestine."

Little, who identifies as queer and isn't Muslim, said he doesn't condone Hamas's treatment of queer people. Same-sex relations are outlawed in Gaza and punishable by up to 10 years in prison, according to Human Rights Watch.

"It's not ideal," he said of supporting a resistance movement led by Hamas. "But I don't think there was another option."



Top, a protest at the University of Massachusetts, Amherst last month. Bottom, Price Little at the University of San Francisco.

Harvard Added to List for Possible Rights Violations

The U.S. Education Department's Office for Civil Rights added Harvard University to the list of schools the agency is investigating as part of a federal crackdown on race- and religion-based harassment since the start of the conflict in Gaza began Oct. 7.

Harvard is the 15th school and eighth college or university added to the list since the conflict began, according to the agency's website. Other colleges in-

clude University of Pennsylvania, Wellesley College and Columbia University.

An institution named on this list means that OCR has initiated an investigation of a case concerning that institution. It doesn't mean that OCR has made a decision about the case.

A Harvard spokesman said the school supports "the work of the Office of Civil Rights to ensure students' rights to access educational programs are safe-

guarded and will work with the office to address their questions."

The day after the Hamas attack, the Harvard Undergraduate Palestine Solidarity Committee and more than 30 other student groups released a statement saying Israel's "apartheid regime is the only one to blame" for the violence.

Leaders of Harvard, MIT and Penn will address Congress next week on antisemitism. —Douglas Belkin

Trump polarized communities.

Their schools closed during the pandemic, then streets shut down for protests following the murder of George Floyd. Now they are struggling with high rates of anxiety and depression as they prepare to enter an economy in which income inequality is near all-time highs.

Nearly half of 18- to 29-year-olds favor socialism—more than those who support a market economy, which many blame for the compounding disasters they face, according to a 2022 poll from Pew Research.

Noah Thompson, a 24-year-old senior at the University of Oregon, works in a university dining hall to put himself through school. Raised by a single mother, he believes too much of the nation's wealth has accrued to the most affluent, and capitalism is skewed to help the rich and exploit the poor. He said he's troubled by war profiteers selling arms to Israel, who then use the weapons to kill children, and has helped organize a "No Money for Massacres" campaign to promote a cease-fire.

"There always seems to be enough money, bombs, for war, for intervention abroad, and never enough money for education, for healthcare, for creating a better and secure society for us here now," he said.

Some student protesters have minimized the brutality of the Oct. 7 attack by Hamas, when militants killed more than 1,200 Israeli civilians, including concertgoers and children, and took 240 hostages. Health authorities in the

Hamas-run Gaza say more than 13,000 people had been killed there in the war.

Some protesters have referred to the attack in demonstrations and public statements as an "armed uprising" or "act of resistance." That framing has been particularly abhorrent to Jewish leaders, who have called on campus administrators to denounce such language as antisemitic.

Many who support the Palestinian cause on campuses say they're uncomfortable speaking publicly for fear of being harassed or called antisemitic. Trucks have circled some campuses, including at Harvard and Columbia, identifying the names and faces of students accused of blaming Israel for the Hamas attack. Ads for many rallies encourage attendees to wear masks to protect their anonymity.

College presidents are struggling to navigate between championing free speech, mollifying outraged alumni and protecting Jewish and Arab students from harassment. Universities in recent weeks have

announced advisory committees, task forces and research centers to address rising antisemitism.

At Columbia University, a male student was hit with a stick after he confronted a female student who was ripping down posters advertising a rally supporting Israel. At both Tulane University and the University of Massachusetts, Palestinian supporters punched Jewish students during protests. At Cornell University, a student was charged with threatening to shoot up a kosher dining hall.

'Never capitulate'

One theme prominent at protests across the country is the opposition to "settler colonialism," or violent empire building that displaces an indigenous community. Zionism—support for Israel as a Jewish state—is viewed by many college protesters as the modern equivalent to European colonization of the Americas and Africa.

"We will never capitulate to

the colonizer or his sympathizers," the George Washington University Students for Justice in Palestine said on their Instagram account.

Classes on the history and experiences of previously marginalized communities have become more prevalent on campuses in disciplines like African-American studies, gender studies and Middle Eastern studies. Universities began focusing on courses that reached beyond the Western canon about 50 years ago, in response to a more racially diverse student body, said Rachel Fish, a special adviser to the Brandeis University's presidential initiative to counter antisemitism in higher education.

"It seems so obvious when you're watching it from halfway across the world that there's this genocide going on," said Price Little, a 21-year-old senior at the University of San Francisco, who grew up in rural Mariposa, Calif. He wrote a column for the local paper about his take on Black Lives Matter and world affairs, but had little direct exposure to any conflicts himself.

College brought new encounters with students from a range of backgrounds, which Little said was eye-opening. With a double major of French studies and fine arts, he signed up for classes about areas colonized by the French empire, Islamic art and theology. He became best friends with a Pakistani American student and joined a South Asian student group, and more recently the Arab Student Union and Muslim



Pro-Palestinian protesters rallied at Columbia University in New York on Oct. 12.

Man Turns Home Into A Castle

Continued from Page One

ians remain fascinated by all things royal. According to a legend that pervades Brazilian literature, a great king will one day return to save Brazil from all its ills.

In 1993, some Brazilians got tired of waiting, calling a referendum to reinstate the monarchy after a corruption scandal toppled the then-president, Fernando Collor de Mello. The motion failed, but still won the votes of seven million people, many of them staunch conservatives who rally to this day for the mon-

archy's return.

"Me? I just like gold things," says Silva, explaining his obsession. The monarchists tried to get him to join their cause, but were aghast to find out he was a socialist, he says with a chuckle. Opening up his Bible, he drew out one of his most prized possessions: a 1987 photo with Luiz Inácio Lula da Silva on the campaign trail 15 years before he was finally elected to the first of three presidential terms.

The two aren't related, although like Brazil's president, a former shoeshine boy himself, Silva's parents came from the poor northeastern state of Pernambuco, migrating south on the back of a truck, a rare rags-to-riches tale in a country marked by extreme income inequality.

Silva began work on his castle 15 years ago, designing

ever-more-extravagant additions to his house with the help of some baffled workmen. "I didn't need an engineer," he says. Silva explains that he had experience in large-scale construction after overseeing the production of carnival floats as head of a samba school.

"When the first turret went up, everyone made fun of us," says Gustavo Silva, his 24-year-old son, who helps his dad show off his castle on TikTok. "But now we're a tourist attraction."

That's partly because there isn't much competition in Curitiba, a southeastern city of 130,000 with lots of heavy industry but no museums. Parents drive by with their kids, who lean out of the car agog, some in costume themselves. A busload of architecture students recently turned up unannounced on a field trip.

Not everyone is a fan of Silva's castle.

"It just all seems, you know, a bit over the top," says Maria Claudete Silva, his wife, questioning his latest project to build a 60-foot-long dragon on the roof. "Honestly, nothing surprises me anymore," she says.

After 30 years of marriage, though, she has adopted a stoic approach.

"He sits on his throne with his sword in one hand and a beer in the other and leaves me in peace," she says, noting that the only rule is that he leave the kitchen alone.

Others are less kind. Silva says he has received hate mail complaining of historical inaccuracies built into the castle's design, which he admits was more inspired by the Palace of Versailles, Russian castles and Harry Potter.

Respecting architectural

traditions can be a thorny subject in Brazil, where heritage experts struggle to stop historic buildings from being torn down to make way for shiny new developments. Despite its interest in royalty, this country has never placed much value on its past. Historians point to a devastating fire that swept through Brazil's National Museum in 2018 as the epitome of that indifference. Not only was the blaze the consequence of years of neglect, they said, but it was also the first time many Brazilians had even heard of the 200-year-old institution and its notable collection of artifacts.

Silva says he has worked too long and hard to care about what people think. He revels in the incongruity of it all. Ever eccentric, he likes to drink Heineken from his family's china and named his Ger-

man shepherd guard dogs after Greek gods. He plans to decorate one turret with memorabilia from Disney's "Aladdin" and turn another into a toilet.

His regal paraphernalia comes from diverse places. He bought one of his nine swords at a gas station and recently bid for a replica 18th century French carriage in an auction held by tax authorities after its seizure by customs agents at the nearby port of Santos. One of his greatest finds, though, was a 19th-century piano sitting in a backroom of a Ford factory that shut down production in another city just north of here in 2019.

He is particularly proud of an 8-foot tall self-portrait—a picture of a monarch whose head Silva photoshopped out and replaced with his own. "I'm an expert at beheadings," he quips.

By ANN-MARIE ALCANTARA

It's the time of year many people have been anxiously awaiting: Spotify Wrapped season.

For nearly a decade, all Spotify users get a shareable summary of their annual listening habits that reveals who they really are and the year they had—stripping away any pretense of taste. The results often surprise people. People who think they're Beethoven aficionados may find they're actually bigger fans of Beyoncé.

Spotify Wrapped includes the top artists, songs and genres for listeners, and, new this year, the ability to see results on a desktop computer, not just a mobile device. The year-end list also highlights the most popular Spotify artists and songs across all users, and, maybe most important, tells people where they rank among an artist's listener fan base.

Last year, Joshua Chenault felt left out as seemingly all of his friends marked the occasion on social media. This year, the 30-year-old will finally join the party: FOMO made him ditch Apple Music for Spotify.

Chenault, a content creator in Dayton, Ohio, subscribed to Apple Music for seven years. While Apple Music also provides a year-end summary, it doesn't have the cult following of Spotify Wrapped.

"That's what made me jealous," Chenault says. Last year during the Wrapped frenzy, he canceled his Apple Music subscription and switched to Spotify.

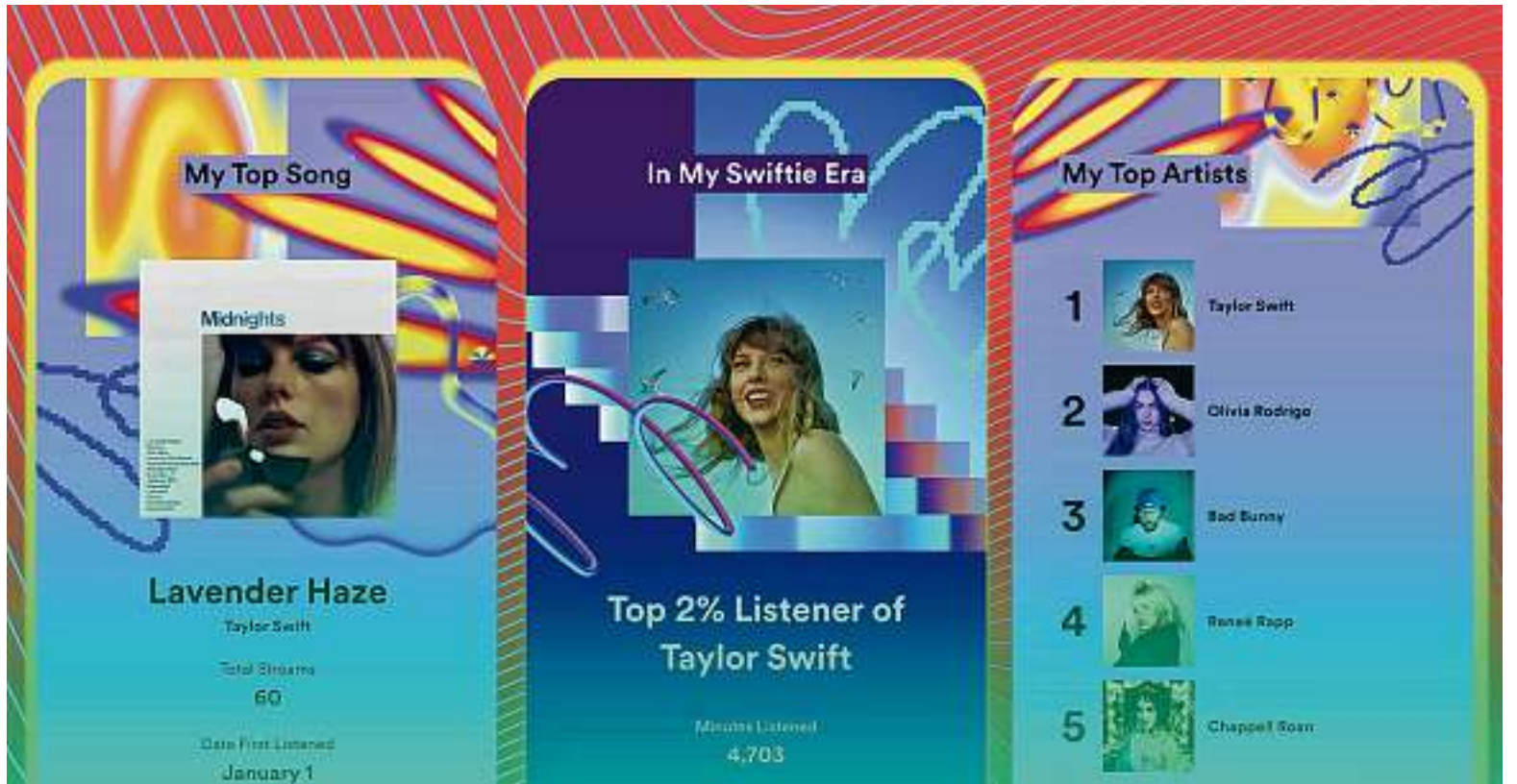
People obsess over what their results say about them. Many people share their recaps on social media and post Spotify Wrapped memes. Spotify Wrapped had 400 million mentions on X in the first three days of its 2022 release, according to Sprout Social, a social-media software and analytics company.

Some people look at the list with year-in-review nostalgia; others see the results as a psychological evaluation. There are also those who try to cheat: In the weeks leading up to the Wrapped release, some people will stream specific songs over and over or tweak settings to listen to some artists privately to get the Wrapped results they want.

The top beats

On Wednesday, Spotify users got an in-app notification to check out their Spotify Wrapped. With each statistic, Spotify prompts users to share their lists in images made for social media. Users can listen to their top songs in a special playlist, as well as hear commentary about their favorites with Spotify's AI DJ feature.

Spotify has more than twice as many U.S. listeners as Apple, Amazon and YouTube's paid streaming tiers, according to a June survey from investment-banking advisory firm Evercore ISI. In October,



PERSONAL TECHNOLOGY

Inside Spotify Wrapped, An Annual Song of Ourselves

The listening recap of high and low notes takes over social media every year

the company reported it added six million new paying subscribers in the third quarter, and is projected to end the year with 600 million monthly active users.

Spotify tends to add new tidbits for listeners with each year's Wrapped. Along with being available on computers, a new "Me in 2023" feature assigns users one of 12 themes that describes their listening habits, such as "Vampire"

for someone who likes to listen to "emotional, atmospheric music."

This year, Taylor Swift dethroned Bad Bunny as the No. 1 most-streamed artist in the world. He held the title for the past three years. People streamed Swift's music 26.1 billion times amid her blockbuster world tour. While Swift was the top artist, the Miley Cyrus song "Flowers" was the most popular song globally, with

more than 1.6 billion streams. And in the U.S., "Last Night" by Morgan Wallen was the top song.

Spotify Wrapped is one of the few cases where companies collecting private data is something users don't complain about.

A musical connection

Stephen Antonini loves sharing his Spotify Wrapped every year and talking with others about their music tastes. The 24-year-old advertising supervisor in Venice, Calif., even posted a TikTok in mid-November about how much he looks forward to seeing everyone else's recaps.

His video aimed to pre-empt naysayers who tell people to stop posting their Spotify Wrapped. Not everyone likes sharing and seeing the results of others.

"It's a good way to look back at your year and just see the year you've had, whether it be the best year of your life, the worst year of your life or anywhere in between," Antonini says.

Others enjoy how Spotify Wrapped brings people together for a week. Katrina Ahuja, a 32-year-old fashion designer based in New York, shares her Spotify

Wrapped every year, even though her EDM-loving friends have poked fun at her preference for hip-hop.

Some songs are not for sharing

Even though users can choose whether or not to share their results, some songs are too personal—or embarrassing—to show up on Wrapped. Most people are fine with the world knowing about their love for Drake, but maybe not their love of the musical "Les Misérables." (Especially not the Russell Crowe-heavy soundtrack.)

It's easy to turn on a private session to avoid a song counting toward a Spotify Wrapped.

JR Mercado, a 24-year-old bookkeeper, has used private listening a few times. But the Westchester, N.Y.-based music lover says she doesn't take the same drastic steps as some of her friends. She says one has a separate Spotify account—just to listen to music from the early-2000s show "Glee."

Mercado's Spotify Wrapped ends up a bit skewed toward who she's seeing in concert. She usually creates a playlist based on the artist's set list for a show and will binge it before the concert, she says.

Mercado and her friends enjoy the additional metrics Spotify includes, such as the time of day users listen to music. After reviewing last year's list, she laughed with them about a clear trend: "Why is my music at night so sad?"



◀ This year's Spotify Wrapped includes two new features. One highlights streaming habits, and the other matches users with a city based on listening and artist preferences.

Secrets of Anti-Aging, Gleaned From Dogs

By ALEX JANIN

In the quest to help people live longer, scientists and companies are turning to dogs.

Humans have greater genetic similarities to dogs than other common subjects of aging research, like mice. Our species get many of the same age-related diseases, including cancer and osteoarthritis. And dogs tend to live alongside us, sharing our exposures. It also helps that they age faster than we do, giving a quicker timeline to study longevity.

Behind the growing enthusiasm is a mix of scientists and entrepreneurs—building on the surging interest from people aiming to live longer.

These groups say insights into dog longevity could provide lessons and perhaps eventually treatments that could help people, too.

Among some notable findings, Scientists at the Dog Aging Project, a research effort based at the University of Washington and Texas A&M, found that physical activity was associated with better markers of cognitive aging in dogs. Another found social companionship, such as living with other dogs, was associated with better health.

Business developments aren't far behind. On Tuesday, a biotech

startup that hopes to have the first FDA-approved treatment to extend healthy lifespan in dogs, took a step toward. In a letter viewed by The Wall Street Journal, the Food and Drug Administration affirmed that its drug had demonstrated "reasonable expectation of effectiveness."

The company, called Loyal, still has to complete several more steps before it can market the drug, and it's only aimed at canines.

"It's ideal to study aging in dogs, and then the leap to be able to use that to transfer into human application really is the next step," says Louise Grubb, chief executive of veterinary drug company TriviumVet, which is working toward gaining FDA approval of a

separate drug targeting age-related diseases in pet cats and dogs.

No animal model is a perfect stand-in for humans. But dog research may offer us some clues that other animal models cannot. Researchers at the Dog Aging Project are enrolling canine participants in a double-blind, placebo-controlled trial to study the effects of rapamycin, a drug originally approved to prevent organ rejection in human transplant patients. Some people use it off-label as part of a longevity regimen.

If any treatment is shown to extend healthy lifespan in dogs, we



▲ Celine Halioua, CEO of dog biotech startup Loyal, and Della, her 85-pound senior Rottweiler mix.

can have more confidence that it will have a similar effect in people, says the project's co-director Matt Kaerberlein, a molecular biologist. The complexity of our environments could affect how drugs or behavioral changes have been shown to work in, for example, mice in controlled lab settings, he says.

From breed to breed, dogs are

very genetically diverse. Some breeds are more likely to develop certain diseases than others, says Daniel Promislow, principal investigator of the Dog Aging Project and professor at the University of Washington. This can help scientists identify subjects for research on the genes or environmental factors that might contribute to those diseases.

There are limitations, too. Differences between our species, including diets and the prevalence of sterilization in dogs, could affect

the way we age and how we measure it. And most research in pet dogs is designed to give us hints, not provide cause and effect, says Dr. Manuel Moro, a scientist at the National Institute on Aging who works on developing animal models.

Between 2019 and 2021, global financing for pet longevity firms more than quadrupled, according to an analysis from longevity research and media company LongevityTechnology.

TriviumVet, the veterinary drug company, is working toward FDA approval of the formulation of rapamycin being studied by the Dog Aging Project. The company is studying the drug's effects on age-related illnesses, like heart disease, in pet cats and dogs, but the work has also caught the eye of some researchers studying aging in humans, says Grubb.

Garri Zmudze, a founding partner at longevity and biotech-focused venture firm LongeVC, has raised \$20 million for a separate early-stage fund that will invest in the pet space, including longevity and therapeutics.

Celine Halioua, chief executive of Loyal, the biotech startup working toward conditional approval of its lifespan drug, says there is a larger aim in addition to helping dogs live healthier for longer. The company has set a possible precedent for other drugs to be approved for lifespan extension, potentially opening a door for other animal—or human—drug companies to follow.

"I think we can both take the opportunity to build better medicines for our dogs and also to better understand these really complex diseases," says Halioua.

PERSONAL JOURNAL.



PERSONAL TECHNOLOGY
JOANNA STERN

My father was a prompt engineer, like his father before him. I come from a long line of people who toiled day and night, chatting with generative-AI chatbots.

OK, not true. Prompt engineering is a totally new job that would have sounded crazy even a year ago. But it can pay six-figure salaries to people who extract the best results from the mysterious artificial-intelligence black boxes that are now part of daily life.

A year ago this week, OpenAI released ChatGPT. Not since the iPhone had I been this wowed by new technology.

Me: How do I keep squirrels out of my bird house?

ChatGPT: Install a baffle on the bird house pole, which acts as a physical barrier to prevent squirrels from climbing up. Place the bird house away from trees, fences, or buildings to minimize jumping-off points for squirrels. Additionally, consider using a birdhouse with a small entrance hole that's too tiny for squirrels to fit through.

You had to see the bots' ability to spit out humanlike answers to believe it. And even then, maybe you shouldn't believe it. Natural as they sound, many chatbot answers are unwieldy, unhelpful and, sometimes, untrue. (These squirrel solutions do seem legit.) Sure, AI can do some of our writing, computer coding and research jobs. But we wouldn't want to bet our businesses on them alone.

Enter the prompt engineer! This person fine-tunes the prompts that go into a generative-AI large-language model—aka LLM—to extract valuable but buried information for an employer or its clients. Think of it as an AI whisperer.

And there's a salary premium for the best whispering. On LinkedIn and the job-search site Indeed, thousands of listings came up for the search term "prompt engineer," and among those that stated salary, the annual pay could range from \$100,000 to over \$200,000. People I spoke with said they were seeing similar pay figures.

"We'll have to wait to see the long-term effects of gen AI, but it's clear right now that jobs related to the field are surging," according to a recent report from Indeed.

Hear that? That's the sound of a whole generation adding "proficient in prompt engineering" to its résumés.



◀ Joanna Stern takes a prompt-engineering assessment during her Hebbia 'interview.'

to get more refined answers. Example: "When I ask a question about Microsoft earnings, suggest a better version of the question and ask me if I would like to use your question instead."

If you want to learn more, I highly suggest you take White's Coursera course. Just watch it at 1.5X speed. (Sorry, professor!)

During my Hebbia tryout, I came up with some of those Microsoft earnings examples. Swetha Revanur, the company's head of AI and platform engineering, uploaded several recent earnings transcripts to Hebbia's Matrix and asked me for some sample prompts. After years of listening to tech earnings calls, I handled that easily. But coding skill is also part of the job, for doing things like building prompts into the system so clients can access them with a quick click. That's where I fell short.

The future

I won't be changing my LinkedIn profile to "prompt engineer" anytime soon, but my new skills are already paying off in *this* job. I often prompt ChatGPT to help me brainstorm and draft emails.

"The future is not artificial intelligence. It's augmented intelligence with generative AI where we augment and amplify what people can do," White told me. "Everybody, realistically, needs to be interacting with it and using it."

A number of experts in the field told me AI probably won't get to a point where it understands so much that prompt engineers aren't needed. "Even in programming where machines are perfect at understanding code, there's still a job for people to go back and forth," Hebbia's Sivulka said.

Yet while AI is creating new jobs, it's also quickly taking other jobs.

The way we communicate with computers has changed a lot in the past year. We now have tools like ChatGPT, Google's Bard and Microsoft's Bing, where a few choice words can produce a powerful response. Success in many fields may depend on how well people can sharpen and hone those words.

For the record, I love my job and don't plan to leave it anytime soon. Unless they hire a prompt engineer to replace me: "You are a tech columnist. Write a column on..."

Watch a Video

Scan this code to watch Joanna Stern's video on what it takes to get hired to talk to chatbots.

Talking to Chatbots for \$200K? Sign Me Up

Welcome to the world of prompt engineering, where you're paid to get the best answers from AI

The job is more complex than typing into a text box. You need to understand how these systems work, have specific tricks up your sleeve and, in some cases, be able to do some coding. I learned that the hard way after taking a multi-week course then "applying" and "interviewing" for a \$200,000-to-\$250,000-a-year prompt-engineering role at Hebbia, an AI startup in New York City.

The job

"You can think of prompt engineering as programming in the English language," George Sivulka, Hebbia's chief executive and founder, told me. Instead of using computer programming languages like Python, prompt engineers use plain words to achieve results.

Hebbia's Matrix tool allows financial institutions and other businesses to analyze huge amounts of documents—contracts, filings, earnings transcripts and

calls. Instead of an analyst sifting through hundreds of pages to research a company, the AI can summarize and pull out key points for them. Buh-bye, Ctrl-F.

The company's job posting, the one I responded to, explains what the prompt engineer does: "Your role is to deeply understand our users' needs, figure out and test the best way to prompt models to meet these needs, and then teach our users."

Translation: Get the robots to cough up valuable answers to keep our human customers happy.

The skills

But what *is* a great prompt? To find out, I went back to school—and by "to school" I mean "to my couch." Over the past few weeks, I watched portions of Prompt Engineering for ChatGPT, a Coursera class from Vanderbilt University associate computer-science professor Jules White. I paid \$49 for the month to

get access to the course.

White said I'm one of over 180,000 students who have taken the six-week class in the past year. He said his students tend to be professionals looking to learn more about AI.

LLMs are capable of producing responses with huge variations. The trick is to tweak the "input" to maximize the "output." Here are three approaches learned in White's class that I now use regularly:

► **Persona prompt:** Tell the AI system to assume a role. For example: "Act as an assistant helping a financial analyst." Then when you ask your question, the bot will frame the response in that role.

► **New-information prompt:** You can add new information that the LLM might not know. For example: "Here's the transcript of Microsoft's last earnings call. Summarize all the mentions of AI and Bing in five bullets." The more specifically you describe your desired output, the better it will be.

► **Question-refinement prompt:** You can ask the LLM to suggest improved or alternative questions

AI whisperers use plain words to extract valuable but buried info.

PERSONAL TECHNOLOGY

Can You Trust a Robot With Your Holiday Shopping?

By CORDILIA JAMES

Artificial intelligence could upend the way we shop for loved ones around the holidays. It's just not ready to do everything yet.

A third of people say they plan to use ChatGPT or some other generative AI while holiday shopping this year, according to a September analytics survey by Adobe. Those surveyed said they wanted AI to surface good deals, brand recommendations and gift alternatives.

These shoppers might be getting ahead of themselves. When you pose shopping and deal-hunting queries to the most popular AI chatbots, limitations often show up. "Hallucinations"—AI speak for inaccurate information—sometimes tell you something is on sale when it isn't or recommend outdated products.

And this fledgling technology isn't fully integrated into popular shopping sites like Walmart and Etsy. The ones that aim to use it have only just begun experimenting.

"Retailers are getting better but are nowhere close to where they want to be," says Sharmila Chatterjee, academic head of enterprise management at the MIT Sloan School of Management.

AI could still help you this holiday shopping season—you just have to manage your expectations.

AI shopping assistants

Generative-AI tools like Microsoft's Bing and Google's Bard scrub the internet in real-time to find answers

to queries. OpenAI's ChatGPT, which is trained on older data, began offering real-time search responses in September, but you need the \$20-a-month ChatGPT Plus plan.

You can ask these bots to scan sites to summarize reviews, offer price comparisons and recommend products. For instance, go to Bard and type in the prompt "Should I buy the new AirPods Pro?" The bot's response may include a pros-and-cons list or notes about what users have said about the product. You can then follow up with questions about similar products and cheaper alternatives.

Where bots fall short is keeping up with the latest markdowns.

In Microsoft Copilot, formerly called Bing Chat, a search for "What's the best quality portable photo printer I can buy right now?" produced a response with some promising options and links to articles. But while the bot said users could buy each of the printers on Amazon for \$99, none was available for that price. A similar query in Bard linked to products that weren't offering the sales the bot suggested.

For now, you should check the retailers for pricing and other details.

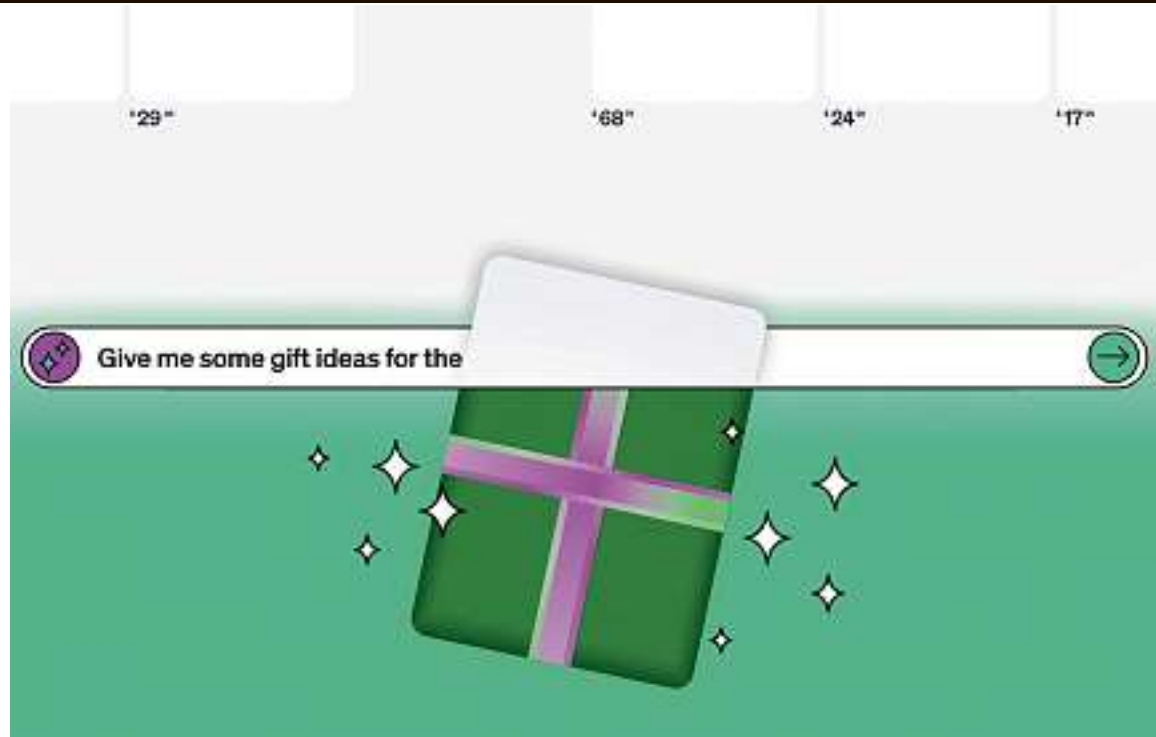
One site that is working to solve the deal-hunting problem with AI is BrickSeek. The price-comparison site, which helps shoppers find items before they sell out, launched its Deals page in September. The new page helps customers find the best markdowns on products across major retailers.

And while Google's Bard might lack deal-hunting skills, the company has a new deals page that offers up-to-date information on sale items. You can activate it by typing "shop deals" in Search.

Smarter search

Online retail companies are also experimenting with generative AI to make search results more insightful.

At the beginning of the year, e-commerce platform Shopify—which says it partners with millions of retailers worldwide—started using OpenAI's technology to power its in-app AI shopping assistant. In Oc-



tober, it brought an updated version to its website.

Users can treat the bot like they are talking to a person. You can ask it to help find toys for your music-loving niece, and it might show you child-friendly drums, guitars and more. The bot may ask you for specifics and refine its recommendations. Just bear in mind, it will only show items from those retailers Shopify supports.

If you want more options, Copilot in Microsoft Shopping works similarly across the web and offers additional information such as price history and comparisons. It began rolling out to users in mid-November.

Online marketplace Etsy is testing a similar AI-powered search bot. You would pose a query like "gifts for fall" and receive a chatty response with additional search suggestions. The chatbot is accompanied by a tailored results page that, in this example, would show product categories such as "cozy blankets" and "fall home décor." Etsy didn't say when this would be widely available.

Generative AI should be able to help retailers meet customers' wants and needs without making them do much work, says Oded Netzer, a business professor at Columbia Business School whose research focuses on AI. He likens it to asking a friend for advice, though in this case the "friend" has its own motive.

"They want to sell products," he says.

Other AI shopping tools

Earlier this month, Google began rolling out generative-AI capabilities to make gift shopping easier. Searching "gifts for a 7-year-old who wants to be an inventor" produces all sorts of coding toys and other relevant ideas, with links to helpful articles. It is accessible to nonbusiness users in Chrome browsers and Google apps via Search Labs.

Also coming to Google's Search Labs in December: an apparel-focused tool that lets users dream up what they are looking for using an AI image generator, which then points users to similar products

that actually exist.

Amazon hasn't added generative AI to its main search, but it did begin using it to summarize product reviews for shoppers in the U.S. The AI-generated text, which appears on product-detail pages in the app and website, highlights reviews from verified purchases.

Walmart is working on ways AI can enable open-ended searches. The company's example, "unicorn-themed toddler birthday party," could replace separate searches for multiple items, including "plates, streamers, party favors and more." The retailer is also experimenting with a tool that blends generative AI with augmented reality to provide personalized, budget-specific interior-design assistance to customers designing a room.

When it comes to shopping with AI, there is huge potential, MIT's Chatterjee says. But, she adds, we have yet to see "the proof of the pudding."

Dalvin Brown contributed to this article.



OYSTER PERPETUAL GMT-MASTER II



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#Perpetual

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ARTS IN REVIEW

ART REVIEW

A Creative Corridor in Connecticut

An exhibition highlights the painters, sculptors, architects and designers for whom the state proved fertile artistic ground

By JUDITH H. DOBRZYNSKI

For a curator in search of a compelling exhibition, there's little better than a fresh, revealing storyline, a cast of artists both well-known and not, and art to substantiate the narrative. That's exactly what the Bruce Museum has in "Connecticut Modern: Art, Design, and the Avant-Garde, 1930-1960."

As told by independent curator Kenneth E. Silver, a corridor in the state's southwest, from New Canaan to Hartford, attracted a critical mass of artists including Alexander Calder, Louise Bourgeois, Marcel Breuer, Yves Tanguy and Kay Sage, among others. Arthur Everett "Chick" Austin—the pioneering director of the Wadsworth Atheneum in Hartford, who organized the first show in an American museum of Surrealism and Picasso's first retrospective in the U.S.—completed the nexus, heralding their work. Over three decades, their lives intertwined socially and artistically, making these scenic acres fertile ground for the furthering of American Surrealism, Magical Realism, Dada and Midcentury Modern architecture and design.

Other than its natural charm, Connecticut possessed no special artistic elixir. As the wall texts make clear, practicalities created this "laboratory of artistic modernity." The towns these artists inhabited were close to New York City, the capital of the art market, and the state's property was cheap, depressed by the exit of agriculture to the west and diminished again by the 1929 Wall Street crash and Great Depression. The darkening mood in 1930s Europe, economically and politically, prompted many artists there to flee, with some settling in Connecticut.

Installed loosely by theme and geography—clustering works by artists who lived near each other—the exhibition comprises nearly 85 works, photographs and documents. Calder, who moved to Roxbury in 1933 after many years in Paris, emerges as a connector and an innovator, with sculptures appearing throughout the show. He was already well-established but, in Connecticut, he gives nature a more prominent role in his works. Wanting to activate his mobiles, he harnessed the wind to move the colored discs of his outdoor, free-standing "Red, White, Black, and Brass" (1934). He devised the playful, red-and-black, seven-foot stable "Big Bird" (1937) and "Yucca" (1941), whose sharp leaves are leavened by a mobile of small flowers floating above. And he created several snow mobiles, like "Roxbury Flurry" (1946), a gathering of fluttering white discs in-



spired by a blizzard, poetically installed here against a blue-gray, winter-sky wall.

In nearby Woodbury, French-born surrealist Tanguy felt both his mood and palette lighten, with his once gray "mindscapes" now incorporating color, as in "There, Motion Has Not Yet Ceased" (1945). Sage, his American wife, thrived there too: Her brand of Surrealism, more figurative than his, produced one of the most ingenious, if nearly inscrutable, pieces in the show: "Pour Yves" (undated), five watercolor-and-collage landscapes, sometimes bright with blue sky, sometimes duller, each with cutouts, displayed vertically in a row, inches apart, in a series—like a peep show.

Several artists acknowledge Calder, either inspired by him, as in David Hare's whimsical "Sun, Clouds, Mountain" (c. 1952) landscape sculpture, or referring to him. Peter Blume's painting "The Italian Straw Hat" (1952) intriguingly marries Surrealism with Precisionism and a dash of New England folk art—and incorporates both a Calder mobile

"Cherner armchair" (1958), designed by Norman Cherner



and an old-style, made-in-Connecticut Hitchcock chair. And Paul Cadmus's crystalline "Inventor" (1946) includes a mobile of shells and feathers that, while never something Calder would have made, nonetheless pays him homage.

The exhibition devotes a section to architecture and design, noting the followers drawn to Connecticut by Breuer. Along with models of the cantilevered glass-and-stone house Breuer built for himself in New Canaan and Philip Johnson's



"Big Bird" (1937), by Alexander Calder, above left; "There, Motion Has Not Yet Ceased" (1945), by Yves Tanguy, above right

famously transparent Glass House (both 1947-48), visitors will see three studies for the "Homage to the Square" series by Josef Albers, who injected Bauhaus style into the Yale department of design, and Anni Albers's geometric weaving "Two" (1952). The quintessentially modernist, bentwood "Cherner armchair" (1958) rests beside Norman Rockwell's cover for a 1961 Saturday Evening Post, "Artist at Work," that depicts the chair. Nice touch.

Austin, who Mr. Silver says was one of "the essential links in the Connecticut visual arts network" (along with Calder and Breuer), is hardest to grasp. Not an artist, he comes through in documents and art made for him, including a catalog for his Surrealism show, "Newer Super-Realism" (1931), and Calder's funny, figurative collage (1936) thanking Austin for including him in the Atheneum's Hartford Festival. Pavel Tchelitchev, who lived in Weston, memorialized Austin wearing a red top hat

and jacket over white trousers in a winsome watercolor, "Ring Master (Mr. Austin)" (1936), made for a museum gala. And Arshile Gorky, who on occasion stayed in the area, clearly perused the catalog for Austin's 1934 Picasso show. He bracketed the list of lenders (including Pierre Matisse and Averell Harriman) with two elongated figure drawings.

The exhibition also features the collectors and sometime artists Hilla Rebay, the first director of the Guggenheim Museum, and Katherine Dreier, founder of the Société Anonyme, plus important dealers like Julian Levy, who championed Surrealism. It concludes with a coda of works by the likes of Helen Frankenthaler and Jasper Johns, a reminder that Connecticut creativity continued past 1960.

The value of "Connecticut Modern" goes beyond the artworks it displays. With its plentiful photographs, documents, cogent wall labels and catalog, it adds up to a sociological exposition as much as a visual one—and that's its real strength.

Connecticut Modern: Art, Design, and the Avant-Garde, 1930-1960 Bruce Museum, through Jan. 7, 2024

Ms. Dobrzynski writes about art for the Journal and other publications.

FILM REVIEW

Yasujiro Ozu's Cinematic Humanity

By DAVID MERMELSTEIN

This December marks the 120th anniversary of Yasujiro Ozu's birth. For those who can't quite place the name, he is the Japanese director of such exquisitely crafted classics as "Late Spring" (1949), "Tokyo Story" (1953) and "Floating Weeds" (1959), as well as a lodestar for film lovers the world over. One seasoned cineaste of my acquaintance who claims to have seen every extant Ozu movie regards him as the only great filmmaker who never made a bad picture. Well, so far as we know. Seventeen of his earliest efforts, all silent, have disappeared completely; two more exist only as fragments. But 14 silent features survive intact, as do all 19 of his sound features, the last six in color.

To honor the anniversary, several cinematheques have this year undertaken Ozu retrospectives—some comprehensive, like what the Harvard Film Archive in Cambridge, Mass., mounted from June to August; and some compact, like the one in September at the Academy Museum of Motion Pictures in Los Angeles devoted solely to the color films. (A companion exhibit of rare

photographs depicting Ozu at work and elsewhere continues at the Academy's Margaret Herrick Library in Beverly Hills, Calif., through the end of the year.)

And now the Pacific Film Archive in Berkeley, Calif., is about to begin its program of 19 pictures—a well-chosen selection of silent and sound movies, black-and-white and color—running Dec. 3 through Feb. 25, 2024, just in time for the milestone birthday on Dec. 12, which also happens to be, neatly, the 60th anniversary of Ozu's death.

Titled "Yasujiro Ozu: The Elegance of Simplicity," it touches on the many facets of a filmmaker even his admirers can sometimes reduce to a series of visual and thematic tropes, missing much of the subtlety and complex interplay that exists within his oeuvre. But seeing his pictures as a group reminds us that rather than being lazy by revisiting the same situations and reusing many of the same actors to play similar roles (Chishu Ryu, Setsuko Hara, Haruko Sugimura, among a host of others), Ozu was instead delving deeply into the commonalities of being human. His films are, at their core, calls for acceptance, compassion and even for-

giveness—their repeated beats not empty repetition but amplifications. Ozu's visual tropes have almost come to define his mise-en-scène—the washing flapping in the breeze as it dries on the line; the belching industrial chimneys; the brightly colored teapot drawing our eye to its inanimate beauty; and, most especially, the empty rooms. All of these retain potency for us because they are no less central to Ozu's world than the characters inhabiting his kitchens, bedrooms, offices and bars. They speak to a power that transcends the individual in favor of the collective, which then inclines toward something even bigger. The artfully folded blanket, the teacup waiting to be raised—they don't just belong to the characters on screen; we, too, lay claim to them.

The restraint so often attributed to Ozu, particularly in his later work, is demonstrated thematically within



Setsuko Hara and Chishu Ryu in "Late Spring" (1949), included in a series at the Pacific Film Archive

the films by a reverence for qualities like decorum, personal responsibility, thoughtfulness and general elegance. But basic modesty is also evident in the techniques employed to make these movies, especially the limited camera movements Ozu favors and his so-called *tatami* shots, in which the point of view is fixed some three feet off the ground in an effort to replicate how action would appear to someone seated on a traditional Japanese straw mat.

In the years since his death in 1963, Ozu has often been characterized as a "conservative" director, and in many respects the adjective fits. But in technical terms, Ozu's filmmaking, though never bravura, broke with tradition, and his con-

stant refinement of angles, blocking and composition brought to his movies an increasingly distinctive style.

Take a climactic scene in Ozu's 11th film, and one of the earliest in the PFA series, "Woman of Tokyo" (1933), in which a quarrelsome brother and sister, the film's main characters, both leave a room angry. Most directors, especially in this era, would follow them, but Ozu keeps his camera rooted until the sister returns to the space nursing hurt feelings.

Likewise, Ozu's mastery of human geometry never fails to impress. In "Early Spring" (1956) and "Good Morning" (1959), to cite just two examples, he draws our gaze to important vertical business happening in the bottom of the frame only to surprise us shortly thereafter with incidental action running horizontally above.

Naturally, these movies are best viewed in theaters, where screens, and thus details, are big and distractions minimal. But even at home—via streaming on the Criterion Channel, with its abundant offerings, or on readily available DVDs and Blu-rays—the defining qualities of Ozu's cinematic grammar and his singular appreciation of the human comedy continue to radiate undimmed. The important thing is to see his films, ideally as often as possible.

Mr. Mermelstein, the Journal's classical music critic, also writes on film.

SPORTS

Tiger Woods Tees Off on Saudi Deal

The golf star called the status of the PGA Tour's negotiations with LIV Golf's backers 'murky'

By Andrew Beaton
and Louise Radnofsky

When Tiger Woods addressed his long-anticipated comeback from ankle surgery that has sidelined him since April, he delivered something even juicier than updates about his own future: his insight into the uncertain future of professional golf.

Woods, who's set to tee off Thursday at the Hero World Challenge in the Bahamas, said his ankle is now pain free and that he hopes to play as much as once a month next year. But from his powerful perch inside the negotiations, the 1,328th ranked golfer in the world also provided some of the most revelatory remarks about the status of the stunning pact between the PGA Tour and its Saudi-backed rival.

When the Tour in June agreed to join forces with Saudi Arabia's Public Investment Fund, which had upended the golf world by recruiting stars such as Phil Mickelson and Brooks Koepka to its new LIV Golf league, Woods was just as taken aback as everyone else. Which is something he wasn't exactly thrilled about.

"I was frustrated with the fact that the players were never involved," Woods said. "No one knew. That can't happen again."

But the framework deal, which calls for the PGA Tour, Europe's DP World Tour and PIF to combine their commercial golf assets in a new for-profit entity, was merely an agreement to try to strike an actual agreement. Little was set in stone except for the two sides dropping their costly, high-stakes litigation against one another.

And Woods's biggest disclosure was that even with a tentative year-end deadline for a final agreement rapidly approaching, everything is still up in the air: the format of a joint venture between the Tour and the Saudis, the involvement of other investors, the return of the LIV players—and even the deadline itself.

"The answer is murky," said Woods when asked what golf



Golf star Tiger Woods is set to return to action this week at the Hero World Challenge in the Bahamas.

would look like in a year or two. "There's a lot of moving parts on how we're going to play. Whether it's here on the PGA Tour or it's merging, or team golf."

PGA Tour players described being blindsided by the framework agreement, which was negotiated in secrecy by a pair of Tour board members and commissioner Jay Monahan and came after the Tour had battled LIV for a year by attempting to take a moral high ground. Since its inception in 2022, LIV has been accused by politicians and activists of attempting to use golf's popularity to whitewash the country's record on human rights.

In a bid to temper the players' distrust after the deal, the Tour

agreed to add an additional player to its board: Tiger. That made the world's most famous golfer a power player in the ongoing negotiations, which have evolved beyond just the PGA Tour and PIF at the bargaining table.

A number of other investors, such as Fenway Sports Group—which owns the Boston Red Sox and the English Premier League team Liverpool—have expressed interest in acquiring a stake. People familiar with the matter said that a likely scenario involves backing from both PIF and additional outside investment.

Woods was non-committal about whether the Saudis come out of the final deal as partners at all. "We're looking at all options

and trying to figure out what is the best deal for the players," he said, though he added that the Tour and its former bitter rivals were "working right now with no animosity."

Now that the former foes are attempting to do business together, there has been a delicate balance of seeing if there's a way back to the PGA Tour for those who left—while also not upsetting members of the Tour who remained loyal and may have turned down enormous sums of money offered by the Saudis.

"Part of the deal we're working through is trying to find a path, whatever that looks like," Woods said. "There's so many different scenarios."

The most consequential scenario may be out of the Tour's hands entirely: The Justice Department, which was already investigating the Tour and other golf bodies over anticompetitive behavior, has indicated that it will review the new pact over antitrust concerns, The Wall Street Journal previously reported.

While professional golf's future has been up in the air in recent months, so has Woods's career. And these are familiar confines for him: he has made his return at the Hero World Challenge in 2016 after more than a year off because of back surgeries. When he suffered major injuries in a car crash that required emergency surgery in 2021, he used this event to hit some balls and make extensive comments about his future.

The 47-year-old's current layoff still traces back to that wreck, which he has said could have led to the amputation of one of his legs. He last competed at the Masters in April, where he made the cut for the 23rd consecutive time but withdrew after rain-soaked conditions caused a postponement in the action on Saturday. Shortly afterward, he had the surgery, which stemmed back to the career-threatening crash.

Woods, over the last two years, has vacillated about his own professional prospects. While he has conceded that his physical limitations will prevent him from playing anything close to a full schedule again, he has also said he still believes he can reach the highest levels of the sport.

Woods gave a glimmer of hope when he said all of the pain he had at Augusta National is now gone after the surgery, and that he hoped to increase his tournament schedule to playing once a month. He also admitted he was rusty and wasn't sure how he would play this week.

"I'm just as curious as you are to see what happens," he said.

TRACY WILCOX/PGA TOUR/GETTY IMAGES

The WSJ Daily Crossword | Edited by Mike Shenk

Crossword grid with numbers 1-65.

- 27 Media darling
28 Fragrant bunch
31 Chaste
32 Way
34 Eclipse, maybe
35 "i__suerte!" ("Good luck!")
36 Strip for a pageant
37 Largest of Canada's First Nations
39 Cricket, e.g.
42 Back from a cruise
44 Aspirant's way
46 Where Inupiaq is spoken
47 Repo victim
49 Way
51 Contents of some lofts
52 Monopoly token added in 2013
54 They "go marching" in a children's song
56 Cavaliers, on scoreboards
57 Trenching tool
58 Immigrants' night sch. class
59 Planner page
60 Before now

SIDEWAYS | By Dennis Nullet

Word puzzle grid with clues: Across 1 Ballpark figures, 6 Off the line of duty?, 10 Saqqara serpent, 13 Blue Grotto locale, 14 Late night TV specialty, 17 Tear into, 18 Widespread, 19 Half of a Basque game, 20 Play reporter, 21 There's nothing after it, 22 Sneeze inducer, 24 Boggy place, 26 Pound sound, 29 Time often preceded by a name, 30 Spices up, 32 Makeover, informally, 33 Post-post entry, 35 Cowboy ties, 36 Jerks, 38 As a rule, 40 Butter up?, 41 Destroyer destroyer, 43 Rams coach McVay, 44 Monopoly token retired in 2000, 45 Gum mass, 48 Member of the pecking order, 49 Buds, 50 Common people, 52 Herbie or Christine, e.g., 53 Monopoly token since the 1930s, 55 Dubai's Burj al __, 56 Gave grounds for divorce, say, 60 Elite group, 61 Grew discouraged, 62 Commercial creature with a British accent, 63 Slim swimmer, 64 Deli breads, 65 Holocaust hero Schindler, Down 1 Tight spot, 2 Pro who might have you in stitches, 3 Hiker's way, 4 Way, 5 Become a chairperson?, 6 Boosts the intensity of, 7 They get the job done, 8 Prime factor

Previous Puzzle's Solution grid with words like WAFFER, SALES, ABC, ANIME, ALERT, TOO, STAMPOUTAGE, RIP, PITTY, DDE, RAINS, HAIR, BANDAGE, ALOHA, ELSA, LASER, RUES, PLOT, ATHLETES, FOOTAGE, SEAM, EASY, BERRA, EARL, ORDER, EXIT, TRAMPAGE, MENS, AMP, OPEN, ONE, BRAT, PACKAGE, TOP, INTEL, ERROR, ENT, ARTSY, LASSO

The NBA Turned a Night Of Blowouts Into Must-See TV

By Robert O'Connell

IN THE CLOSING MINUTES of their home game against the Chicago Bulls on Tuesday, the Boston Celtics were still going flat out. They flew in for rebounds, pushed the ball up the court and hoisted 3-pointers. When All-Star forward Jaylen Brown zipped the length of the floor with just under five minutes left and battered his way between two Bulls defenders for a lay-in, the sell-out crowd roared, as if he'd just tipped the advantage in a back-and-forth contest.

In fact, the Celtics were already up by 32. All across the NBA, the final slate of group-stage games for the league's first-ever In-Season Tournament brought to basketball a concept more common to soccer: point differential as tiebreaker. Records being equal, the teams who notched the biggest blowouts would reach the single-elimination quarterfinals, with trips to next week's semis in Las Vegas at stake. For one night only, running up the score wasn't ethically questionable. It was practically essential.

"There are some things I don't agree with, but I also know that there's rules," Celtics guard Jrue Holiday said after a 124-97 victory, which separated Boston from two other teams in its group with identical 3-1 records in tournament play. (Teams could advance by winning their group or securing one of two wild-card berths.) "We also want to win. We want to make the tournament and have the best seed that we can."

Since its opening games in the first days of November, the In-Season Tournament has provoked a jumble of excitement and skepticism.

The scenarios circulating online Tuesday afternoon—the Minnesota Timberwolves need to win by eight more points than the Golden State

Warriors win by—brought unwelcome memories of word problems on grade-school math tests. Soccer has the luxury of tidier arithmetic, with scoring totals of single, not triple, digits.

As the evening got under way, though, social media lit up with enthusiasts briefing one another on the ever-updating margins. The energy with which teams pursued their needed edges proved that the players likewise had cottoned on to the new way of doing things. The New

team to foul Chicago's Andre Drummond, a poor free-throw shooter, in the hopes of getting the ball back quickly in the fourth quarter, Bulls coach Billy Donovan took visible exception. "I had to explain to him, 'This is what our people are telling us, this is what we have to do,'" Mazzulla said.

Earlier this month, Warriors coach Steve Kerr had welcomed the new license to keep the accelerator floored. "It's great, nobody stops playing at the end," he said



Jayson Tatum and the Celtics advanced in the tournament.

York Knicks' 24-point thrashing of the Charlotte Hornets, secured by starters playing heavy minutes, helped them hold on to a crucial point-differential edge over the rest of the Eastern Conference's wild-card hopefuls. (The Cleveland Cavaliers' own 23-point win over the Atlanta Hawks, alas, wasn't quite enough.)

"Once I knew the point differential, I told the team that this is a good opportunity for us to work on playing with a lead and building on it," Boston coach Joe Mazzulla said Tuesday, "because we want to try to win as much as we can."

That mindset signals a break with professional basketball's usual mores, which hold that piling on points in a settled game is an insult. After Mazzulla instructed his

before a tournament matchup with the Timberwolves. "I actually prefer it. I have no idea why people get offended in the NBA when you shoot at the end." Tiebreakers ultimately had no bearing on Kerr's club, as it lost its last group game by one point to the Sacramento Kings.

The NBA has been careful to position its new contest as a complement, not an equal, to its established postseason—something more than a diversion but less than the ultimate prize. (Neither of last season's finalists, the Denver Nuggets or the Miami Heat, reached the knockout stage.) League officials have reiterated that its mechanics aren't necessarily permanent, and future seasons will likely bring tweaks to the process.

STEVEN SENNE/ASSOCIATED PRESS

OPINION

Hamas Seizes the Advantage



WONDERLAND
By Daniel Henninger

As predicted, events since the Hamas massacre of Oct. 7 have unfolded in a way that puts Israel, the victim of the mass slaughter, at a significant political disadvantage.

News reports say Egypt and Qatar, the two nations involved in hostage-release negotiations, are pushing for a long-term cease-fire. The Biden administration, we may assume, will support this goal.

In short, Hamas's planners and fighters look likely to survive without personal accountability for the 1,200 killed on Oct. 7. Instead, the burden will fall on Israel to assent to talks with Hamas, whose goal remains removing the rest of Israel's more than nine million people.

Credit is due Hamas—and its partner Palestinian Islamic Jihad—for figuring out the utility of modern sensibilities, especially in the U.S. Initially the world was shocked that Hamas kidnapped young children and pregnant or elderly women. This week's dramatic release of 4-year-old American Abigail Idan is exemplary. Hamas murdered her parents, then took the child to Gaza.

Hamas understood that the unprecedented horror of its Oct. 7 attack would melt away amid daily media attention to the unbearable horror of these vulnerable hostages and the realities of war inside Gaza. Responding to the second horror has forced Israel's army to stand down, possibly putting

other Israelis at mortal peril from attacks by Hamas and Hezbollah.

Professional terrorism has come a long way. One of the earliest acts of Palestinian terror, by a Hamas precursor called Black September, was the kidnapping of Israeli athletes at the 1972 Munich Olympics, televised to the world. It ended with the deaths of athletes and terrorists. In 1985, Hezbollah and Abu Nidal terrorists hijacked two separate airliners and attacked airports in Rome and Vienna.

Ultimately the world took precautions, internalized these terrorist attacks, and in some sense learned to live with them. The post-9/11 airport-security lines have become an accepted annoyance. But by kidnapping babies, children and grandmothers, terrorism had finally hit on a tactic the world could not absorb.

For the record, the Nigerian terrorist group Boko Haram kidnapped 276 schoolgirls in 2014, which led for awhile to the global social-media campaign #BringBackOurGirls. It accomplished little. Some 100 girls remain missing, and those terrorists, now affiliated with Islamic State, continue their assaults.

No one can be unmoved by the reunions of the Israeli hostages with their families. But it is impossible not to miss a second dilemma. Israel said Tuesday its goal remains to dismantle Hamas. But how, when the current standoff gives Hamas an incentive to hold some hostages indefinitely?

Meanwhile, running alongside are anti-Israel, pro-Palestinian demonstrations like those in New York City the

past week. Protesters glued themselves to Sixth Avenue, blocking the Macy's Thanksgiving Day Parade. Hours later, they vandalized the facade of the New York Public Library's main building, doing an estimated \$75,000 of damage.

On Saturday, they moved on the Museum of Natural History—closed in anticipation—demanding to be let inside to see exhibits of the “colonizers,” burning an Israeli flag and shouting that the police officers protecting the museum were equal to the “KKK.”

After the massacres of Oct. 7, the burden is now on Israel to end the war in Gaza.

As we went to press, these activist groups planned to wreck the Wednesday evening lighting of the Rockefeller Center Christmas tree. A social-media post said, “Bring your flags, signs & keffiyehs, mobilization, not celebration!” Apparently baby Jesus is also complicit.

Add the campus demonstrations, and this constitutes Joe Biden's Democratic youth base, which is pushing the president and his party toward equivocal support for the state of Israel.

The intensity of these demonstrations calls to mind the early 1970s, when some members of the left-wing group Students for a Democratic Society tipped over to become a domestic terror group called the Weather Underground. They blew themselves up while making bombs in a

Greenwich Village townhouse.

In the U.S., we have arrived at a familiar crossroads. Amid a growing atmosphere of civil disorder, much of it organized, we can either stand back and live with it or push back, deciding that the potential price to our own security eventually could be too high.

New York again illustrates the challenge. The police detained some of the rampaging pro-Palestine protesters, but there's little prospect of Manhattan's progressive District Attorney Alvin Bragg prosecuting them. After the city's George Floyd protests (including store looting), which ran almost daily for weeks, state Attorney General Letitia James filed a lawsuit—against the New York City Police Department for mishandling activists.

Right now cops and demonstrators, not to mention store-smashing thieves, know the previous structure for maintaining order is dormant.

A word returning to fashion in national-security circles is “deterrence.” Deterrence is a bow to the dangers of accommodating disorder. The Netanyahu government's accommodation of Hamas in Gaza was a deterrence failure. Communist China's military expansiveness is a deterrence failure, as are the attacks by Iran's proxies on U.S. forces and Russia's invasion of Ukraine. Virulent anti-semitism on U.S. campuses is a deterrence failure. The border is a deterrence failure. So is urban crime. It adds up.

As an entry point for discussion on how to avoid calamity, a simple proposal: Start doing the opposite. Relearn deterrence.

Write henninger@wsj.com.

BOOKSHELF | By James B. Meigs

Outer Space, The Inside Story

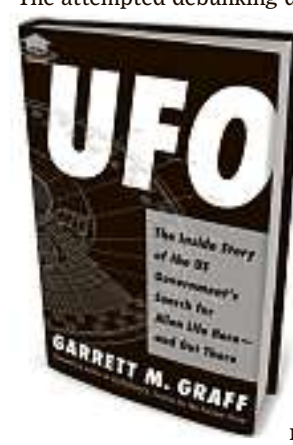
UFO

By Garrett M. Graff

Avid Reader, 544 pages, \$32.50

On June 24, 1947, a civilian pilot in Washington State spotted nine bright lights apparently moving at incredible speed near Mount Rainier. Interviewed by local reporters, he described the objects as saucer-like. Articles about the Mount Rainier “flying saucers” soon appeared in newspapers across the country. In the coming days more sightings poured in—from Alabama, Nevada, Oregon—and these too made headlines. “Flying ‘Whatsits’ Supplant Weather as No. 1 Topic Anywhere People Meet,” reported the Los Angeles Times.

Then, in early July, a rancher near Roswell, N.M., told authorities he'd found a jumble of crumpled foil and wooden dowels on his land. Army officers from a local airbase investigated, then quickly announced they'd captured a “flying disc.” What a sensation! But almost as quickly, Army higher-ups pooh-poohed that assertion, claiming that the debris was merely scraps from a crashed weather balloon. The attempted debunking didn't work, and the rest is



history—or myth, depending on how deeply one ventures into the maddeningly murky lore of “ufology.”

In “UFO: The Inside Story of the US Government's Search for Alien Life Here—and Out There,” Garrett Graff seeks to determine “the line between science fiction and science fact” over nearly eight decades of UFO mania. From the 1940s to the present, as Mr. Graff shows, the U.S. military and various government agencies have launched investigations into UFO reports. Some of them have

operated in good faith. Others have been rushed attempts to put public fears to rest. Almost always investigators have hesitated to say too much. For one thing, full disclosure might reveal military secrets unrelated to space aliens. The Roswell debris, for example, appears to have come from a classified project that used balloons to detect Soviet nuclear tests. Later, civilians began spotting top-secret U2 spy planes—which launched test flights from Nevada's off-the-books Area 51 base—and reporting the aircraft as UFOs. Again, officials had to cook up cover stories.

This combination of nothing-to-see-here pronouncements and clumsy attempts at secrecy has led many Americans to conclude that our government is hiding something. Mr. Graff agrees that the government has routinely hidden details of its UFO investigations. “What is unclear,” he adds, “is whether the government is covering up *meaningful* information about UFOs.” In his exhaustive review, he turns up no solid evidence that it is. In many cases, government investigators ended their inquiries as befuddled as when they began. If you're hoping for tales of alien bodies in Area 51 refrigerators, this is not the book for you.

Mr. Graff, whose previous books include an oral history of 9/11 and a history of Watergate, weaves together accounts of the government's UFO inquiries whose quirky names would become part of UFO lore: Project Sign, Project Grudge, Project Blue Book. And he has fun describing the motley clan of independent UFO investigators: “strange and colorful characters who span the spectrum from serious scientists to outright grifters.” Almost from the start, he writes, UFO entrepreneurs began combining scraps of reliable information with wild conjecture. “The Flying Saucers Are Real,” True magazine announced in a January 1950 cover story. The floodgates had opened. Soon stories about UFOs and aliens were a staple of TV, movies and popular journalism. By the mid-1960s nearly half of all Americans believed the flying saucer stories to be true.

Explaining how a few scattered reports of odd things in the sky created a cultural obsession would be a big enough topic for any book. But Mr. Graff also aims to tell a parallel story—of the scientific search for life in the cosmos. That's a taller order. Science buffs will enjoy his accounts of how astrophysicist Frank Drake loosely calculated the likely number of advanced civilizations in the Milky Way (between

UFO entrepreneurs combined scraps of reliable information with wild conjecture. Investigators often ended as befuddled as when they began.

1,000 and 100 million) and how astronomer Jill Tarter searched for signs of intelligent life using radio telescopes. (Tarter was the inspiration for the character Jodie Foster played in the 1997 film “Contact.”) But casual readers might experience vertigo as Mr. Graff's narrative veers from NASA Mars probes to tales of alien abductions.

The 20th-century astronomer and public intellectual Carl Sagan helps pull the two strands of “UFO” together. Sagan, Mr. Graff writes, was “an outspoken skeptic on UFO visits to Earth even as he championed the scientific search for life beyond.” In both domains, Sagan insisted on the rigorous application of scientific reasoning. Today his oft-repeated phrase, “extraordinary claims require extraordinary evidence,” is a yardstick too rarely applied in UFO investigations. In 2017, for example, several videos, shot from Navy fighter jets years earlier, were leaked to the press. The short clips seemed to show blurry objects hovering or racing through the skies. The media responded with breathless coverage, and Congress demanded briefings. A government-funded investigation into one of the Navy incidents concluded: “The Anomalous Aerial Vehicle (AAV) was no known aircraft or air vehicle currently in the inventory of the United States or any foreign nation.” Sounds spooky!

In fact, as professional debunker Mick West and others have suggested, the objects in the Navy videos are most likely distant conventional aircraft, or, in one case, a stray balloon, distorted by camera flaws and the motion of the jets. Whether or not the skeptics are precisely correct, their work shows why it is premature to make claims about an object's “speed” and “performance”—as many UFO analysts do—based solely on a few seconds of ambiguous camera footage.

None of this rules out the possibility that alien visitors are buzzing around our skies. The proper scientific stance—one that Sagan would have approved—is to keep an open mind but hold out for extraordinary evidence. Mr. Graff very much wants to keep the door of possibility open. Fortunately, he is too careful a reporter to fall for extravagant claims. That makes “UFO” one of the rare books on the topic that manages to be both entertaining and factually grounded.

Mr. Meigs is the former editor of *Popular Mechanics* and a senior fellow at the Manhattan Institute.

Where Are the Pros in Biden's Campaign?

By Karl Rove

We knew the answer as soon as the question was raised.

At Monday's White House briefing, Ed O'Keefe of CBS asked press secretary Karine Jean-Pierre if, “given the president's sagging poll numbers,” which show him trailing “any Republican opponent,” there has “been any talk in this White House about a change in strategy or staffing.” Ms. Jean-Pierre dismissed this with a curt “no.”

She had to say that. Any other answer would have been chum for a room full of journalistic sharks. But a change in strategy and staffing should be discussed in the West Wing.

President Biden's numbers stink. In a Nov. 13 Fox News poll, he trails Donald Trump by 4 points, Ron DeSantis by 5 and Nikki Haley by 11. That's after spending tens of millions on digital, cable and network ads and holding endless presidential and cabinet events extolling his achievements.

Despite this, Mr. Biden's overall approval rating is an anemic 40.6% in the RealClear-Politics average. His approval numbers on handling the economy, crime, foreign policy, immigration and inflation are even worse (at or below 38.4%).

Mr. Biden has tried campaigning via a jumble of self-congratulatory policy pronouncements, generally so tone-deaf and superficial as to invite ridicule. Take Monday's announcement of the new

Council on Supply Chain Resilience, at which Mr. Biden unveiled 30 steps to “strengthen America's supply chains.” How many American voters can name a single one?

Having appointed a task force on the same subject in June 2021, Mr. Biden's announcement Monday was a stunt to draw attention. But it didn't get any. Small-ball proposals aren't any more impressive if they're issued by a “council” rather than a “task force.”

It's unclear that his relatively greenhorn team can even fix his failing 2020 strategy.

Though it's clear Team Biden's strategy isn't working, they seem intent on doing more of the same. Their last resort will be that of any failing campaign: Go thermonuclear on their adversary. That might work if his opponent ends up being Donald Trump, but it won't if Republicans nominate a different candidate.

Even a new strategy might not overcome Mr. Biden's manifest weaknesses if he doesn't have the right campaign team.

There are strong, seasoned campaign operatives in the West Wing. Deputy chief of staff for operations Jen O'Malley Dillon was Mr. Biden's 2020 manager and has almost a quarter-century of election experience. Senior adviser

Mike Donilon, Mr. Biden's strategist in 2020, has spent more than 40 years in campaigns. Senior adviser Anita Dunn began working in campaigns in the 1980s. White House counselor Steve Ricchetti was the Democratic Senatorial Campaign Committee director in the 1990s and chairman of Mr. Biden's 2020 campaign. But all now have important White House governing responsibilities. Where are their equals in the campaign?

There are none.

The president's campaign manager, Julie Chávez Rodriguez, has never run a campaign. The sum of her election experience? She volunteered for Barack Obama's 2008 run, worked in Kamala Harris's dreadful 2019 bid, then became the Biden campaign's senior adviser for Latino affairs, principally responsible for calming agitated Hispanic party insiders. She's now in charge of something that's hard for the most seasoned campaign hands to handle. Her deputy does have experience: Quentin Fuks ran Sen. Raphael Warnock's 2022 Georgia re-elect and Illinois Gov. J.B. Pritzker's 2018 race. Ms. Rodriguez and Mr. Fuks have so far been given a tiny staff.

The plan is to outsource the duties a larger campaign staff would handle—the ground game, digital, polling and message testing—to the Democratic National Committee. That's a doozy of an idea. The DNC's chairman is Jaime Harrison, who headed the

South Carolina Democrats when the party didn't win a single statewide contest. Mr. Harrison then ran for the Senate in 2020, raising a record \$130 million before losing to Sen. Lindsey Graham by 10.3 points.

Maybe this will work as seamlessly as Tinkers to Evers to Chance. I doubt it. Having so many relative greenhorns in key slots and such a diffuse structure will likely make operations difficult, decision-making choppy, execution slow and responsibility elusive.

By contrast, consider the 2012 Obama re-election campaign. Mr. Obama's 2008 manager, David Plouffe, remained as White House senior adviser, serving as the pipeline to the campaign. The president's closest political hand, veteran operative David Axelrod, went to be chief campaign strategist. The manager was Jim Messina, who had been campaign chief of staff in 2008 after years as a political journeyman. Coordination between the White House and campaign was seamless, focused and effective.

Team Biden is delusional to think they're on the right path. Their strategy is broken and their campaign structure rickety. No matter how many committees or task forces Mr. Biden announces, he'll find you can't run a campaign like this.

Mr. Rove helped organize the political-action committee *American Crossroads* and is author of “*The Triumph of William McKinley*” (Simon & Schuster, 2015).

The Thrilla in Alpharetta

By Stephen Moore

It won't be Ali-Frazier, but Thursday's debate between Govs. Gavin Newsom and Ron DeSantis has high stakes for both men's presidential ambitions. More important, the face-off in Alpharetta, Ga., will show two different models for America's economic future.

Both states have balmy weather and beautiful beaches. Both are coastal hubs with high levels of immigration. But on policy, they are almost polar opposites. California is the nation's poster child for progressive governance. Its 13.3% income-tax rate is the highest in the country. It has forced union rules, a minimum wage that can reach \$20 an hour, highly restrictive land-use rules and strict regulations on climate and labor. California is a gen-

erous welfare state—paying out twice as much per person as Florida—with a politically dominant teachers union. Florida has no income tax. It is a right-to-work state with an ambitious school-choice program.

Newsom vs. DeSantis is a genuine conflict of governing visions.

In the “Rich States, Poor States” report from the American Legislative Exchange Council's Center for State Fiscal Reform, Florida ranks ninth in economic outlook, California 45th. Florida beats California on nearly every socioeconomic indicator.

California has lost a net 1.8 million residents to other states over the past decade,

while Florida gained nearly two million people. If current trends persist, California could lose three or four congressional seats after the 2030 census, with Florida picking up that many.

Money is leaving California too. According to Internal Revenue Service tax-return data, the Golden State lost a net \$73 billion in income from 2015 to 2021 to outbound migration, while the Sunshine State gained \$129 billion.

The unemployment rate has averaged 2 percentage points higher in California than Florida over the past three years. State and local spending per person was about \$14,755 in California in fiscal 2021 compared with \$8,816 in Florida. Yet Californians don't get better government services. The number of homeless people in California last year was roughly 171,000, while Florida

had fewer than 30,000.

Thanks to California's green policies, gasoline is nearly \$2 a gallon cheaper in Florida—even though California is an energy-rich state. Florida's air quality is better, according to the Environmental Protection Agency.

California has singular advantages. Silicon Valley is the planet's high-tech mecca. Schools like Stanford and the University of California attract top minds from all over the world. But Florida's rise shows that the red-state model of free enterprise, low taxes and policies that encourage work, not welfare, is flourishing. Meanwhile, under redistributive progressive policies, a state that once heralded America's future has come to define its past.

Mr. Moore is a senior fellow at the Heritage Foundation.

OPINION

REVIEW & OUTLOOK

Biden, Trump and ObamaCare

Donald Trump handed his opponents another gift over the weekend by vowing to “terminate” ObamaCare—or at least that’s how Democrats are translating his blunderbuss comments. Democrats are distorting the issue as ever, but they know Mr. Trump has no plan of his own.

“The cost of Obamacare is out of control, plus, it’s not good Healthcare,” Mr. Trump wrote Saturday on Truth Social. “I’m seriously looking at alternatives. We had a couple of Republican Senators who campaigned for 6 years against it, and then raised their hands not to terminate it. It was a low point for the Republican Party, but we should never give up!”

His comments were responding to our editorial (“Elizabeth Warren Has an ObamaCare Epiphany”) about complaints from the Massachusetts Senator that insurers are exploiting the law’s profit cap and driving healthcare costs higher. Thanks for reading, sir, but it would help if there were an idea behind your impulse.

Democrats seized on his post, warning that 40 million Americans could lose health coverage if Mr. Trump wins again. In 2024 “the Affordable Care Act and all its transformational benefits will be on the ballot,” Nancy Pelosi declared. “The American people will need to know that if Donald Trump wins next year, he’s coming for your health care.”

On Tuesday President Biden told donors that “if Trump gets his way, it’s all gone.” Democrats successfully ran on protecting ObamaCare in 2018 and 2020, and they are trying to make it a three-peat. Bidenomics isn’t selling with voters, so why not run on the tried-and-true strategy of scare-mongering about losing health coverage?

Recall that Republicans failed to repeal and replace ObamaCare in 2017 despite controlling both houses of Congress. John McCain’s opposition ultimately killed the GOP’s last reform bill, but Mr. Trump’s unwillingness to understand the policy arguments was the bigger problem. His inability to marshal a case to rally public opinion contributed to its failure and the GOP’s losses in the midterms.

Democrats are again making false claims about ObamaCare that Mr. Trump and Republicans seem incapable of refuting. Mr. Trump later attempted to clarify that he merely wants to “replace” ObamaCare with “MUCH BETTER HEALTHCARE,” though he again missed the

mark by suggesting that other countries’ socialized health systems are superior to America’s private care.

Democrats distort the issue, but the GOP offers no alternative.

The reality is that ObamaCare has increased healthcare costs while producing few tangible benefits for patients. As we recently pointed out, the law’s de facto profit cap has driven industry consolidation, resulting in higher costs for patients and taxpayers. Insurers have pocketed subsidies while increasing premiums and deductibles.

The share of Americans with insurance increased by about five percentage-points in the six years after the law’s Medicaid expansion and health exchanges took effect. This resulted in about 17 million Americans gaining health coverage. But most newly insured are young, healthy adults on Medicaid. They could have afforded “skinny” plans more appropriate for their age and health risks, but the Biden Administration is restricting those plans.

Medicaid spending was growing at an unsustainable 9% a year even before its pandemic expansion. Taxpayers are shelling out \$90 billion this year for ObamaCare subsidies—\$6,324 per household—which Democrats sweetened in 2021 to offset surging premiums for middle- and upper middle-income Americans.

Meantime, insurance provider networks have become narrower while out-of-pocket costs increase for patients. Democrats have no plan to deal with these problems or soaring government healthcare spending other than drug price controls or rationed care. But neither do most Republicans, who more or less stopped thinking about healthcare after their 2017 failure. The policy chops of former Reps. Paul Ryan or Tom Price are nowhere to be seen in the current House majority.

Republicans could start by educating voters about ObamaCare’s regulatory distortions, such as the de facto cap on insurer profits, rigid plan designs, and benefit mandates that increase costs while limiting choice. They could also propose giving states more flexibility to manage Medicaid in a way that offers better patient care while imposing work requirements for the young and healthy, among other ideas.

There are other ideas, but they require doing some homework and honing a message. If Republicans have nothing more to say than Mr. Trump does, they’re better off ducking the subject lest they lead with their chin.

Many More Voters With Guns

More than half of American voters say that they or someone in their household owns a gun, according to a poll by NBC News. That’s the highest level since its polls began asking in 1999. After progressives drove up firearm ownership with policies that are soft on violent crime, they can’t figure out why their gun-control ideas fail to pass.

The share of voters with a firearm in the household is 52%, up from 46% in 2019 and 42% in 2013. A partisan split is evident. Gun households now include 66% of Republicans, 45% of independents, and 41% of Democrats. This is no surprise, in part because rural areas tilt right, and that’s where hunting is a family event and bears might be prowling the woods.

Notable, though, is that the numbers are increasing the fastest on the left side of the aisle. In 2019, 64% of Republican voters reported that their household had a firearm, compared with 33% of Democrats. The figure for Republicans

has risen two points over four years, compared with eight for Democrats.

Black households with firearms have gone up 17 points since 2019.

Twenty-four percent of black voters were in gun households in 2019. Today it’s 41%, up 17 points. Over the same period, the number for white voters rose three points, to 56% from 53%. Could this increase in black ownership be related to self-defense concerns amid the runup in urban crime? The survey doesn’t delve into the reasons, but it’s a reasonable guess.

The NBC survey includes 1,000 registered voters, and the margin of error is plus or minus 3.1 points. But it fits other evidence, and the trend is hard to miss. The Second Amendment protects Americans who want to own firearms for self-defense, and lately millions more people have availed themselves of that right.

If politicians want to pass gun regulations, even red-flag laws that seek to bar firearms from people with mental-health issues, these are the voters they need to convince.

Who the Israelis Are Releasing

Hamas continued to release hostages on Wednesday, for a total of more than 100 so far, a bit more than a third of the estimated 240 civilians seized on Oct. 7. In return Israel has freed more than 200 Palestinian prisoners, but no body should think these prisoners are at all morally comparable.

Hamas is releasing Israeli and foreign women and children abducted in illegal acts of war targeting civilians in their homes. The recently released include grandmothers in their 70s and 80s, Thai guest workers, and more than 20 children under age 12—including preschoolers and a toddler.

By contrast, the Palestinians Israel is releasing were in prison because they were arrested and awaiting trial, or were convicted of violent crimes. Of the 39 Palestinians released Saturday night, Haaretz reports that eight were convicted of attempted murder. Let us introduce you to a couple of them.

There’s Israa Jaabis, a Palestinian woman who in 2015—during a wave of other attacks in Jerusalem—attempted a car bomb that wounded an Israeli police officer. According to the Shin Bet security service, Jaabis yelled “Allahu Akbar” as the officer approached and detonated an explosive device.

Israel also released Maysoon Musa Al-Jabali, who was convicted of attempted murder for her 2015 stabbing of a female Israel soldier; Shorouq Dwayyat, who was convicted of attempted murder after she wrote on Facebook in 2015 of her desire to become a martyr and stabbed an Israeli man multiple times; and Aisha Afghani, who was convicted

after an attempted 2016 stabbing attack on Israelis in Jerusalem.

All were adults when they committed their attacks, and all were released this week well before the end of their sentences. Most of the children Israel has released are teenage boys—age 14 and older—arrested or charged in recent years for

making explosives or throwing stones or petrol bombs at Israelis.

The Times of Israel reports that data provided by Israel authorities showed that “at least 55 percent of the 117 prisoners released during the first three days of the deal had been being held for violent crimes, including 10 for attempted murder, 13 for inflicting serious bodily harm, 19 for placing a bomb or throwing an incendiary device, seven for shooting at people, and five for assault.” Twenty-one percent were affiliated with a terrorist organization.

Palestinian crowds are greeting them with heroes’ welcomes, while the Western media rarely reports on what they did or why they were in Israeli custody. But they committed criminal acts, and Israel had every reason to arrest, try and imprison them. The Palestinians were accorded due-process rights under a civilized legal system—defense attorneys, juries and appeals—in contrast to Israeli citizens snatched and held for ransom in tunnels by Hamas.

Israel knows from prior swaps that freed Palestinian prisoners often return to the terrorist ranks, and no one should be surprised if those recently released take up arms again against Israelis or others. These are the ugly choices that Hamas’s terrorism and Palestinian violence are forcing Israel to make.

LETTERS TO THE EDITOR

Medicare Advantage Comes With Drawbacks

As an ophthalmologist and solo-practice business owner, I respectfully disagree with your editorial praising Medicare Advantage (“Nikki Haley’s Medicare Advantage,” Nov. 24). Medicare Advantage plans reimburse me a fixed percentage that is often less than what traditional Medicare pays, making it difficult to cover rent and employee salaries.

These plans often require prior authorization, which imposes a huge administrative burden on my office and delays or denies care to patients. Advantage plans reduce costs with narrow networks, limiting patient choice and steering patients toward large hospital-owned groups rather than private practices like mine.

Finally, Medicare Advantage plans incessantly contact my office to request charts for risk adjustment, so they can overcode the severity of illness to exploit the government for more money.

HOWARD CHEN, M.D.
Phoenix

Ms. Haley is right on Medicare Advantage. When I became Medicare-eligible 14 years ago, I thoroughly researched all the material available. It seemed obvious that the Advantage plans were superior in terms of costs. I chose what looked like the best one and have never looked back. It has met my expectations in terms of care and access to doctors very well.

It still has no monthly premium, and the prescription drug plan is included, so no premium for that either. The additional benefits add value and reduce my expenses, too.

The restrictions are easy to live with. I have to use in-network doctors and get referrals approved by the plan, but the network in my large metro area is huge, with thousands of doctors participating.

My quick cost analysis finds that I have saved \$42,000 during my 14 years on Medicare Advantage. These plans have grown to cover about half the Medicare population for good reason. They give excellent value for the cost. Get the word out, Ms. Haley.

BERYL JEFFKO
Westchester, Ill.

We need to call the Medicare Advantage plans what they are: Potemkin plans, premised on denial of service and fixed monthly fees with a host of nominal coverage, none of it dependable or good.

The doctors are given bonuses based on how little they do relative to others and against benchmarks. No honest plan can be so premised. I had such a plan under Kaiser in California—with fixed fees, less service means more profit. The incentive is to deny care. I experienced it with my son. When he was seriously ill, I had to raise hell to get him treated.

Medicare would save money under fixed fee plans, but patients would suffer. Half the people would say the plan is great because it’s cheap and they’ve never had to use it. The other half would know better. Fundamentally, we need more doctors and medical staff to provide competition and lower the cost.

JACK KNUTSON
Pebble Beach, Calif.

What Happened to Accountability in America?

Remember trickle-down economics? Now we have trickle-down bad behavior (“So You Think You Want a Political Fighter?” Declarations, Nov. 18). We have had no accountability for astronomical debt, unenforced borders, widespread looting, shoplifting, defecating on our sidewalks, breaking the law and disruption of lectures at universities. There is also now the expectation that others will pay for loans that you signed for, and you can graduate high school without going to class or doing homework.

There is no respect, no accountability, no honesty and no sense of responsibility or remorse. It starts at the top.

BESSIE MONTESANO
Myrtle Beach, S.C.

Back when silly was silly and could never be seen as threatening, the people of Minnesota elected Jesse Ventura, the professional wrestler, as governor. Within weeks, bumper stickers across our state proclaimed, “Our governor can beat up your governor.” It was funny then. Today, it probably would inspire a gubernatorial reality show.

I rarely agree with Sen. Bernie Sanders (I, Vt.), but for a brief, shining moment last week he was my hero. “God knows the American people have enough contempt for politics,” the senator said, intervening to prevent a fight during a public hearing. “Let’s not make it worse.”

D.W. DORLE
Minneapolis

Empower University Trustees, Not Accreditors

In “America’s Universities Need Serious Regulation” (op-ed, Nov. 13), former Securities and Exchange Commission Chairman Arthur Levitt rightly notes that governance practices in higher education should be overhauled. For far too long, boards of trustees have been content to act as rubber stamps for university presidents, pacified by promises of tickets to football games and a go-along-together boardroom culture.

Hunting in Pink Is Asking For Trouble in the Field

“Hunting in Hot Pink May Be Safer, but Men Aren’t Having It” (Page One, Nov. 18) disregards two important safety considerations that argue against using pink in the field as a safety color. First, a safety color must consider the background from which it is intended to stand out. On the color wheel, blaze orange is opposite azure and therefore pops out against blues and greens. Blue is everywhere outdoors even on a cloudy day. Hunters often wear yellow-tinted safety glasses to filter out pervasive blue light.

Second, allowing multiple colors in the field complicates the hunter’s split-second determination of a safe shot. Bird hunting is complicated enough. The hunter is moving; the dog is moving; the birds are moving; the gun is moving. As a safety matter, sorting through orange and pink adds a burden to the hunter’s decision at the instant of taking a shot. It is asking for trouble.

FRANK PAMPUSH
Atlanta

Age Isn’t Biden’s Main Issue

Mark Quinn suggests that given President Biden’s age and increasingly obvious infirmity, China’s President Xi Jinping may think that Mr. Biden is a “lightweight” who is in way over his head (Letters, Nov. 24). I submit that had Mr. Jinping met Mr. Biden 35 years ago, he would still have come to the same conclusion.

CHARLES KNELLER
Chestertown, Md.

But increased regulation by accreditors—such as the one that launched an investigation of the University of North Carolina—Chapel Hill after its board dared to establish a school for free expression—isn’t the answer. Expanding higher education’s regulatory regime would result only in trustees being even less engaged in governance, lest their actions draw the ire of an accreditor as a form of undue influence.

The responsibility for addressing the woes of higher education falls squarely on the shoulders of university governing boards. Taxpayers, alumni and lawmakers should make that clear.

ARMAND ALACBAY
Centerville, Va.

Buying Influence on Campus

Michael Bloomberg writes that we need to hold college professors accountable for hiring professors disproportionately on the far left, tacitly endorsing Hamas’s attack and tolerating speech only from certain groups (“Hamas’s Barbarity Heightens the Crisis in Higher Education,” op-ed, Nov. 18). I agree, but the problem is deeper. Starting years ago, Middle East Studies departments in many universities were purchased with donations from the region. From 2001 to 2021, Qatar alone has given over \$4.7 billion to U.S. colleges.

EVELINDA URMAN
Littleton, Colo.

Pepper ... And Salt

THE WALL STREET JOURNAL



“After years of low level burglaries, Robin Hood started to steal from the rich using a sophisticated Ponzi scheme.”

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OPINION

‘Net Zero’ Fails the Cost-Benefit Test

By Bjorn Lomborg

World leaders are gathering in Dubai for another climate conference, which will no doubt yield heady promises along the lines of the 2015 Paris climate agreement to keep the global temperature's rise “well below” 2 degrees Celsius and pursue efforts to limit it to 1.5 degrees. But they'd be wiser not to. New research shows how extravagant climate promises are far more wasteful than useful.

A new special issue of the journal *Climate Change Economics* contains two ground-breaking economic analyses of policies to hold global temperatures to 1.5 degrees and its practical political interpretation,

Two new studies show that extravagant climate promises are far more wasteful than useful.

mandates to reach net zero, usually by 2050. Though more than 130 countries, including most of the globe's big emitters, have passed or are considering laws mandating net-zero carbon emissions, there's been no comprehensive cost-benefit evaluation of that policy—until now.

One of the *Climate Change Economics* papers is authored by Rich-

ard Tol, one of the world's most-cited climate economists. He calculates the benefits of climate policy using a meta-analysis of 39 papers with 61 published estimates of total climate change damage in economic terms. Across all this, Mr. Tol finds that if the world meets its 1.5 degree promise, it would prevent a less than 0.5% loss in annual global domestic product by 2050 and a 3.1% loss by 2100.

If that sounds underwhelming, blame one-sided reporting on climate issues. While headlines tend to focus on stories of violent climate catastrophes and modeled worst case scenarios, the data reveal a far less frightening picture. Despite a drumbeat of stories this summer about rising heat deaths, higher temperatures also prevent cold deaths, and so far in much greater number. Globally, the result has been fewer overall temperature-related fatalities. Writ large, the damage the world experiences each year from climate-related disasters is shrinking, both as expressed in fraction of GDP and lives lost.

While media coverage tends to hype the benefits of climate policy, it plays down the costs, which Mr. Tol's analysis shows are substantial. Based on the latest cost estimates of emission reductions from the United Nations climate panel, he finds that fully delivering on the 1.5-degree Paris promise will cost 4.5% of global GDP each year by midcentury and 5.5% by 2100. This means that likely climate policy costs will be much higher than the likely benefits for every year throughout this cen-



The climate conference site in Dubai.

tury and into the next. Under any realistic assumptions, the Paris agreement fails a basic cost-benefit test.

The reality would likely be worse than Mr. Tol's estimate. He unrealistically assumes governments will implement policies that meet these temperature targets at the lowest possible cost, such as a globally uniform, increasing carbon tax. In real life, climate policy has been needlessly expensive, with a plethora of inefficient, disconnected measures such as electric-vehicle subsidies. Studies show that the policies actually being enacted to curb carbon emissions will cost more than twice the theoretical expense Mr. Tol outlines.

This is borne out in the second *Climate Change Economics* study. The peer-reviewed paper from MIT

economists identifies the cost of holding the temperature's rise below 1.5 degrees as well as that of achieving net zero globally by 2050. The researchers find that these Paris policies would cost 8% to 18% of annual GDP by 2050 and 11% to 13% annually by 2100.

Climate economic models all show that moderate policies make sense—initial carbon cuts are cheap and prevent the most damaging temperature rise—but net zero doesn't. Averaged across the century, delivering the Paris climate promises would create benefits worth \$4.5 trillion (in 2023 dollars) annually. That's dramatically smaller than the \$27 trillion annual cost that Paris promises would incur, as derived from averaging the three cost estimates from the two *Climate Change Economics* papers through 2100.

In other words, each dollar spent will avoid less than 17 cents of climate damage. The total, undiscounted loss over the century is beyond \$1,800 trillion. For comparison, global GDP last year was a little over \$100 trillion. Although well-intentioned, current climate policy would end up destroying a sizable fraction of future prosperity.

For the world leaders assembling in Dubai who actually wish to help the world, a sensible alternative is ramping up research and development in low-carbon technologies to innovate green energy that will be cheap enough to outcompete fossil fuels. That would protect the economy and ensure clean energy's adoption not only in rich, climate-concerned countries but in places like China, India and Africa. The MIT study highlights that breakthrough technologies could dramatically lower climate policy costs. A study by a researcher for the Copenhagen Consensus shows that competitive government investment in green R&D would be 66 times as effective as Paris policies, while costing between 1% and 10% as much.

Unfortunately for the world, a serious cost-benefit discussion isn't likely to make the Dubai agenda.

Mr. Lomborg is president of the Copenhagen Consensus, a visiting fellow at Stanford University's Hoover Institution and author of "Best Things First: The 12 Most Efficient Solutions for the World's Poorest and our Global SDG Promises."

AI Needs Open-Source Models to Reach Its Potential

By Kai-Fu Lee

Johannes Gutenberg's printing press revolutionized life in the 15th century, making it possible for ideas to travel around the world at previously unimaginable speeds and creating huge gains for mankind. Gutenberg tried to keep his technique a secret, but a disgruntled former investor, Johann Fust, soon replicated his device. Fust launched his own press and poached Gutenberg's top techie, Peter Schoeffer.

It was lucky for the rest of us that he did. Imagine if the printing press had been kept secret and controlled by one company, or confined within one nation. Centuries of human progress might never have happened. It's an imperfect analogy, but it offers a useful way to frame the current debate around artificial intelligence.

Generative AI, which is artificial intelligence capable of producing text, images and other media, will revolutionize life in the 21st century. It will be much more disruptive than the printing press. Generative AI's ability to digest nearly the entire breadth of human knowledge by training large-language-model algo-

rithms with hundreds of billions of parameters allows it to write, draw, reason and solve problems. These potent new tools will amplify the power of knowledge workers.

The printing press accelerated the spread of knowledge. Generative AI will accelerate the creation of knowledge. It can understand, explain and create ideas and content at speeds unfathomable by humans. Generative AI will improve productivity and generate untold economic value. It will help entrepreneurs make fortunes and, more important, transform lives. I can say from my four decades of involvement in AI—first as an academic, then working with Microsoft and Google, and later as a venture capitalist—that generative AI will unleash the greatest technology revolution ever.

But we can't keep this power locked away for only the privileged elite. Given the massive technological paradigm shifts that are coming, it will be necessary for people from all backgrounds to understand and have access to the technology. It is crucial that no one be left out. This is why I decided to launch OLAI, a startup building foundational large language models, which are the building blocks

of generative AI. We launched our first language model, Yi-34B, with 34 billion parameters. Anyone can engage with, enhance and tailor our model and its source code, which is available on GitHub.

While the Yi-34B model's manageable size makes it ideal for researchers, entrepreneurs and smaller companies, OpenAI and Google have kept

Without a commitment to openness, a privileged elite will enjoy the lion's share of the benefits.

their larger and better models proprietary. I am not suggesting that every model should be open. But I hope every technology company will embrace and contribute to the open-source community, even as they maintain their business and profit goals.

A technology giant could open-source a smaller model while keeping larger models proprietary. This is OLAI's intention. This openness will make models accessible to research-

ers, educators, students, entrepreneurs, hobbyists and nonprofits. This inclusiveness is critical, because many communities can't afford to use the more expensive proprietary models. Embracing openness democratizes generative AI.

Thwarting the spread of generative AI by keeping it proprietary leaves some groups marginalized as successful companies put their tools in black boxes. The best generative AI models were mostly trained on American and English data. While they are functionally multilingual, they perform poorly when using languages that are less prominent on the internet. Users from smaller or poorer nations are provided a much inferior experience. They don't have the resources to generate and collect giant repositories of data in their languages or the technological know-how to develop high-quality native language models. The generative AI revolution is leaving them behind.

There's also an American bias in the dominant proprietary models. Because of how they were trained, these models reflect the culture and values of the U.S., which may not suit other places. What one country

sees as the norm may be offensive or even illegal in another. There are huge differences between the U.S. and Europe, never mind between the West and the rest of the world. A universal model can't possibly fit every country's needs. Each country should have a high-quality model that is tailored to its culture, values, religion and language.

Some in the media have described OLAI as China's answer to OpenAI, the developer behind ChatGPT. We see ourselves as the more “open” answer to OpenAI. In our view, the key competition isn't China vs. the U.S. Rather, it's open vs. closed systems. Even with only modest resources, we are determined to develop high-quality models for more languages to make this technology accessible to more people globally. We don't want AI to leave anyone behind.

As a technology optimist, I firmly believe that artificial intelligence will advance the human race, amplifying our humanity rather than replacing it. But that can be accomplished only if we remain committed to the virtue of openness.

Mr. Lee is CEO of OLAI and chairman of Sinovation Ventures.

Keith Ellison Wants to Run Energy Policy From Minnesota

By William P. Barr
And Adam J. White

Progressives can't get their radical policy agenda enacted through the Constitution's democratic processes. That is why the Biden administration mobilizes its agencies to bypass Congress and unilaterally impose major policies—especially energy and climate rules—by executive fiat. Fortunately, the Supreme Court has pushed back, holding that agencies must show clear congressional authorization for significant new policies.

In response, progressive activists are using another tactic, this time trying to evade not only Congress but also the federal courts. They are filing massive lawsuits against energy companies in state courts, trying to set national climate policy under the guise of holding companies liable for polluting. Evidently unsatisfied with the Environmental Protection Agency as their energy policy maker, activists want to make blue-state judges into energy-policy czars.

Minnesota Attorney General Keith Ellison wants a Minnesota judge to influence national climate policy through the state's tort laws. In June

2020, Mr. Ellison sued oil companies in a state court, asking the judge to strip Exxon Mobil and Koch Industries of “all profits” made from alleged “unlawful conduct,” which the suit defined as allegedly deceptive trade practices, fraud, and lack of public disclosures. Mr. Ellison further asked the judge to order oil companies to “fund a corrective public education campaign in Minnesota relating to the issue of climate change, administered and controlled by an independent third party.”

The case is clearly an attempt to make national energy policy through state case law. As Judge David Stras of the Eighth U.S. Circuit Court of Appeals wrote in a concurring opinion in March, “there is no hiding the obvious, and Minnesota does not even try: it seeks a global remedy for a global issue.” Judge Stras said Minnesota's clear aim is to “change the companies' behavior on a global scale.” Citing precedents, he said that “the state's attempt to set national energy policy through its own consumer-protection laws would ‘effectively override . . . the policy choices made by’ the federal government and other states.”

The case belongs in federal court, not in a Ramsey County courtroom.

The federal courts have jurisdiction over “all civil actions arising under the Constitution, laws, or treaties of the United States,” according to the U.S. Code. When such cases are filed in state courts, they can be “removed” to the federal courts.

Mr. Ellison argues that his lawsuit is immune to federal judicial power because his state-court complaint invokes only state laws, leaving the federal aspects unmentioned. Alarming, the appellate court ruled in Minnesota's favor. The court rested its decision on precedents involving the “well-pleaded complaint rule,” under which a plaintiff in state court often enjoys latitude to craft his own lawsuit and control the choice of forum.

Perhaps that doctrine makes sense in minor cases with minimal stakes. But it strains credulity to suggest that national energy policy belongs in state courts. Judicial deference to a plaintiff's gerrymandered pleadings defeats the purpose of the federal removal statute, which traces its lineage to the Judiciary Act of 1789. Early on, Congress recognized the need to ensure that the federal judiciary remained firmly in control of interstate litigation and, eventually, of federal questions more broadly. A

plaintiff may be the master of his own case in some ways, but a defendant is entitled to the protections of federal laws, including laws preserving a defendant's access to federal judicial review of genuinely federal issues. And the people—through their elected representatives—are entitled to the constitutional process for making the law.

The Supreme Court should take up an appeal of his case, which belongs in federal, not state, court.

Energy policy is among the most significant federal issues. It touches economic growth and innovation, environmental stewardship, international trade and national security. A transition toward “clean energy” involves profound challenges for infrastructure development, mining, drilling and power generation. It also raises questions about national security and energy security in an era when critical minerals and copper are in short supply in the U.S., handing economic and

geopolitical leverage to China.

Choices about how to handle energy policy must be made through the Constitution's democratic processes, not by federal judges or administrative fiat—and certainly not by state and local judges. The Minnesota case belongs in federal court to ensure that federal law governs Mr. Ellison's gambit.

In the most recent major energy case, *West Virginia v. EPA* (2022), the Supreme Court overturned the EPA's largest attempt yet to claim federal lawmaking power on energy and climate. “We presume,” the justices wrote, citing a prior opinion, “that Congress intends to make major policy decisions itself, not leave those decisions to agencies.”

Yet states and activists are now attempting to make national policy through state litigation. State politicians are growing bolder—especially on energy policy. When he filed his suit in 2020, Mr. Ellison said Minnesota was joining at least 15 other plaintiffs that had brought similar lawsuits, including Massachusetts, New York and Rhode Island. Earlier this year, the Supreme Court declined to hear a similar case involving Colorado politicians' lawsuits against Exxon and other companies. Justice Brett Kavanaugh alone noted his support for hearing the case. Meantime California is attempting to expand its energy policy making from emissions regulation to financial regulation, mirroring the Securities and Exchange Commission's unlawful ambitions.

The Supreme Court must ensure that national energy laws are made by the federal government, not by state courts. It should do this by reviewing the Minnesota case.

Mr. Barr served as U.S. attorney general, 1991-93 and 2019-20 and is a distinguished fellow at the Hudson Institute. Mr. White is a senior fellow at the American Enterprise Institute and co-director of the Antonin Scalia Law School's C. Boyden Gray Center for the Study of the Administrative State.

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Notable & Quotable: Schumer

Majority Leader Chuck Schumer speaking on the Senate floor Nov. 29:

Jewish Americans were alarmed to see some of our fellow citizens characterize a brutal terrorist attack as justified because of the actions of the Israeli government. . . .

Even worse, in some cases, people even celebrated what happened, describing it as the deserved fate of quote “colonizers” and calling for quote “glory to the martyrs” who carried out these heinous attacks.

Many of the people who have expressed these sentiments in America

aren't neo-Nazis, or card-carrying Klan members, or Islamist extremists. They are in many cases people that most liberal Jewish Americans felt previously were their ideological fellow travelers.

Not long ago, many of us marched together for black and brown lives, we stood against anti-Asian hatred, we protested bigotry against the LGBTQ community, we fought for reproductive justice out of the recognition that injustice against one oppressed group is injustice against all.

But apparently, in the eyes of some, that principle does not extend to the Jewish people.

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BUSINESS & FINANCE

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THE WALL STREET JOURNAL.

Thursday, November 30, 2023 | B1

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OpenAI's New Board Takes Over

Directors plan to add adviser role for Microsoft, review Altman drama

By DEEPA SEETHARAMAN

OpenAI's new board formally took over on Wednesday and said it would add an observer role for partner Microsoft, capping a dramatic chapter for the artificial-intelligence startup and launching a new phase of difficult decisions.

The new board's initial three members were decided as part of CEO Sam Altman's return last week after the previous board abruptly fired him. The replacement directors' priorities include creating an independent committee to review the events around

Altman's ouster, OpenAI's interim chairman, Bret Taylor, said in a note to employees on Wednesday.

He added that the directors also will enhance OpenAI's governance structure so all stakeholders "can trust that OpenAI will continue to thrive," and that it is seeking a diverse slate of additional directors to expand the board.

The plan to include an observer for Microsoft, a role that Taylor said will be non-voting, gives some indication of how the new board will handle one of the many thorny questions it needs to address: whether OpenAI's investors will have more input and visibility into its future governance.

Microsoft, which has invested some \$13 billion in OpenAI, and other investors were blindsided by the deci-

sion by four members of the prior board to fire Altman as chief executive on Nov. 17. That decision triggered five days of chaos during which investors pressured directors to reinstate Altman and employees threatened to quit en masse.

In a note to employees Wednesday, Altman thanked a long list of advisers, partners and fellow executives, and praised OpenAI employees' loyalty. He said persistence was central to achieving the company's overall goal of developing artificial general intelligence, or AI systems that mimic or surpass human intel-

The company didn't lose any customers during the ordeal, Altman said.

"You stood firm for each other, this company, and our mission," Altman wrote. "One of the most important things for the team that builds AGI safely is the ability to handle stressful and uncertain situations, and maintain good judgment throughout. Top marks."

Altman, in a key concession to outgoing directors as part of the agreement for his return, doesn't have a place on the board.

The board's other two initial members are Larry Summers, the former U.S. Treasury

secretary, and Adam D'Angelo, CEO of question-and-answer website Quora and the sole member of OpenAI's previous board to remain. Taylor is the former co-CEO of business-software giant Salesforce who also was the chairman of Twitter when it dealt with Elon Musk's takeover effort.

OpenAI's board is unusual in that it isn't obligated to maximize shareholder value, but rather to fulfill a larger mission of advancing artificial intelligence for humanity's benefit. On its website, OpenAI says the board's "principal beneficiary is humanity, not OpenAI investors."

Asked if OpenAI's board could revisit this structure, Taylor said: "I think it's a great question—probably not one for my first day on the job."

Please turn to page B2

OPEC Mulls Cuts In Output Amid War In Mideast

By BENOIT FAUCON AND SUMMER SAID

OPEC and its Russia-led allies are considering new oil production cuts of as much as one million barrels a day, delegates said Wednesday, despite tensions in oil markets amid the conflict in the Middle East.

The move, which would likely send oil prices higher, could be announced Thursday at a virtual meeting of the cartel. The meeting, originally scheduled for last week, was postponed over disagreements about production.

A deal for further cuts isn't assured, and the prospect is facing significant resistance within the Organization of the Petroleum Exporting Countries. A rollover of most existing output curbs is the most likely scenario, the delegates said, but talks are continuing.

Saudi Arabia in June cut production by one million barrels, in a unilateral move as part of a deal with the other members of the Vienna-based group. Any cuts announced Thursday would be in addition to those announced in June.

Saudi Arabia, the world's biggest oil producer, is in favor of the new cuts, the delegates said.

Oil prices climbed after The Wall Street Journal reported talks of the possible cuts. Brent, the most widely traded contract, climbed 1.7% to \$83.10 a barrel.

Analysts said the potential curbs were greater than most forecasts.

"I was expecting half a million; one million is quite bullish, and we can see that in oil prices popping up," said Bjarne Schieldrop, chief commodities analyst at SEB. A cut of one million "won't necessarily drive it to \$90 a barrel and above but it will prevent it from falling below \$80."

Nigeria and Angola, the two biggest African oil producers, have been resisting a downgrade of their individual quotas, which OPEC-commissioned reports say overstate their production capacity, the delegates said. The United Arab Emirates is also reluctant to cut output, they said.

Any extra cuts, if approved, would likely draw a rebuke from the U.S., which slammed 13-strong OPEC and its 10 Russia-led allies for agreeing to a cut of two million barrels a day last year. The White House called the decision by the OPEC+ alliance shortsighted and suggested the group was actively supporting Russia's invasion of Ukraine.

Please turn to page B11

Tech Giants Curb Growth Appetite

By KATHERINE BINDLEY AND PREETIKA RANA

The tech industry has largely recovered from the downturn, but Silicon Valley learned a long-lasting lesson: how to do more with less.

Amazon, Alphabet's Google, Microsoft and Meta Platforms have been cutting dozens or a few hundred employees at a time as executives keep tight controls on costs, even as their businesses and stock prices have rebounded sharply.

The cuts are far smaller than the mass layoffs that reached tens of thousands in late 2022 and early this year. But they suggest a new era for an industry that in years past grew with little restraint, one in which companies are focusing on efficiency and acting more like their corporate peers that emphasize shareholder value and healthy margins.

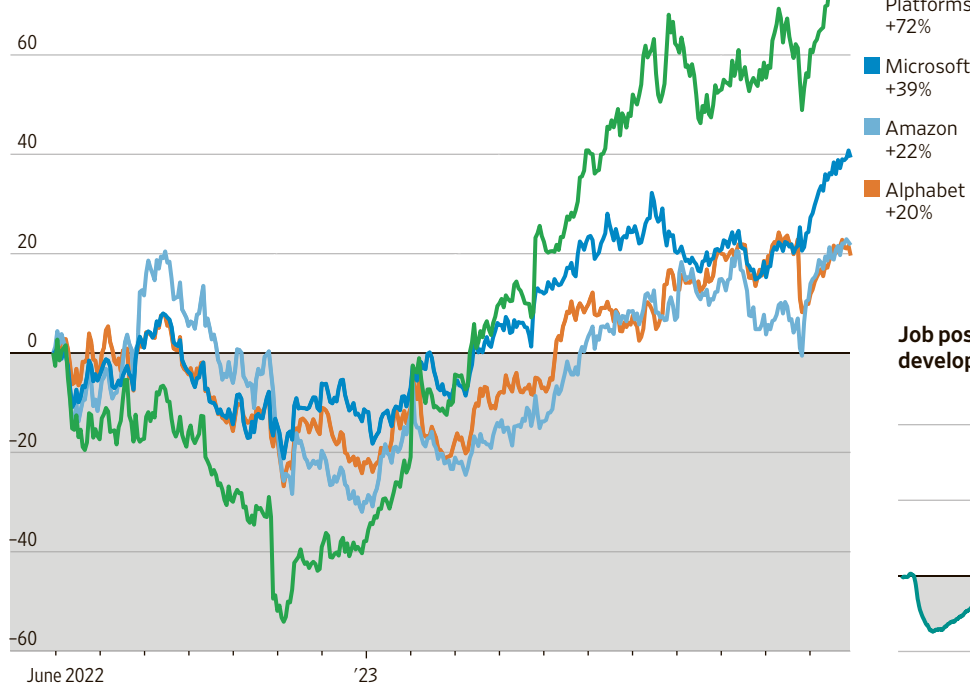
"There's a second look at costs, at lines of business and where investments are going to be next year. The output are these microcuts," said Adam Ward, a founding partner at Growth by Design Talent, a recruiting advisory firm. "This will be a new normal."

The launch of the humanlike chatbot ChatGPT late last year served as a bright spot of growth in an industry that was otherwise scaling back. Challenges regarding the technology and calls for regulation remain, but some of the biggest tech companies are starting to make it their priority.

There is a reallocation of resources from noncore areas to projects such as AI rather than hiring new people, said Ward, who was previously a director of recruiting at Facebook and the head of recruiting at Pinterest.

Amazon eliminated several hundred roles this month from

Share performance of selected tech companies since June 2022



Sources: FactSet (performance); CompTIA analysis of Lightcast job posting data (tech occupations); Indeed (software development postings)

its Alexa division to maximize its "resources and efforts focused on generative AI," according to an internal memo. The company has also made small cuts in recent weeks to its gaming and music divisions.

"We've hired a lot over the past several years, and we're in the process of digesting that growth and making sure we're operating as efficiently as we can as a company," said Brad Glasser, an Amazon spokesman.

Facebook's parent, Meta, recently posted its largest quarterly revenue in more than a decade. It laid off 20 people weeks later. Chief Executive Officer Mark Zuckerberg said on an earnings call that the company would continue to operate more efficiently going forward "both because it creates a more disci-

Please turn to page B2



Mark Zuckerberg said on an earnings call that Meta would continue to operate more efficiently.

UAW Targets Tesla, VW, Toyota

By NORA ECKERT

The United Auto Workers formally launched one of the largest organizing drives in its history with campaigns at 13 automakers, in an effort to leverage record gains from its recent labor deals in Detroit.

The UAW plans to target nearly 150,000 workers at U.S. factories owned by large foreign automakers including Toyota and Volkswagen, as well as newer electric-vehicle manufacturers such as Tesla and Rivian Automotive, the union said Wednesday.

The UAW represents about 145,000 workers at Ford Motor, General Motors and Chrysler-parent Stellantis. The widespread organizing campaigns are a bid to significantly

Please turn to page B2

Binance Begins Again With U.S. Oversight

Binance's second act starts now.

The largest global crypto exchange and its chief executive and co-founder, Changpeng Zhao, pleaded guilty last week to ignoring anti-money-

By Patricia Kowsmann, Caitlin Ostroff and Angus Berwick

laundering rules while serving U.S. customers. Binance agreed to pay over \$4 billion in fines and consented to have a government-approved monitor oversee the firm's activities. Zhao, who could face jail time, stepped down as CEO.

The shake-up leaves the six-year-old firm in the hands of Richard Teng, who was a regulator in Abu Dhabi and Singapore before joining Binance in 2021. He has said he believes the firm is in good shape and is ready to move forward.

"The fundamentals of our

business are very strong," Teng said on X. He said Binance is profitable and has no debt.

But people inside Binance and around the crypto world say the firm faces stiff challenges in its new incarnation.

The new regime at Binance will force a significant shift in how the firm operates. Binance's plea agreement with the Justice Department obliges the firm to give a government-approved monitor access to internal documents, records, facilities and employees, as well as former employees, third-party vendors, consultants and contractors.

The intrusiveness could spook users who don't want their data handed to U.S. authorities.

A Binance spokesman said transactions from institutional users are rising. "Rigorous standards are attractive to users," he said.

The firm will also have to Please turn to page B2

INSIDE



REAL ESTATE
Retail mogul René Benko's property empire files for insolvency in Austria. B3



COMMODITIES
The London Metal Exchange wins a legal fight with investors over canceled trades. B10

Vessel Glut Weighs On Shipping Sector

By COSTAS PARIS

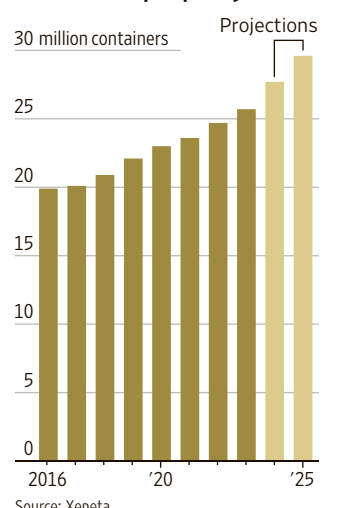
Containership operators rushed to order new vessels during the pandemic as booming demand for consumer goods was expected to fuel global trade for years to come. Their timing couldn't have been worse.

The surge in demand proved temporary, and executives are bracing for years of industry damage from weak freight rates and more ships hitting the water than are needed.

Shipbuilders have orders totaling about 26% of the world's containership capacity. The peak of those deliveries is coming over the next two years.

The overcapacity has left dozens of idled or underused vessels with freight rates barely covering sailing costs. The shipowners face tough talks with cargo owners in the

Containership capacity



Source: Xeneta

coming months as they seek long-term contracts at rates less than half of what they were last year, according to

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Binance Begins Again

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boost money-laundering controls and file over 100,000 reports on suspicious activities it never handed over to authorities. And it will have to keep Americans, once its main source of revenue, off the platform.

The Binance spokesman said the company had been tackling those issues.

Even before the DOJ settlement last week, Binance's dominance was already dwindling. It left Russia under pressure from U.S. authorities and was shut off from other markets that didn't give it registration approval like Germany. Some crypto firms stopped using the platform under the threat of enforcement actions in the U.S. and elsewhere.

Bobby Zagotta, chief commercial officer of Luxem-

Dollar value of Binance's native token, BNB



bourg-based crypto exchange Bitstamp, said institutional traders who continue to work with Binance "must now consider a set of new risks," including an untested CEO and working with a company with a criminal history.

Outside the U.S., Binance will have to convince regulators it can operate even as Zhao, now an admitted felon and facing up to 18 months in prison, remains the company's owner. Binance said it would set up a board with independent directors as part of the deal with the U.S. regulators.

Zhao and his inner circle have controlled all aspects of the company since its 2017 launch.

Yi He, a co-founder and Zhao's romantic partner with whom he has children, remains at the company. The DOJ said Zhao instilled in Binance a culture of noncompli-

ance that drove it to seek profits even from terrorists, cybercriminals and child abusers trading on the platform.

Some employees are worried that Yi He could clash with Teng about the new direction of the company.

Once a host of a Chinese TV travel show, Yi He took the helm of Binance's venture-capital arm last year and often has weighed in on legal and regulatory issues, according to people who have dealt with her.

Over the years, she sent missives to staff, laden with wartime analogies, spurring them to defend Binance from enemy "counterattacks."

In a statement, Yi said she is fully aligned with the new direction of the company and has always been supportive of Teng for CEO.

"Richard's experience in the traditional financial industry and financial regulation will guide us through this challenging period, helping us to go from 160 million users to one billion users," she said.

So far, reactions to the shift at Binance have been muted. After the firm's guilty plea, customers pulled almost \$1 billion in tokens traded on the Ethereum blockchain from the exchange, which include coins such as tether, shiba inu and ether, but not bitcoin. The exchange holds \$65 billion across all its tokens, according to analytics firm Nansen.

Binance's native cryptocurrency, BNB, fell about 6%, while other cryptocurrency prices moved little.

But Binance was in retreat even before the guilty pleas. It cut its staff to about 5,000 workers from over 8,000 at the beginning of the year, according to insiders. Some of the layoffs were in the compliance department, the unit that handles money laundering and sanction matters.

The firm is already posting new jobs and adding back to its compliance department. It currently has seven positions open for suspicious activity investigators. Those hires will likely come at a premium to those previously laid off.

Staff expect that the DOJ settlement and the pending appointment of an independent monitor will protect the compliance department from further layoffs. Some employees are optimistic that stricter compliance they have long advocated for could come about as a result.

Binance has a strict HR elimination system called, "bottoming-out," where lower-performance employees are dismissed from the business. Zhao established this system.

At a virtual all-hands meeting the day after he pleaded guilty, Yi joked that Zhao had been bottomed out, according to people present.

Shipping Pays for Miscue

Continued from page B1
people involved in the talks.

"What's ahead of us is going to be a downturn because we face some serious overcapacity," said Vincent Clerc, the chief executive of Danish boxship giant **A.P. Moller-Maersk**. "I see another two to three years of weakness in the market, so we are taking comprehensive measures to shore up our balance sheet."

Maersk, which operates more than 700 ships and is seen as a bellwether of global trade, said this month that it was cutting more than 10,000 jobs across the company. Its third-quarter net profit slumped to \$521 million from \$8.88 billion in the same period last year, while revenue fell 47% to \$12.13 billion.

The postpandemic period has been one of sustained weakness with daily rates now hovering at 2019 levels, down 95% since the peak of the pandemic in 2021. It is a turnaround from a time when carriers were handing out generous bonuses, sometimes more than a year's pay, to reward employees for bumper profits, according to boxship executives in Asia and Europe.



Shipbuilders have orders totaling about 26% of the world's containership capacity.

The weaker market has cut freight costs for big retailers such as **Amazon** and **Target** by around half, according to people familiar with the market. Some retailers are actively negotiating to lower prices agreed to under long-term freight contracts signed last year or earlier this year.

Average three-month rolling contracts for 2024 are being settled at around \$2,000 a box, down from \$6,000 this year, people involved in the talks said. Boxships make more than 60% of their earnings from longer freight

agreements rather than spot rates that can swing substantially from week to week.

The top carriers next year are expected to report a combined loss of \$15 billion, driven by prolonged weakness in freight rates, according to London-based shipping broker Drewry. Container lines are expected to make around \$43 billion in 2023, down 80% from last year, according to estimates by owners and brokers.

"We are making the same mistake as in 2008-2010 when everybody ordered ships because we thought China would

grow by millions of percent forever. We haven't learned to control capacity," said Nils Haupt, a spokesman for German carrier **Hapag-Lloyd AG**, the world's fifth-biggest liner in terms of capacity.

The late 2000s financial crisis kicked off a wave of consolidation among the world's 20 biggest carriers. By the end of 2019, about half the companies on that list had been swallowed up by bigger competitors or had gone bankrupt.

Owners and analysts don't expect additional consolidation in coming years.

Growth Appetite Is Curbed

Continued from page B1
plined and lean culture, and also because it provides stability to see our long-term initiatives through in a very volatile world."

Alphabet, reported its strongest quarterly growth in more than a year, but the company has eliminated jobs in at least a half-dozen different organizations in recent weeks, from the news division of its search engine to the self-driving car unit, Waymo. Multiple teams justified the cuts by saying they were reshuffling workers to areas such as AI. In most cases, employees are being given the opportunity to apply for open roles at the company, in con-



Alphabet has cut jobs in its self-driving car unit, Waymo.

trast to those who were laid off earlier this year.

At the same time, teams across Google are seeking approval for 2024 spending plans from Chief Financial Officer Ruth Porat, who has been working to drive down costs across the company, according to people familiar with the matter.

Google said it has been

sharpening its focus and actively moving teams to its most critical areas for more than a year. "We're continuing this work so we can build more-efficient, fast-moving teams and responsibly invest in our biggest initiatives for the long run," Chris Pappas, a spokesman, said.

Lyft Chief Financial Officer

Erin Brewer said that the company—which beat Wall Street's expectations in the most recent quarter—will continue to be "super disciplined" about keeping costs in control even after letting go of thousands of people in the past year.

Microsoft said in October that sales growth accelerated in its fiscal first quarter as demand for its cloud-computing services heated up amid growing enthusiasm about artificial intelligence. Earlier in the month, Microsoft laid off around 300 employees from its LinkedIn division.

Many large tech companies are handing out budgets to department heads by the quarter instead of the year, said Karena Man, a senior partner at Korn Ferry, an organizational consulting firm. The industry has "traditionally been averse to the B word: budget. It was never part of the culture," said Man.

—*Sebastian Herrera and Miles Kruppa contributed to this article.*

OpenAI New Board Takes Over

Continued from Page One

He said the board would move as quickly as possible to hire directors and appoint outside counsel to handle an independent investigation into the events around Altman's firing. "Job number one is stabilizing this organization."

UAW Targets Toyota

Continued from page B1
add to its ranks for the first time in decades and rebuild the union's clout in the auto industry, after company downsizing and outsourcing reduced its U.S. footprint.

UAW membership has slipped from a peak of roughly 1.5 million people decades ago to around 400,000 today, a tally that includes nonautomotive workers. UAW President Shawn Fain has broadly outlined plans to organize nonunion automakers, but the union detailed the scope of the effort for the first time Wednesday. The union said the organizing efforts encompass more than three dozen factories.

"When we return to the bargaining table in 2028, it won't just be with the Big Three, but with the Big Five or Big Six,"

The outgoing board included Ilya Sutskever, OpenAI's chief scientist and co-founder; Tasha McCauley, an adjunct senior management scientist at Rand Corp., a policy nonprofit, and Helen Toner, a director at the Center for Security and Emerging Technology, a research organization tied to Georgetown University.

In a Nov. 17 blog post, that group said Altman failed to be "consistently candid" in his dealings with the board. The board didn't offer details on what sparked its explosive decision to the public or to Ope-

nAI employees and executives.

The decision—and the board's lack of an explanation for it—sparked an uproar among OpenAI staff. More than 700 of the startup's 770 workers signed a letter to the board, threatening to leave the company unless Altman was reinstated. Microsoft, OpenAI's largest backer, said it would hire him to start a new

advanced AI research team.

Sutskever, who as a board member voted to remove Altman, later reversed his position following several intense discussions with OpenAI colleagues. On Wednesday, Altman told employees he harbored "zero ill will" toward Sutskever and is currently discussing "how he can continue his work at OpenAI."

Fain said in October, as the union neared tentative agreements with the Detroit carmakers.

Workers at GM, Ford and Stellantis have since ratified the four-year contracts, which secure the return of cost-of-living adjustments, a 25% base wage increase, the right to strike over plant closures and other gains.

Nonunionized automakers such as **Honda Motor**, **Subaru** and Toyota raised wages in the wake of the Detroit Three labor talks, citing the need to stay competitive. Fain has urged workers at those companies to consider pushing to join its ranks.

Spokespeople for Honda and Nissan said the companies don't think an outside party would improve its employees' experience. Toyota, Rivian and VW declined to comment.

Tesla Chief Executive Elon Musk said Wednesday during an interview at the New York Times' DealBook Summit that he disagrees with the idea of unions because they "try to create negativity in a company, and create a sort of lords and peasants situation."

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BUSINESS NEWS

Occidental in Talks To Buy CrownRock

Occidental Petroleum is in talks to buy CrownRock, a major energy producer in the West Texas area of the Permian basin, continuing a frenzy of deal making in the oil patch.

A deal for the closely held company, which could be valued well above \$10 billion including debt, could come together soon assuming the talks don't fall apart or another suitor doesn't prevail, according to people familiar with the matter.

CrownRock owns more than 80,000 net acres in the northern part of the Midland Basin in Texas, part of the Permian, the largest oil-producing region in the U.S. It is led by Texas businessman and billionaire Timothy Dunn, and backed by the private-equity firm Lime Rock Partners.

The company is one of the last remaining sizable private companies in the Permian, alongside Endeavor Energy Resources. Before the shale boom took off, Dunn accumulated leases in the region before trading and swapping land to build the enviable position CrownRock now sits on in a coveted part of the basin.

The company produces about 150,000 barrels of oil equivalent a day, according to Fitch Ratings.

Oil and gas producers have faced pressure to scale up, especially after Exxon Mobil struck a nearly \$60 billion deal for Pioneer Natural Resources in October. Days later, Chevron agreed to buy Hess for \$53 billion.

Occidental has a market capitalization of around \$53 billion. Its last major purchase—the \$38 billion acquisition of Anadarko in 2019—saddled the company with debt and attracted activist investor Carl Icahn.

Chief Executive Vicki Hollub spent the ensuing years cutting jobs and slashing spending. Rising oil prices following Russia's invasion of Ukraine helped the company report banner profit in 2022. Icahn sold his shares and gave up his board seats that same year.

Bankrupt BB&B Sues Shipper

By COSTAS PARIS

The bankruptcy estate of Bed Bath & Beyond has filed the largest ever lawsuit with the Federal Maritime Commission, seeking around \$300 million from Mediterranean Shipping Co. for allegedly overcharging to move its cargo during the pandemic.

The bankrupt retailer wants Geneva-based MSC, the world's largest boxship operator in terms of capacity, to pay around \$150 million for damages and an equal sum for what it described as exploitative and coercive behavior. Complaints by American companies are handled by the FMC, the U.S. maritime regulator.

Bed Bath & Beyond filed for bankruptcy protection in April, after years of losses. It subsequently closed all of its stores and sold its brand to Overstock.com, which has taken on the Bed Bath & Beyond name. The bankrupt estate changed its legal name to DK Butterfly.

The 36-page lawsuit said MSC's performance in 2021 was "abysmal" and details how the retailer had to pay high freight rates in the spot market to get its goods shipped. It also claims that MSC failed to meet its contractual obligations in terms of pricing along with saddling the retailer with surcharges.



Bed Bath & Beyond filed for bankruptcy protection in April, following years of losses.

"MSC's behavior has caused significant harm" and lost profits because of cargo that wasn't imported as well as the shipping surcharges, the complaint said. The complaint asks the FMC to determine damages.

MSC said it is studying the complaint but believes that the claims are meritless and that it will dispute them through legal channels. "MSC

is proud of its efforts to provide its customers with continued service during a time of extraordinary market conditions," a spokesman said.

Ocean rates spiked during the pandemic amid supply-chain disruptions and a surge in consumer demand. American retailers like Bed Bath & Beyond, Target and Walmart were often charged around \$20,000 per box to move goods across the Pacific and from Asia to Europe, more

than triple the prepandemic rates. Freight rates have since tumbled by more than 95%.

Some big retailers resorted to chartering their own ships to move their goods during the crisis.

The former home-goods retailer previously brought similar claims against Taiwanese carrier Yang Ming Marine Transport and Hong Kong-based carrier OOCL, but claiming much smaller damages.

Property Firm Signa Files for Insolvency

By ELIOT BROWN AND MARGOT PATRICK

The property slump sweeping the globe has claimed a new high-profile victim: René Benko, an Austrian-born retail and department-store magnate who also co-owns New York's Chrysler Building.

Benko's main holding company, Signa Holding, said Wednesday it is filing for insolvency in Austria. The move, similar to U.S. bankruptcy procedure, puts billions of dollars of company debt at risk and casts uncertainty over a property empire that includes stakes in the largest department-store chains in Europe, upscale British retailer Selfridges and a now-stalled Hamburg tower that would have been among the tallest in Germany.

Signa, which valued its property portfolio at nearly \$30 billion at the peak, doubled down on investments as the market crested. It buckled over recent months because of rising interest rates and poor performance of Benko's trophy holdings. The collapse has already led some European banks to mark down the value of their loans to the group.

The region's regulators have been on guard against the ripple effects from the downturn in commercial real estate on the banking system and are closely watching Signa's unraveling.

Benko, 46 years old, stepped aside as chairman of Signa's advisory board earlier this month, and ceded control of the company to Arndt Geiwitz, a restructuring manager. Signa said efforts to negotiate with lenders in recent weeks had failed and it now intends to undergo a restructuring.

It pointed to troubles in the retail sector. "Investments in this area have not brought the expected success," it said.

Analysts at JPMorgan Chase estimated earlier this month that Signa's two largest subsidiaries had more than \$14 billion of debt and other liabilities. Swiss bank Julius Baer has around 606 million Swiss francs in lending to the group, equivalent to around \$690 million. Austria's Raiffeisen Bank International has a roughly €755 million exposure across several Signa commercial properties.



René Benko co-owns New York's Chrysler Building.

Elliott Puts \$1 Billion Into Phillips 66 Stake

By ROBB M. STEWART

Elliott Investment Management has made a roughly \$1 billion investment in Phillips 66 and is pushing for the appointment of two directors as it seeks to bolster the energy company's fortunes.

In a letter to the Houston-based company's board, the activist investor outlined what it said is a path to remedying the Houston-based company's underperformance, improve execution and restore trust with investors. It said it sees about 75% upside to the current share price by unlocking value for shareholders.

Phillips 66's shares rose 3.6%.

Elliott said while Phillips 66's 2025 targets are admirable, investors are skeptical. It said President and Chief Executive Mark Lashier and his management team deserve investor support so long as they company makes progress on its goals, though investor doubts are understandable.

Lashier said the company was engaged in talks with Elliott and welcomed its perspective, and that of other shareholders, on strategy and actions being taken.

"Phillips 66 continues to invest in returns-focused growth opportunities," he said, adding the company had a diversified portfolio of integrated assets that positions it to continue driving long-term shareholder value. "We remain committed to acting in the best interests of our shareholders."

Elliott said it was sharing its thoughts publicly to encourage an open discussion on the best path for the energy company.

The letter said a key driver of the stock-price underperformance has been Phillips 66's refining operations, where operating expenses per barrel have jumped in recent years. It added that investors also have been disappointed in Phillips 66's cost-cutting programs, and are also skeptical that the company can hit its target for earnings. Elliott said that if it becomes necessary, Phillips 66 could follow a similar path to oil refiner Marathon, which in 2019 agreed to spin off its gas-station chain and consider shaking up its executive leadership to appease activist shareholders, including Elliott.

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TECHNOLOGY & BUSINESS

WSJ.com/Tech

Musk Uses 'F' Word to Advertisers

By ALEXA CORSE

Elon Musk said that an advertising boycott over his posts that he said were misperceived as antisemitic would kill his social-media platform X, and that anyone trying to blackmail him over advertising money could "go f--- yourself."

"If somebody's going to try to blackmail me with advertising, blackmail me with money. Go f--- yourself," Musk said during an interview at the New York Times's DealBook Summit on Wednesday.

He added later: "What this advertising boycott is going to do is, it's going to kill the

company."

Earlier this month, Musk responded to a user's post that espoused an antisemitic conspiracy theory with: "You have said the actual truth." He then seemed to qualify his response in a later post. He also subsequently denied what he called "bogus media stories" claiming he was antisemitic.

On Wednesday, Musk said he had tried to clarify afterward that he hadn't meant anything antisemitic by his post.

"Essentially, I handed a loaded gun to those who hate me, and arguably, to those who are antisemitic," Musk said. He added shortly after:

"I'm quite sorry. That was not my intention."

Musk's platform in recent weeks has been grappling with the departure of several large advertisers in the wake of the billionaire's Nov. 15 post, which elicited a new round of criticism that he promotes antisemitic views.

Musk said he had posted to make absolutely clear that he isn't antisemitic. He said that, if anything, he's "philosemitic."

After the charged exchange over Musk's posts, the conversation turned toward what motivates Musk, his difficult childhood and his hopes for the future, including interplanetary civilization



Elon Musk says he posted to make clear he isn't antisemitic.

Nascar Signs New Streaming, TV Deals

By JOE FLINT

Nascar has struck new television and streaming rights deals worth \$7.7 billion with media partners including Amazon, Warner Bros. Discovery and Fox as interest in the sport grows.

The value of Nascar's new seven-year deals is 40% higher than its prior arrangements, a person familiar with the situation said.

The new deals, which take effect in 2025 and run through 2031, highlight the wide range of entertainment companies embracing motor sport and the growing popularity of streaming as a way for consumers to watch races.

Nascar forged new deals with Warner Bros. Discovery's TNT cable network and Max streaming service, Comcast's NBC Sports, Fox and Nexstar's CW Network.

Fox and NBC will carry fewer races than they had in the previous deal. The races that they are no longer carrying will be split between Amazon Prime Video as well as TNT and Max.

The agreements don't include production fees, which could ultimately raise the total payments to Nascar, the person familiar with the situation said.

For Amazon, adding Nascar is the latest evidence of its push into sports to boost the appeal of its Prime Video service. It is already the home of the National Football League's "Thursday Night Football" package and has expressed interest in National Basketball Association rights whose current deals with Disney's ESPN and TNT expire after the 2024-2025 season.

Warner is also seeking to use sports to help its Max direct-to-consumer platform.

Google Agrees to Pay Canada News Outlets

By VIPAL MONGA

TORONTO—Alphabet's Google unit reached a settlement with Canada over a contentious law that would have forced the tech company to pay news organizations for links to their content.

Google has agreed to pay 100 million Canadian dollars, equivalent to \$73.6 million, indexed to inflation, into a fund, said Canada's Heritage Minister Pascale St-Onge. Money from the fund will go toward supporting the news sector.

The settlement means that Google will continue to provide links to Canadian news. The tech giant had threatened to stop linking to news on Dec. 19, when the law is set to take effect.

Canadian legislators in June approved a law, named Bill C-18, that would have compelled tech companies like Google and Meta to compensate media outlets for news links posted on their platforms.

Meta, which isn't a part of the agreement announced on

Wednesday, has already blocked news links for Canadian users on its Facebook and Instagram platforms.

The tech companies have argued the law would put a price on free links to webpages, which contravenes copyright legislation and upends the concept of an open internet where users can search and connect to material without restrictions.

"Following extensive discussions, we are pleased that the Government of Canada has committed to addressing our core issues with Bill C-18," said Kent Waker, president of global affairs at Google and Alphabet.

The settlement avoids a scenario for Canada where news wouldn't appear in Google searches.

The only time Google took a similar action was in 2014, when the company shut Google News in Spain over a law requiring the company to pay publishers. The service was restarted in Spain last year after Google was allowed to negotiate directly with media outlets.

Morgan Stanley's Gorman Is Named to Disney's Board

By ROBBIE WHELAN AND DENNY JACOB

Walt Disney's board appointed Morgan Stanley Chief Executive James Gorman and former Sky CEO Jeremy Darroch as directors as it faces the prospect of two separate shareholder challenges.

Disney said the appointments reflect its commitment to a strong board focused on long-term performance, strategic growth initiatives, succession planning and increasing shareholder value. Chief Executive Bob Iger in recent weeks has told investors and employees that the company has begun building its future after a period of fixing problems.

The entertainment giant said Darroch's appointment adds international media expertise to the board and is effective Jan. 9. Darroch was CEO of Sky from 2007 to 2021, leading Europe's largest media conglomerate, which has been a unit of Comcast since 2018.

Gorman has been chief executive of Morgan Stanley since

2010 and is expected to be succeeded by Ted Pick on Jan. 1. His appointment, effective Feb. 5, will give Disney's board a new member with experience overseeing a major corporate transformation who has been part of a "well-managed succession process," Disney said.

The appointments would temporarily expand Disney's board from 11 to 13 members. Francis deSouza, a pharmaceutical executive who has served on the Disney board since early 2018, doesn't plan to stand for reelection at next year's annual meeting, Disney said.

Last month, The Wall Street Journal reported that activist investor Nelson Peltz had increased his stake in Disney and is planning a new run at the company, this time seeking multiple board seats.

Former Marvel Entertainment Chairman Isaac "Ike" Perlmutter said he entrusted Disney shares he owns to Peltz to help press for changes at the company. Perlmutter has added 25.6 million shares to Peltz's war chest, while Peltz's Triam Fund Management owns 7.3 million Disney shares, according to a November regulatory filing, giving the activist control of nearly \$2.7 billion in stock, or roughly 1.8% of the company.

Triam, with support from Perlmutter, launched a short-lived proxy battle about one year ago, which it called off after Iger announced \$5.5 billion in budget cuts and a head-count reduction of 7,000 positions.

Over the summer, however, Disney's market value sank, prompting Peltz to gear up for a new campaign to win board seats.

Disney says appointments reflect commitment to a strong board.

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BUSINESS & FINANCE

Blackstone to Buy Petcare Firm Rover for \$2.3 Billion

By MARIA ARMENTAL

Blackstone agreed to buy online petcare marketplace **Rover Group** in a roughly \$2.3 billion deal that bets on growing demand for pet services, an area considered insulated from economic ups and downs.

"Rover has a significant runway for growth as pet owners increasingly place a premium on high-quality care, flexibility and convenience," Tushar Gupta, a principal at Blackstone, said.

The agreement, which would take Rover private, includes a 30-day "go-shop" period, which allows Rover to entertain other offers. Private-equity firm **True Wind Capital**, venture-capital firm **Menlo Ventures** and other Rover investors that collectively represent about 40% of the company's outstanding voting power as of Nov. 27

committed to vote for the Blackstone transaction and against any competing offer, according to a securities filing.

Blackstone offered \$11 a share, a 29% premium to Tuesday's closing price of \$8.50. The transaction is slated to close in the first quarter of 2024.

Blackstone's investment would allow Rover to expand internationally.

Rover was founded in 2011 and went public through a special-purpose acquisition company merger in 2021, but it has largely traded below its \$10 initial share price.

The Seattle company, which bills itself as an alternative to relying on friends and family for petcare, offers such services as boarding and in-home pet sitting, dog walking, drop-in visits and dog training. Through Sept. 30, more than four million pet owners have booked services on Rover and more than one million pet care providers in

North America and Europe have been paid, according to company data.

Sachin Bavishi, the Blackstone senior managing director who led the deal and heads the firm's San Francisco-based private-equity team, said the Rover investment highlights Blackstone's focus on backing fast-growing digital businesses. Blackstone, for example, is part of a private-equity consortium that has offered to buy eBay-backed Oslo, Norway-listed online-classified business **Adevinta** for about \$13.2 billion.

Blackstone, which this year also took private another founder-led company that had gone public in a SPAC merger, said the Rover investment would allow the company to expand its international presence and fuel expansion initiatives as a private company. Rover Chief Financial Officer Charlie Wickers said at an industry event in September that the company expects international business to grow to about a third of the total value of services booked, or gross



As of the September quarter, Rover operated in the U.S., Canada and Western Europe.

TIFFANY HAGLER/GEORGELOBOMBERG NEWS

booking value, which includes tips and other fees.

Bookings in international markets grew by about 50% in the first nine months of the year and accounted for about 10% of gross booking value in the first nine months of the year, up from about 8% for the comparable period a year earlier, according to a securities filing.

As of the September quarter, Rover operated in the U.S., Canada and Western Europe.

Investment in pet services has been growing, in part

fueled by an increase in pet ownership during the pandemic and has been driving private-equity firms' appetite for veterinary clinics, which have attracted greater antitrust scrutiny along with other healthcare deals.

Pet-industry spending in the U.S. reached nearly \$137 billion in 2022, up from \$90.5 billion in 2018, according to the American Pet Products Association, an industry group that projected spending this year to increase to about \$143.6 billion.

Most of spending remains in pet food and treats, driving deals such as General Atlantic's recent investment in U.K.-based dog-food company **Butternut Box** alongside the company's existing backer, consumer-focused **L Catterton**. Still, some \$11.4 billion in 2022 was spent in "other services," like boarding, grooming, insurance, training, pet sitting and walking and all services outside of veterinary care, the American Pet Products Association said.

—Colin Kellaher contributed to this article.

FERROVIAL

Deal to Sell Stake In Heathrow Is Set

Ferrovial is to sell its stake in London's Heathrow Airport after striking a deal with a French private-equity group and Saudi Arabia's sovereign-wealth fund.

The Spanish construction company said late on Tuesday that Ardian and Saudi Arabia's Public Investment Fund would pay £2.37 billion, equivalent to \$3.01 billion, to acquire its 25% stake in FGP Topco, the parent of Heathrow Airport Holdings.

Ardian will acquire around 15% of the stake, while the Saudi fund will take about 10%, Ferrovial said.

—Pierre Bertrand

RICHEMONT

No Further Farfetch Investing Is Seen

Luxury group Richemont said it has no plans to invest further in Farfetch and could reconsider a deal with the e-commerce firm, amid speculation Farfetch may be taken private by backers that include China's Alibaba.

A spokeswoman for Farfetch declined to comment.

Richemont said it could review its deal with British-Portuguese Farfetch, reached last year, under which Richemont agreed to divest itself of nearly half of its e-commerce business **Yoox Net-A-Porter** in return for a minority stake in Farfetch.

—Andrea Figueras

OKTA

Projects Delayed After Data Breach

Okta is delaying product updates and internal projects by 90 days as it works to shore up its security architecture.

Identity-management company Okta said in a filing with the Securities and Exchange Commission that a breach of its customer-support system had resulted in the theft of names and email addresses of all its commercial users. Okta said the breach didn't include users of its federal systems, which are stored on a separate server, or its support system for its Auth0 authentication software.

—James Rundle, Catherine Stupp, Kim S. Nash

TOYOTA MOTOR

Sale of Shares in Supplier Planned

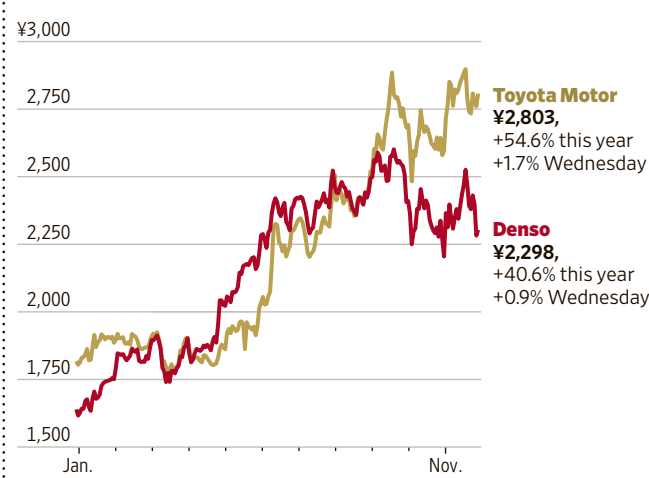
Toyota Motor said it plans to sell about 125 million shares in its top auto-parts supplier **Denso**, a stake worth about \$1.95 billion based on Denso's share price as of Wednesday's close.

Toyota's stake in Denso would fall to 20% from around 24%, Toyota Chief Communications Officer Jun Nagata said on Wednesday. Denso said in a separate statement that it would buy back up to 125 million shares. The move comes as Japanese companies face pressure to unravel stakes they have long held in business partners.

—River Davis

BUSINESSWATCH

Year-to-date stock performance in Japanese stock market



Note: ¥1 billion = \$6.8 million

Source: FactSet



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BIGGEST 1,000 STOCKS

How to Read the Stock Tables
The following explanations apply to NYSE, NYSE Arca, NYSE American and Nasdaq Stock Market listed securities.

Wall Street Journal stock tables reflect composite regular trading as of 4 p.m. and changes in the closing prices from 4 p.m. the previous day.

Table with columns: Stock, Sym, Close, Net Chg. Lists various stocks like AECOM, AES, Afflic, AGCO, etc.

IPO Scorecard

Table showing performance of IPOs, most-recent listed first. Columns include Company, SYMBOL, Wed's close, Offer price, 1st-day close, % Chg From Offer, 1st-day % Chg From Offer.

Table with columns: Stock, Sym, Close, Net Chg. Lists various stocks like Broadcom, Brookfield, Brookfield, etc.

Table with columns: Stock, Sym, Close, Net Chg. Lists various stocks like DTE Energy, DanaHER, Darden, etc.

Table with columns: Stock, Sym, Close, Net Chg. Lists various stocks like DocuSign, DolbyLab, DollarGeneral, etc.

Table with columns: Stock, Sym, Close, Net Chg. Lists various stocks like GE HealthCare, GFL, GSK, etc.

Exchange-Traded Portfolios | WSJ.com/ETFresearch

Table showing largest 100 exchange-traded funds, latest session. Columns include ETF, Symbol, Closing Price, Chg, YTD (%).

Table showing various ETFs with columns: ETF, Symbol, Closing Price, Chg, YTD (%).

Table showing various ETFs with columns: ETF, Symbol, Closing Price, Chg, YTD (%).

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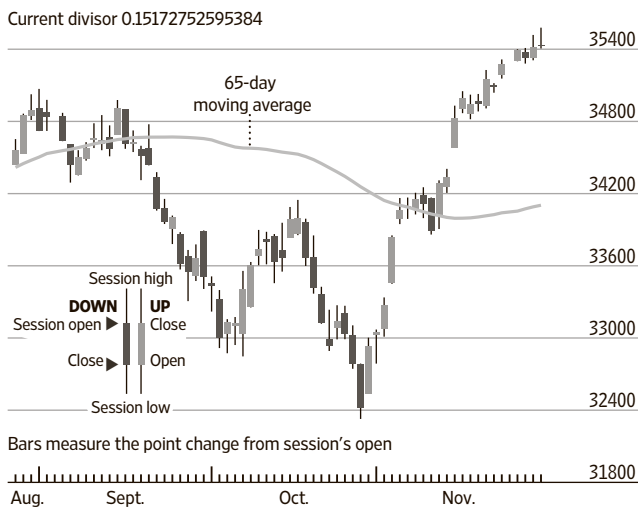


MARKETS DIGEST

EQUITIES

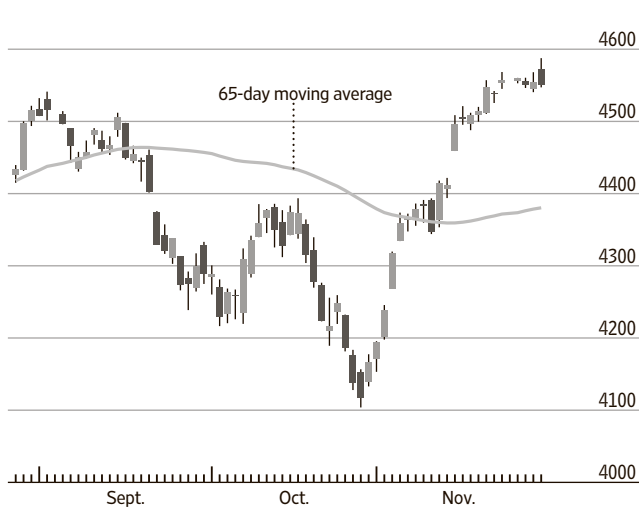
Dow Jones Industrial Average

35430.42 ▲13.44, or 0.04%
High, low, open and close for each trading day of the past three months.



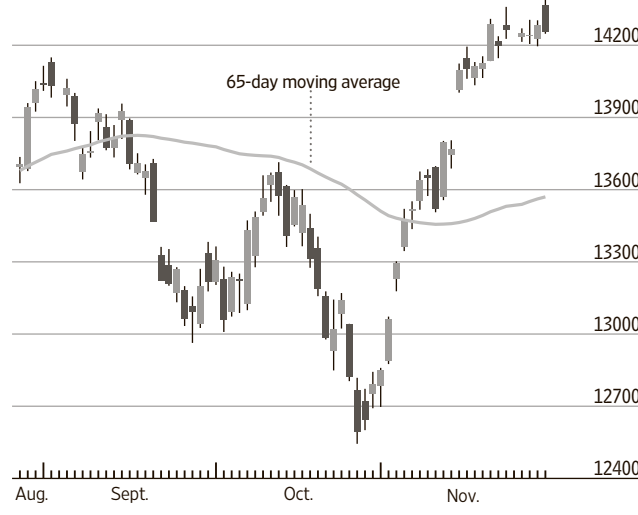
S&P 500 Index

4550.58 ▼4.31, or 0.09%
High, low, open and close for each trading day of the past three months.



Nasdaq Composite Index

14258.49 ▼23.27, or 0.16%
High, low, open and close for each trading day of the past three months.



Major U.S. Stock-Market Indexes

Table of Major U.S. Stock-Market Indexes including Dow Jones, Nasdaq Stock Market, S&P, and Other Indexes with columns for High, Low, Close, Net chg, %chg, 52-Week High/Low, %chg, and YTD %chg.

Late Trading

Most-active and biggest movers among NYSE, NYSE Arca, NYSE Amer. and Nasdaq issues from 4 p.m. to 6 p.m. ET as reported by electronic trading services...

Most-active issues in late trading

Table of Most-active issues in late trading listing Company, Symbol, Volume, Last, Net chg, After Hours %chg, High, and Low.

Percentage gainers...

Table of Percentage gainers listing Company, Symbol, Latest Session Close, Net chg, %chg, 52-Week High/Low, and %chg.

Trading Diary

Volume, Advancers, Decliners

Table of Trading Diary statistics including Total volume, Adv. volume, Decl. volume, Issues traded, Advancers, Declines, Unchanged, New highs, New lows, Closing Arms, and Block trades.

International Stock Indexes

Table of International Stock Indexes listing Region/Country, Index, Close, Net chg, Latest %chg, and YTD %chg.

Percentage Gainers...

Table of Percentage Gainers listing Company, Symbol, Latest Session Close, Net chg, %chg, 52-Week High/Low, and %chg.

Most Active Stocks

Table of Most Active Stocks listing Company, Symbol, Volume, %chg from 65-day avg, Latest Session Close, %chg, 52-Week High/Low, and %chg.

Percentage Losers

Table of Percentage Losers listing Company, Symbol, Latest Session Close, Net chg, %chg, 52-Week High/Low, and %chg.

Volume Movers

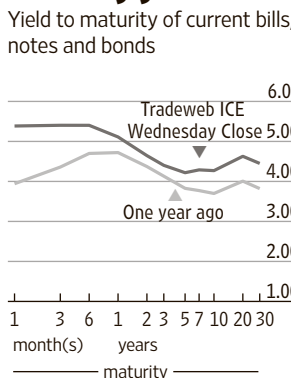
Table of Volume Movers listing Company, Symbol, Volume, %chg from 65-day avg, Latest Session Close, %chg, 52-Week High/Low, and %chg.

CREDIT MARKETS

Consumer Rates and Returns to Investor

Table of Consumer Rates and Returns to Investor including U.S. consumer rates and Selected rates for five-year ARM, Rate.

Treasury yield curve



Forex Race



Corporate Borrowing Rates and Yields

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CURRENCIES & COMMODITIES

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Commodities

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Bonds | wsj.com/market-data/bonds/benchmarks

Tracking Bond Benchmarks

Return on investment and spreads over Treasuries and/or yields paid to investors compared with 52-week highs and lows for different types of bonds

Table of Tracking Bond Benchmarks showing Total return close, YTD total return, Index, and Yield (%) for various bond categories like Broad Market, Mortgage-Backed, and Global Government.

*Constrained indexes limit individual issuer concentrations to 2%; the High Yield 100 are the 100 largest bonds. ** EMBI Global Index. Sources: ICE Data Services; Bloomberg Fixed Income Indices; J.P. Morgan

Global Government Bonds: Mapping Yields

Yields and spreads over or under U.S. Treasuries on benchmark two-year and 10-year government bonds in selected other countries; arrows indicate whether the yield rose (▲) or fell (▼) in the latest session

Table of Global Government Bonds showing Country, Maturity, Yield (%), and Spread Under/Over U.S. Treasuries for various countries like Australia, France, Germany, Italy, Japan, Spain, and U.K.

Source: Tulliet Prebon, Tradeweb ICE U.S. Treasury Close

Macro & Market Economics

Watching the Gauges: U.S. Supply and Demand

Inventories, imports and demand for the week ended November 24. Current figures are in thousands of barrels or thousands of gallons per day, except natural-gas figures, which are in billions of cubic feet.

Table of Inventories, Imports, and Weekly Demand for various commodities like Crude oil, Gasoline, and Natural gas.

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Table of Total petroleum product showing Current, Expected change, Previous week, Year ago, 4-week avg, and 5-year avg.

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Note: Expected changes are provided by Dow Jones Newswires' survey of analysts. Previous and average inventory data are in millions. Sources: FactSet; Dow Jones Market Data; U.S. Energy Information Administration; Dow Jones Newswires

Dividend Changes

Table of Dividend Changes showing Company, Symbol, Yld % New/Old, Frq, Amount, and Payable/Record.

Mutual Funds

Table of Mutual Funds showing Fund, NAV, Net YTD, and various performance metrics.

Table of Mutual Funds showing Fund, NAV, Net YTD, and various performance metrics.

NEW HIGHS AND LOWS

WSJ.com/newhighs

The following explanations apply to the New York Stock Exchange, NYSE Arca, NYSE American and Nasdaq Stock Market stocks that hit a new 52-week intraday high or low in the latest session. % CHG-Daily percentage change from the previous trading session.

Wednesday, November 29, 2023

Table with columns: Stock, Sym, 52-Wk High/Low, % Chg, Stock, Sym, 52-Wk High/Low, % Chg, Stock, Sym, 52-Wk High/Low, % Chg. Includes sections for 'Highs' and 'Lows'.

Biggest 1,000 Stocks | WSJ.com/stocks

Continued From Page B6

Table with columns: Stock, Sym, Close, Net Chg, Stock, Sym, Close, Net Chg, Stock, Sym, Close, Net Chg. Lists top 1,000 stocks by market cap.

Table with columns: Stock, Sym, 52-Wk High/Low, % Chg, Stock, Sym, 52-Wk High/Low, % Chg, Stock, Sym, 52-Wk High/Low, % Chg. Lists various stocks with their 52-week performance.

Table with columns: Stock, Sym, Close, Net Chg, Stock, Sym, Close, Net Chg, Stock, Sym, Close, Net Chg. Lists various stocks with their daily performance.

Table with columns: Stock, Sym, Close, Net Chg, Stock, Sym, Close, Net Chg, Stock, Sym, Close, Net Chg. Lists various stocks with their daily performance.

Table with columns: Stock, Sym, Close, Net Chg, Stock, Sym, Close, Net Chg, Stock, Sym, Close, Net Chg. Lists various stocks with their daily performance.

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Table with columns: Stock, Sym, 52-Wk High/Low, % Chg, Stock, Sym, 52-Wk High/Low, % Chg, Stock, Sym, 52-Wk High/Low, % Chg. Lists various stocks with their 52-week performance.

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Cash Prices | wsj.com/market-data/commodities

These prices reflect buying and selling of a variety of actual or "physical" commodities in the marketplace—separate from the futures price on an exchange, which reflects what the commodity might be worth in future months.

Table with columns: Commodity, Price, Wednesday, Commodity, Price, Wednesday, Commodity, Price, Wednesday, Commodity, Price, Wednesday. Lists various commodities and their prices.

Grains and Feeds

Table with columns: Commodity, Price, Wednesday, Commodity, Price, Wednesday, Commodity, Price, Wednesday, Commodity, Price, Wednesday. Lists various grains and feeds.

Food

Table with columns: Commodity, Price, Wednesday, Commodity, Price, Wednesday, Commodity, Price, Wednesday, Commodity, Price, Wednesday. Lists various food items.

Fats and Oils

Table with columns: Commodity, Price, Wednesday, Commodity, Price, Wednesday, Commodity, Price, Wednesday, Commodity, Price, Wednesday. Lists various fats and oils.

Borrowing Benchmarks | wsj.com/market-data/bonds/benchmarks

Key to CODES: A=ask; B=bid; BP=country elevator bid to producers; C=corrected; D=CME; E=Manfra,Tordella & Brooks; H=American Commodities Brokerage Co; K=bi-weekly; M=monthly; N=nominal; n.a.=not quoted or not available; P=Sosland Publishing; R=S&L Energy; S=Platts-TSI; T=Cottlook Limited; U=USDA; V=Benchmark Mineral Intelligence; W=weekly; Y=International Coffee Organization; Z=not quoted. *Data as of 11/28

Table with columns: Rate, Week ago, -52-Week High/Low, Rate, Week ago, -52-Week High/Low, Rate, Week ago, -52-Week High/Low. Lists various borrowing benchmarks.

Money Rates

Key annual interest rates paid to borrow or lend money in U.S. and international markets. Rates below are a guide to general levels but don't always represent actual transactions.

Table with columns: Rate, Week ago, -52-Week High/Low, Rate, Week ago, -52-Week High/Low, Rate, Week ago, -52-Week High/Low. Lists various money rates.

NOTICE OF PUBLIC SALE - Property to be Sold

Table with columns: Lot#, CUSIP, Issue Name, Asset Type, Registration, Original Face. Lists various public sale lots.

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BANKING & FINANCE

Berkshire's Board Worries Investors

Munger was the fourth longtime director to die in last couple of years

By JUSTIN BAER
AND THEO FRANCIS

Warren Buffett lost his closest confidant when Charlie Munger died this week. But he has lost other advisers recently as well.

In the past two years, three other longtime **Berkshire Hathaway** directors died. All were in their 90s and had forged close ties to Buffett decades earlier. The board's tenure and makeup have drawn scrutiny from some investors who say the group needs more changes.

Munger, Berkshire's vice chairman, died Tuesday at age 99.

Walter Scott, a Berkshire director since 1988, died in September 2021 at age 90. Thomas S. Murphy, 96 years old, stepped down from the board in February 2022 and died in May of that year. A third director, David "Sandy"

Gottesman, was also 96 when he died in September 2022.

Each had served on Berkshire's board while Buffett transformed the once-failing textile company into one of America's most valuable, and respected, corporations.

In recent years, though, Buffett's commitment to shrink his Berkshire holdings over time had put more of the company's shares in the hands of institutional investors.

And those shareholders have been more willing to challenge Berkshire on social and governance priorities, from the diversity of its staff to its disclosures on how its businesses affect climate change.

Last year, the \$470 billion California Public Employees' Retirement System threw its weight behind a shareholder proposal that would have disqualified Buffett, or anyone else, from serving as both Berkshire's chairman and chief executive.

"They've made some strides in the direction the governance gurus want to see, but not as a genuflection," said Lawrence Cunningham,

an emeritus professor at George Washington University who has written extensively about Berkshire and Buffett. "They still stand by the idea that 'we're going to appoint directors who understand the unique aspects of this organization that might not be appreciated by the institutions that have a checklist.' That's a durable point of contention."

Among investors' issues has been the composition of Berkshire's board. Before Munger's death, Berkshire's board members had an average age of 70 years old, with a mean tenure of 16 years, according to ISS, a proxy-advisory firm.

In all, 73% of its directors were men. Those numbers were higher before the deaths of Scott and Gottesman, and Murphy's resignation, but they remain a problem for some investors.

"There should be pressure on this board to lower the average age of board members and increase diversity," said Cathy Seifert, an analyst at CFRA who rates Berkshire's Class B shares a "buy."

The board's median age—meaning half of all directors



Clockwise, Warren Buffett, right, and Charlie Munger; Buffett and his daughter, Berkshire director Susan Buffett; and board member Ken Chenault.

are older, half are younger—after Munger's death is about 67, making Berkshire one of the oldest in the S&P 500, but not the oldest, according to data compiled by Equilar, a compensation and

corporate-governance data company.

About 42 other companies have an older median age than Berkshire Hathaway had, based on ages disclosed in corporate filings, typically with

the annual proxy statement. The oldest: **Teledyne Technologies**, with a median age of 77, followed by database giant **Oracle** and **Kinder Morgan**, the natural-gas pipeline company, both at 76, Equilar data show.

London Metal Exchange Wins Fight on Nickel

By YUSUF KHAN
AND JOE WALLACE

LONDON—The London Metal Exchange chalked up a big victory over investors on Wednesday, when a court said it was within its rights to cancel trades during a high-profile blowup in the nickel market sparked by Russia's invasion of Ukraine.

The U.K. court rejected claims by activist fund **Elliott Investment Management** and market maker **Jane Street Global Trading** that the exchange overstepped its powers

by nixing \$12 billion in trades in March last year. Had they won, Elliott and Jane Street planned to claim hundreds of millions of dollars in damages combined in a follow-on trial.

Paul Singer's Elliott, a veteran of courtroom fights against opponents such as Argentina, said it would appeal the judgment.

A spokesman said the ruling "raises fundamental questions for U.K. market participants...about a lack of effective checks and balances on U.K. exchanges."

A Jane Street spokesman

said the firm was weighing its next steps.

The cases, heard in the U.K.'s Administrative Court in London, have been followed closely in financial circles as a test of whether exchanges have the power, in extreme circumstances, to unwind trades to maintain orderly markets. The LME said it did so to make sure the meltdown in a niche metals market didn't cascade through the financial system.

On Wednesday, the exchange said the judgment recognized its powers to intervene in markets to stop them

from spiraling out of control.

The blowup was one of the most dramatic financial knock-on effects of Russia's invasion of Ukraine. Russia is a major producer of the metal, an ingredient in stainless steel and, increasingly, electric-vehicle batteries. So prices rose after the start of the war in February 2022.

The rally turned into an uncontrolled spike on March 8. Companies with big bets that nickel prices would fall faced billions of dollars in cash calls to hold on to those loss-making wagers, most notably Chi-

nese nickel titan **Tsingshan Holding**. Some started to unwind those positions by buying nickel, pushing prices higher still in what traders call a short squeeze.

Fearing the collapse of several brokers, the LME halted trading and canceled trades that took place at the top of the market. The court heard how Chief Executive Matthew Chamberlain woke at 5:30 a.m., scrolled through reports of chaotic trading on his phone and, within hours, arrived at the decision.

The LME said it would have

faced a "death spiral" of defaults if it hadn't acted. "This cascade...would have caused an unprecedented market crisis and posed a significant systemic risk to the LME's metals markets and the wider financial system," it told the court.

The losers were financial firms that scored huge profits betting on a rise in the nickel price, only to see those gains vanish.

Elliott said it missed out on \$456 million from a single morning's trades, while Jane Street said it lost \$15 million in gains.

Brookfield Finds Pricing a Polluter Isn't Easy

By STUART CONDIE

SYDNEY—At the heart of a nearly US\$11 billion takeover tussle for the owner of several Australian coal-fired power plants is a key question for investors: how to value a major polluter that could become a big enabler of the energy transition.

It isn't proving easy. A consortium led by **Brookfield Asset Management** has made an offer for **Origin Energy** worth 9.43 Australian dollars a share, equivalent to US\$6.21 a share, that it says is fair to shareholders. Brookfield says it will spend up to US\$30 billion on accelerating Origin's shift to renewable energy and storage over the decade through 2033.

But that offer is opposed by AustralianSuper, Origin's biggest shareholder with a stake of about 17%. The pension fund says the consortium has lodged a series of lowball bids for Origin, not least because the energy transition has made the company's assets more valuable. It has even offered to provide capital to help it shift away from fossil fuels.

The uncertain fate of Origin also reflects a debate about whether big polluters should make the shift to clean energy as listed companies and subject to broader scrutiny than as a private company with less onerous disclosure requirements. Origin is Australia's fourth-largest emitter of greenhouse gases because much of the electricity that it generates comes from plants that burn thermal coal.

"The challenge facing the nation as we work toward net zero by 2050 is not a lack of capital but rather a shortage of good-quality investment opportunities," AustralianSuper said.

The Origin saga is the latest example of a large investor hitting hurdles in an attempt to profit from the global trend toward clean energy. Company boards are caught in the middle, trying to meet their obligations to maximize shareholder value while figuring out whether private or public ownership represents the best



Origin is Australia's fourth-largest emitter of greenhouse gases because much of the electricity it generates comes from thermal coal.

transition for funding the costly transition from fossil fuels to renewables.

Brookfield, which manages about US\$850 billion in assets, has been thwarted in an effort to acquire another of Australia's largest power companies and polluters. It made two offers for AGL Energy in 2022 in partnership with Australian billionaire Mike Cannon-Brookes, but walked away after the AGL board rejected the second offer as too low.

A major problem for investors like Brookfield is that factors including government support, the prospect of stable returns from long-term contracts, and souring sentiment among many lenders and insurers toward fossil-fuel assets helps widen the appeal of investing in the energy transition. There are questions over sovereign capability and, in Origin's case, a potential conflict since Brookfield already owns Australian transmission assets. Australian regulators decided

the need to reduce emissions outweighed concerns over the latter.

It all adds up to frustration for the likes of EIG Global Energy Partners' MidOcean Energy unit, which joined the Brookfield consortium expecting to get hold of Origin's liquefied natural gas assets. Instead, its plans have been held up by AustralianSuper, which steadily increased its stake in Origin from 13% in March.

"We had spent the better part of a year thinking it was just a matter of time until we got engagement and we would reach some commercial understanding," EIG Chief Executive R. Blair Thomas said in an interview.

Brookfield has a backup pro-

posal to buy Origin's energy-markets business and EIG is completing funding commitments to potentially acquire what's left, which would essentially be a holding vehicle for Origin's stake in the Australia Pacific LNG project in eastern Australia.

Shareholders are scheduled to vote on the consortium's original deal structure on Dec. 4, almost 16 months after Brookfield and its partners presented an initial proposal to Origin's board. If that fails, the backup offer could come into play.

Thomas said he was frustrated by AustralianSuper's unwillingness to indicate a price it would be willing to accept for its stake in Origin. He noted no one has made a better offer than the consortium's 68% pre-

mium to Origin's share price before its interest becoming known. Shareholders may never get another opportunity to realize such value, he added.

Investment-firm executives say rising financing costs and prices for equipment are making it harder to develop clean-energy projects as industry investors weigh the risks of providing capital against the benefits of cutting carbon emissions. Rising costs partly stem from interest rates that surged, pushing up financing costs.

Brookfield aims to invest in Origin through its Brookfield Global Transition Fund. "The key here is that BGTF sees the net zero transition as an attractive investment rather than a risk to be managed," it said in June.

AustralianSuper has countered that it would help fund Origin in its transition toward renewables, without giving details. It declined to comment on its plans.

KKR Maps Growth Tied To Insurer Purchase

By TED BUNKER

KKR & Co. said it is acquiring the rest of insurer **Global Atlantic Financial Group** in a \$2.7 billion deal that came with a growth-focused reshuffling of business segments within the publicly traded private-equity firm, which raised its earnings outlook, prompting a surge in its shares on Wednesday.

The changes focus on driving long-term growth and include a new way of determining employee compensation that makes payouts less reliant on management fees and more dependent on investment realizations, executives said on a conference call with analysts to discuss the revamp contingent on the Global Atlantic transaction.

New York-based KKR is acquiring the 37% of the Bermuda company that it doesn't own in a cash deal. The firm first purchased a majority stake in the insurer and annuity provider for about \$4.7 billion in early 2021. Adding the carrier will result in a gain of 10% or more in per-share fee-related earnings next year, KKR said.

On Wednesday, KKR indicated that by bringing Global Atlantic fully in house, it can establish three distinct business reporting segments, including an insurance and annuities segment. The new arrangement separates the firm's roughly \$35 billion of core private-equity assets into a group called strategic holdings while other fee-generating businesses, including its rapidly expanding private-credit operations, remain under the asset-management heading.

The firm raised its forecast for 2026 fee-related earnings to more than \$4.50 a share from over \$4 previously. The firm reported fee-related earnings per adjusted share of \$2.45 for 2022. KKR shares rose 7.7% to close at \$74.74.

\$11B

Value of takeover bid for Origin Energy that is being disputed.

MARKETS

S&P, Nasdaq Trim November Gains

Yield on benchmark 10-year Treasury drops to lowest level since September

By **GUNJAN BANERJI**

Stocks wavered, halting a November rally that has sent the S&P 500 toward its best month since July 2022.

The S&P 500 slipped 0.1%. The Dow Jones Industrial Average added 13 points, or less than 0.1%. The tech-heavy Nasdaq Composite fell 0.2%.

The yield on the 10-year Treasury note fell for the third consecutive day and settled at 4.270%, its lowest level since

September. It is a rapid plunge from just around a month ago, when government-bond yields touched 5% for the first time in 16 years.

Investors have been reassured in recent weeks by inflation and economic data suggesting the Federal Reserve can pull off a soft landing, or a cooling of the economy that doesn't tip it into a recession. Another morsel of good economic news arrived Wednesday, when data showed the economy grew at a 5.2% annual rate last quarter, the fastest pace since late 2021.

Still, economists expect growth to slow in the fourth quarter as consumers pull back on spending.

Some investors said that stocks were due for a breather after a blockbuster stretch. The S&P 500 is up around 8% this month.

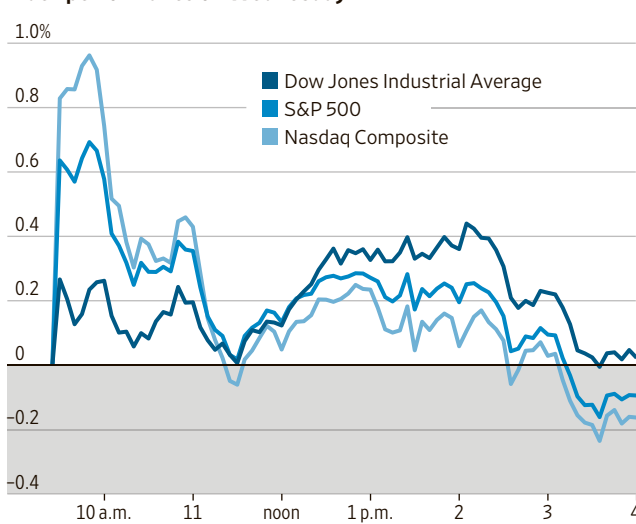
"It would actually be healthy to get a little bit of a pause," said Larry Adam, chief investment officer at Raymond James.

Hopes that the Fed will slash interest rates next year—in part because of easing inflation and a slowing economy—have rippled through markets, driving rallies in stocks, bonds and gold while hurting the dollar. The stock-market rally has petered out in recent days.



Shares of Ford Motor rose 2.1% on Wednesday. Rival GM gained 9.4% on a planned share repurchase. A Ford dealership in Miami.

Index performance on Wednesday



Source: FactSet

Futures for gold rose for a fourth consecutive session, to \$2,047.10 a troy ounce, the highest level since May and within striking distance of its record hit in August 2020. Gold doesn't pay any income, so speculative demand for the metal tends to wane when yields on other assets are rising. Demand picks up when yields fall.

Federal Reserve Bank of Cleveland President Loretta

Mester said Wednesday that interest-rate policy is in a "good place" right now and can move in either direction based on how the economy evolves. On Thursday, investors will get more clues on the path of the U.S. economy with new data on spending and inflation.

Still, market volatility has been falling, and some investors appear to be positioning for bigger stock gains ahead

after a blockbuster stretch. "All things point to maybe the bulls getting the upper hand here," said Jeff Buchbinder, chief equity strategist at LPL Financial. "We think we just drift higher over the next month or so."

In corporate news, shares of **General Motors** jumped 9.4% after the company said it would increase cash to shareholders and outlined plans for a \$10 billion share repurchase for next year. **Ford** shares added 2.1%.

Overseas, the Stoxx Europe 600 rose 0.45%, while Britain's FTSE 100 fell 0.4%. At midday Thursday, Japan's Nikkei 225 was down 0.2% but Hong Kong's Hang Seng Index was up 0.3%. S&P 500 futures rose 0.1%.

AUCTION RESULTS

Here are the results of Wednesday's Treasury auction. All bids are awarded at a single price at the market-clearing yield. Rates are determined by the difference between that price and the face value.

17-WEEK BILLS

Applications	\$163,982,128,400
Accepted bids	\$56,266,994,000
" noncompetitively	\$653,055,000
" foreign noncompetitively	\$0
Auction price (rate)	98.267889 (5.240%)
Coupon equivalent	5.423%
Bids at clearing yield accepted	99.24%
Cusip number	912797J12
The bills, dated Dec. 5, 2023, mature on April 2, 2024.	

OPEC Considers Big Oil Cut

Continued from page B1

Arab nations such as Saudi Arabia have been critical of an offensive in Gaza by Israel, where thousands have died and large neighborhoods have been reduced to rubble. The operation was launched in response to Palestinian militant attacks on Oct. seven on Israel, which the U.S. has backed militarily.

The delegates said the Middle East conflict hadn't been brought up in the OPEC conversations.

Geopolitical tensions have spiraled beyond Israel and the Palestinian territories. An Israeli-connected ship was recently seized by Yemeni rebels acting in solidarity with the Palestinians.

Militias in Iraq—OPEC's second-largest producer—have exchanged fire with U.S. Army

bases. The OPEC talks also come as global industry and political leaders arrive in Dubai for the United Nations climate summit, where the role of major oil-producing countries in reducing emissions will again be a major topic of discussion.

Saudi Arabia, which has embarked on an ambitious program of projects, including a giant new city in the desert, needs a fiscal break-even oil price of as much as \$88 a barrel, according to Goldman Sachs.

Robert Yawger, executive director of energy futures at Mizuho Securities USA, predicted Brent prices would rise back to about \$90 a barrel and benchmark U.S. crude prices to about \$85 a barrel if OPEC+ followed through on the extra cuts.

He added, though, that Saudi Arabia would find it difficult to persuade other members both to sign up to extra cuts and follow through on them given the deep existing curbs.

—Anna Hirtenstein and Joe Wallace contributed to this article.

1M

Cut in barrels of oil that is being considered by OPEC and its allies.

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HEARD ON THE STREET

FINANCIAL ANALYSIS & COMMENTARY

GM Gives Investors \$10 Billion Apology

Automaker is having a good year financially, but a bad one strategically

General Motors' much-trumpeted technology bets haven't worked out well lately. Ironically, that is one reason it can afford to score an easy goal with investors.

A so-called accelerated share repurchase worth \$10 billion is big for a company that had a market value of \$40 billion before the announcement. Some \$6.8 billion of stock—about 17% of the total—will be canceled immediately, with the rest following over the next year. Mechanically, that should increase analysts' forecasts for GM's earnings per share next year by roughly 20%. The stock rose 9% on Wednesday.

The money comes from strong cash generation on top of a robust balance sheet. GM on Wednesday increased its guidance for the cash that it expects to flow from operations this year, while reducing the amount it expects to spend on capital expenditures. Combine these two and the company's 2023 free-cash-flow forecast rose 38% at the midpoint of its guidance range to \$11 billion.

This upgrade is even more surprising in light of the recent United Auto Workers strike, which wasn't factored into GM's previous guidance. The company said Wednesday the work stoppages cost it \$1.1 billion in operating profit from lost



GM's finance chief said reviving the Bolt EV would save it \$5 billion relative to the cost of launching a new program.

production and it reduced its operating-profit guidance accordingly, albeit by less. Yet somehow cash flows strengthened.

Investors will have to wait for the company's fourth-quarter earnings for a full explanation, but a more cautious approach to future technology is clearly part of it.

GM has struggled to increase

electric-vehicle output this year because of problems with assembling battery modules.

More recently, its big bet on driverless cars, the California robotaxi business Cruise, veered off course after an accident rattled regulators. Chief Executive Mary Barra, who has staked her reputation on these technologies, struck a

more apologetic note than usual on a call with analysts.

The financial impact of these bumps in the road might actually be positive because EVs and robotaxis are unprofitable and require heavy investment. More than that, GM has delayed and rationalized capital investments as U.S. consumer adoption of EVs has wa-

vered. Many of the gains will last into next year, when cash flow could be better than expected too.

For example, the company is delaying the reopening of its flagship plant for producing electric pickup trucks in Orion, Mich., until late 2025. And Chief Financial Officer Paul Jacobson said reviving the Bolt EV brand, which many assumed would be retired after a damaging recall, would save it \$5 billion relative to the cost of launching a new program.

GM has long struggled to translate strong earnings into a strong share price. Before Wednesday's announcement, the stock traded at four times earnings—a level only otherwise seen during the Covid-19 panic of March 2020. The buyback is, among other things, a way to force Wall Street to take its strong financial performance seriously.

But gains made at the expense of technologies that might future-proof the business are even harder for investors to get excited about. The company needs to keep its EV-focused strategy on track while also delivering steady earnings. Until it shows it can consistently do both in a smooth transition, expensive buybacks won't earn GM more than a cheap bump.

—Stephen Willmot

Can a Drugmaker Ever Be Worth \$1 Trillion?

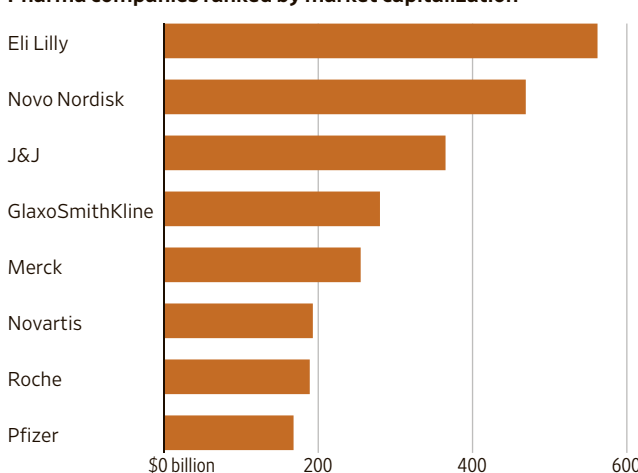
There are five tech companies valued at over \$1 trillion. In healthcare, the closest contender is **Eli Lilly**. This year it became the first big pharmaceutical to surpass a market capitalization of \$500 billion thanks to its obesity and diabetes medications and, to a lesser extent, its experimental Alzheimer's drug.

But hanging over Lilly and **Novo Nordisk** is a reality that puts the brakes on the industry's ascent: the patent cliff.

There are several reasons why there isn't a drugmaker in the trillion-dollar club, but the boom-and-bust nature of drug development is high on the list. Unlike **Apple**, which hypothetically can make huge margins off the iPhone for perpetuity, U.S. drugmakers have a limited period from which to profit from their innovation. As patents expire and generic rivals enter the market, sales plunge. Pharma executives, focused on short-term growth, don't often prepare companies for that.

As Lilly soars into the pharma stratosphere, a big question is whether it can avoid the fate of its competitors (and itself in the past). Chief Scientific and Medical Officer Daniel Skovronsky, says he wants to avoid a key error much of the industry tends to make. "When a company has a mega blockbuster drug that is doing really well, every investment on the margin goes towards that instead of towards something that's untested and unproven," he said in an interview. "And that drug overshadows the rest of the portfolio and everything else is starved for people, money and attention." Once the blockbuster runs out, he said, "they find out their cupboard

Pharma companies ranked by market capitalization



Sources: FactSet, Yahoo Finance

is bare, and there's nothing else coming."

The predicament Skovronsky describes ails nearly every drug company to varying degrees. The industry is staring down a \$200 billion cliff in annual sales by the end of the decade. And because companies need to keep their top and bottom lines growing, they wind up having to sacrifice long-term innovation for short-term growth. Rather than making bets on edgier science, they shell out billions of dollars on proven therapies, where investment returns are lower. Another way to put it, says Skovronsky, is that they are moving money from the balance sheet to the income statement.

"We think about that as going to the grocery store when you're hungry. You end up buying things you don't really need," he says.

Lilly lagged behind peers in the early 2010s and its R&D was highly

inefficient. Skovronsky, who joined Lilly after it acquired his brain-imaging firm in 2010, pushed the company to move more quickly and focus more on science. Those steps paid off handsomely.

For now, it isn't clear there is something significantly different about Lilly's DNA that might make it immune to headwinds. While the company deserves credit for making prescient bets, its stock surge—up 300% in three years—is largely because it landed on one of the biggest commercial opportunities of all time: the obesity epidemic.

"This is a huge market that has never really been addressed," said Evan Seigerman, an analyst at BMO Capital Markets. The question, he says, is whether Lilly can replicate that success.

Skovronsky said Lilly wants to grow in areas where it isn't a leader, such as cancer and immunology.

Some recent deals include the purchase of immunology company Dice Therapeutics for \$2.4 billion and a company in the radiopharmaceutical cancer space for \$1.4 billion.

"We're going at business development from a longer-term perspective," he said. "So some of our recent deals reflect that we're acquiring not just molecules but also a team, a technology, and a platform that we think can expand our capabilities." Immunology and cancer are crowded areas. Lilly's edge was that it saw an opportunity in obesity and Alzheimer's when most of its rivals overlooked them. Skovronsky said Lilly will continue to go off the beaten path. "You'll see us working on areas that are unpopular because we have a hunch that the science is going to break," he says. "We're working on hearing loss, we're working on pain."

A challenge all innovative companies face is as they grow, a bloated bureaucracy kills risk-taking. That could afflict Lilly as it grows its R&D budget, which is among the industry's highest relative to sales. Skovronsky said the answer isn't to just add head count. He said the company should stay nimble and preserve the culture of its acquisitions by, for example, leaving the acquired companies intact as separate entities within the corporation. Another strategy is to join with emerging biotech through innovation accelerators it has opened around the U.S.

Patent expirations, pricing pressures and competition are inescapable. What can separate Lilly from the pack, and perhaps help it hit more valuation records, is how well it keeps innovating. —David Wainer

Amazon And Nvidia Need Each Other

Amazon needed to put on a good AI show this week. It got a little help from a surprising friend.

Amazon's AWS unit comes second only to **Microsoft** in the market for business-focused software and related services. But Amazon has been perceived as lagging behind its largest cloud rival in the field of generative artificial intelligence, given Microsoft's push into the technology since ChatGPT's launch almost exactly a year ago.

Hence, Amazon used its annual AWS re:Invent conference on Tuesday to lean hard into generative AI. It unveiled a chatbot called Q, which looks like a business-focused version of Microsoft's Copilot. But most notable was the appearance of **Nvidia** Chief Executive Jensen Huang, who joined AWS CEO Adam Selipsky on stage at the Las Vegas event to unveil an "expanded collaboration" between the companies. That will include AWS being the first cloud provider to launch services with Nvidia's new GH200 NVL32 "superchips" that will ship next year.

This was the first time Huang appeared at the annual confab for AWS, which has been a major customer of Nvidia's data-center business over the past several years. And it came as Amazon has gone further than its cloud rivals in designing its own in-house chips, while Nvidia has been pushing into offering cloud-computing services. Amazon used the same keynote to unveil the fourth version of its Graviton processor and the second version of its Trainium accelerator—the latter of which competes with Nvidia's chips in the training of AI models.

Amazon CEO Andy Jassy bragged on its third-quarter call last month that its Trainium chips "have better price performance characteristics than the other options out there, but also the fact that you can get access to them"—a dig at the shortage of Nvidia's chips.

The truth is that the two companies need each other. Nvidia's early moves in AI gave it a strong position that can't be fully replicated even by in-house chips from tech giants, who can custom design silicon for their networks. That has been apparent in Nvidia's recent results; its data-center sales quadrupled over the past two quarters compared with the same period last year. Nvidia credited cloud-service providers as accounting for about half those sales.

But Nvidia can't afford to alienate the biggest buyer in the market. It is facing the prospect its sales to China could take a hit because of new export controls, making a strong relationship with a big U.S. customer more important. —Dan Gallagher

Oil Companies Bet on Hot Air in Climate Talks

Oil-and-gas companies are banking on a glacial pace of progress on cutting fossil-fuel use in this year's climate negotiations—and they may well get it.

The U.N. Climate Change Conference, COP28, begins Thursday with an oily twist. It is being hosted by the United Arab Emirates, which pumps more than 3 million barrels of oil a day. The Organization of the Petroleum Exporting Countries, of which the U.A.E. is a member, will have a pavilion at the climate summit for the first time.

COP28's president, Sultan al-Jaber, is the boss of Abu Dhabi National Oil Co., which plans to boost fossil-fuel production by up to 20% by 2027. But Jaber says the oil-and-gas industry needs to be involved in talks about transforming the world's energy system.

Governments attending the summit are expected to agree to a new target to triple global renewable-power capacity by 2030, and to boost energy efficiency. There is debate about whether they should agree to cut fossil fuels. The European Union and the G-7 signaled

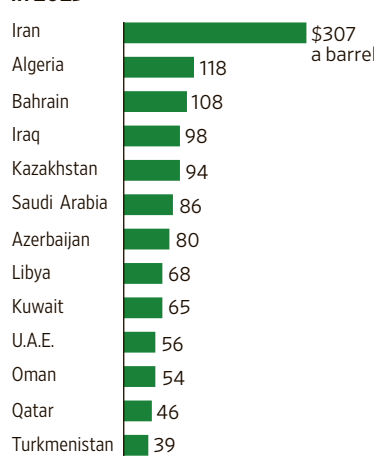
they would back a new target.

It would send the clearest signal yet to oil-and-gas companies and their shareholders that demand could start to fall soon. This seems unlikely given countries that rely on the industry to balance their books can torpedo a deal. About 20 nations get more than 30% of government revenues from fossil fuels, including Saudi Arabia and the U.A.E., according to analysis by the Carbon Tracker Initiative.

The oil industry isn't prepared for dramatic developments. Last year, fossil-fuel players spent \$20 billion on low-carbon investments, according to the International Energy Agency—1% of global clean-energy funding. And of the small contribution, more than 60% came from four European companies: **Equinor**, **TotalEnergies**, **Shell** and **BP**.

At COP, there may be a pledge from the industry to move faster by investing in renewable energy to run refineries and reduce the methane emissions belched out during fossil-fuel exploration and production. But this won't fix the main problem: Most emissions are re-

Fiscal breakeven oil price of Middle East and Central Asia petrostates, in 2023



Source: Carbon Tracker

leased when oil and gas are burned.

Oil-and-gas bosses are reluctant to invest much in low-carbon alternatives such as biofuels, green hydrogen, wind or solar power because they are less profitable than their existing business and often require different skills. They are relying on

carbon capture and storage to allow continued and even increased production, says Natalie Jones, policy adviser at the International Institute for Sustainable Development.

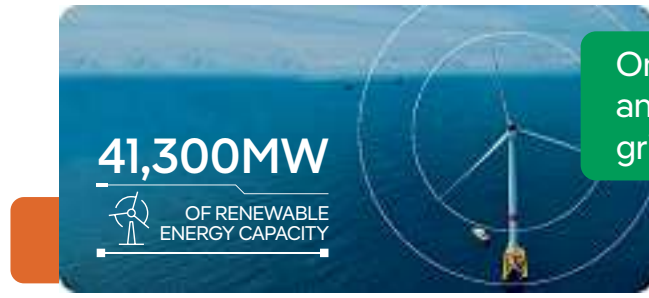
But rolling out this technology on a meaningful scale might be even worse for profits than a shift to renewable energy. According to the IEA, the world will need to trap and store 32 billion metric tons of carbon by 2050 unless it begins to lower oil-and-gas use. Building the necessary network of plants would require more than \$3.5 trillion of investment every year between now and 2050—equivalent to the oil-and-gas industry's entire annual revenue. Operating the facilities would suck up power equivalent to global electricity demand in 2022.

With no easy options for the energy transition, oil-and-gas companies seem to be hoping the world stays hooked on their core products. COP28 probably won't change their minds. The flip side is that it won't stop the questions about the industry's future either.

—Carol Ryan

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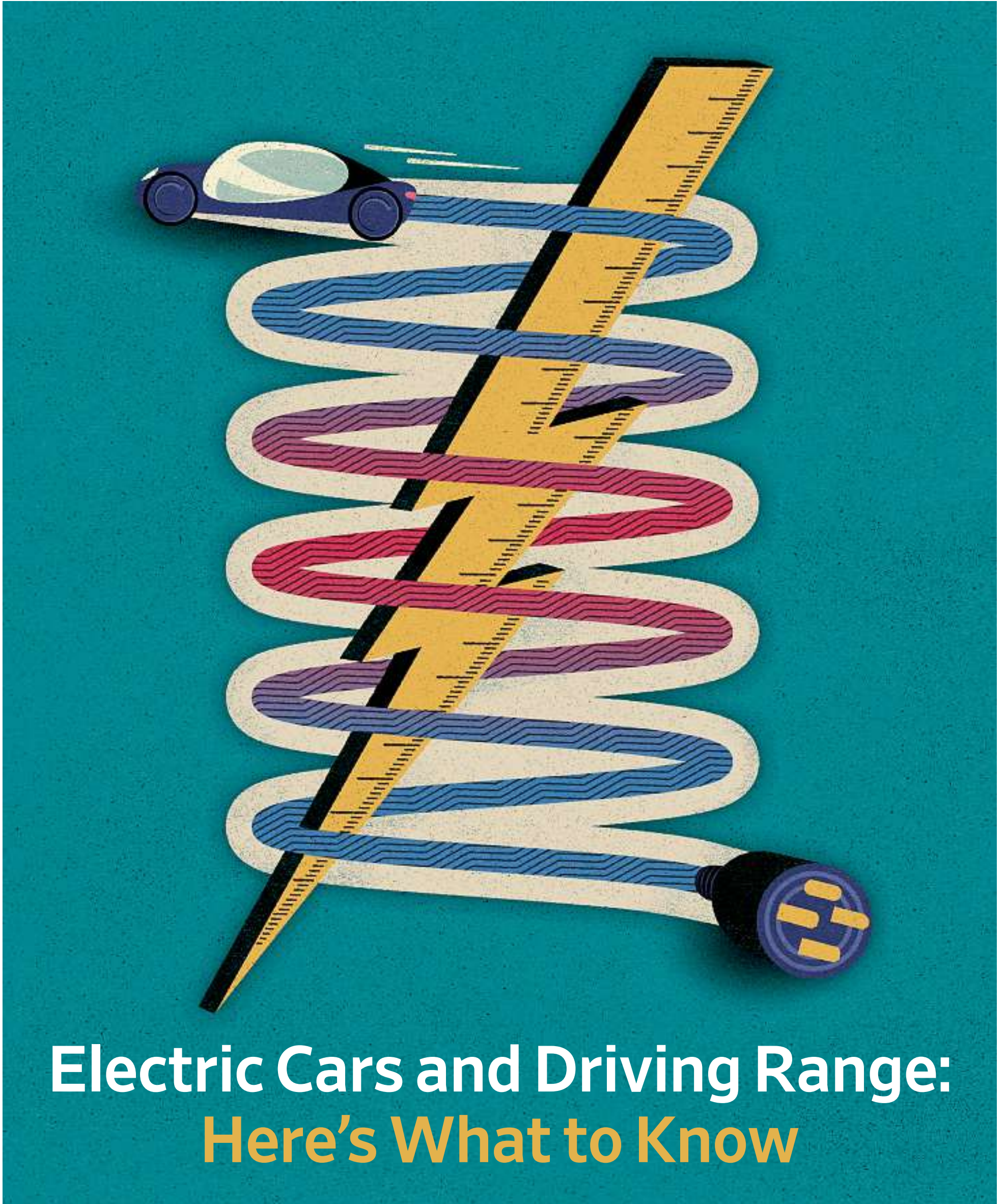
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Electric Cars and Driving Range: Here's What to Know

How far can an electric car really go on a full charge? **What can you do to make it go farther?** We answer these and other questions that EV buyers often ask.

BY BART ZIEGLER

MANY PEOPLE considering an electric vehicle are turned off by their prices or the paucity of public charging stations. But the biggest roadblock often is “range anxiety”—the fear of getting stuck on a desolate road with a dead battery.

All EVs carry window stickers stating how far they should go on a full charge. Yet these range estimates—overseen by the Environmental Protection Agency and touted in car-makers’ ads—can be wrong in either direction: either overstating or

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Inside



FORMULA E

Formula E, the Formula One of electric cars, is gaining traction. **R2**

Safer Drivers

Is AI more skilled than we are? WSJ readers respond. **R5**



CLEANING UP

Ammonia could be a clean-energy answer. Fertilizer companies are betting on it. **R9**



Scan this code to learn what's being done to reduce the high ratio of broken EV charging stations.

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Move Over, Formula One. Here Comes Formula E.

Electric racing cars move a little slower, and run shorter races. But its fans say they are the future.

BY DIETER HOLGER

ELECTRIC-CAR racing is picking up speed and fans. But can it gain more traction in the U.S.? For electric cars, the racing circuit is known as Formula E, a nod to the more-established and gasoline-powered Formula One circuit. And although Formula E cars are slower—and the races are shorter—than with Formula One, Formula E has been able to leverage its technological limitations in ways that excite its smaller but growing international fan base.

Its top drivers say Formula E is more about strategy than who has the fastest car. “Anyone who watches it says it’s the most unpredictable motor-sport category to watch,” says Jake Dennis, a British driver for the Indianapolis-based Andretti team and world champion driver of the 2022-23 Formula E season.

In under an hour, cars capable of reaching 200 miles an hour maneuver on a tight track, usually narrow city streets, their drivers constantly calculating when to speed past competitors and when they need to save enough power to still reach the finish line. Cars will pass each other hundreds of times, which is unheard of in Formula One. New York, Miami and Portland, Ore., have drawn thousands of spectators. “It creates a whole world of excitement,” says Dennis, who got his start in motor sports in kart racing.

Thanks to Netflix

Formula E, launched in 2014, got a big boost when the hit Netflix documentary series “Formula One: Drive to Survive” came out in 2019. While that series is devoted to Formula One racing, it drove new interest in motor sports in general as TV audiences flocked to the show during Covid lockdowns.

Formula E says that it has 344 million fans worldwide. It doesn’t provide its total audience numbers by country but says its U.S. fan base grew 30% in 2023. The circuit currently is composed of 11 teams, based in Britain, France, Germany, the U.S. and Monaco, and each uses advanced EV technology from par-

ticipating automakers. Andretti, a U.S.-based team, uses a Porsche powertrain. DS Penske, a team whose website says it is based in Southern California, uses a powertrain from France’s DS Automobiles.

However, Formula E attracts only about half as many TV viewers as Formula One in the U.S. A July broadcast by CBS of a Formula E race in London drew around 606,000 viewers, according to ratings provided by Nielsen. By comparison, an ESPN broadcast of Formula One’s Grand Prix in Belgium that same month attracted around 1.17 million viewers. NASCAR, meanwhile, continues to dwarf both Formulas One and E, drawing around 2.43 million viewers in a single USA Network broadcast in July.

were broadcast by CBS weren’t carried live. Formula E recently has struck a deal with Roku to stream races that aren’t aired by CBS. It marks Roku’s first offering for live sports.

Range issue

Formula E, meanwhile, is working on issues that could stand in the way of its building a bigger audience in the U.S.—issues like the limits of EV technology.

In the first seasons, the limited battery life for the cars meant they couldn’t last the entire race. Halfway through, drivers would get into new cars to keep racing. And top speeds were about 140 mph.

Battery technology has improved sharply since then, with

end before they really get going,” Blackstock says.

Formula E is testing in-race charging, Chief Executive Jeff Dodds says, with a goal of 30-second charging times. The fast chargers being tested could charge some of today’s consumer electric cars to full capacity in around seven minutes, compared with the 30 to 45 minutes it takes with other fast chargers. For now, he adds, the fast charging would just give the drivers more power and wouldn’t be used to extend the race. Dodds says the technology “will likely be introduced in the near future.”

Still, some experts in racing engineering are skeptical about how quickly further advances in Formula E battery technology will happen.

A preseason run in Spain last year. Drivers say the races are more about strategy than whose car is fastest.

Big car companies

Participation of big auto companies in Formula E has come in waves. A few years ago, German automakers Mercedes and BMW dominated Formula E, but then exited after they won races and developed their EV technology for the consumer market. Since then, McLaren and Maserati have joined the series and are bringing out their own electric cars for the consumer market. So far, no U.S. automaker has sponsored or launched a team in Formula E.

Jaguar, after leaving Formula One more than a decade ago, started a Formula E team in 2016 around the same time it launched its first all-electric car for consumers, the Jaguar I-Pace. Jaguar aims to be a fully



Of the Formula E circuit’s 17 scheduled races for 2024, meanwhile, only two currently will be held in the U.S.—in Portland on June 29 and 30.

Until recently, TV viewing options in the U.S. for Formula E races were limited to the CBS Sports Network on cable, and sometimes the main CBS channel. In a press release earlier this year, CBS said it would expand its partnership with Formula E and broadcast more live races, which will appear on the main CBS channel and Paramount+. So far, though, the races themselves are mostly held outside the U.S. and at times that often don’t align for U.S. fans to watch. Some races that

Formula E cars today capable of reaching 200 mph, compared with more than 220 mph for Formula One cars. But while battery life has improved, the batteries still can’t hold enough energy for longer races. Formula E races last 45 minutes to an hour compared with around 90 minutes for Formula One and anywhere from two to five hours for NASCAR.

Elizabeth Blackstock, a car-racing commentator and author of “Racing With Rich Energy,” a book on Formula One’s sponsorships, says spectators enjoy the unpredictability and chaos of Formula E races. But, she adds, the races would be more exciting if they lasted longer.

“Sometimes they feel like they

Kyle Forster, a former aerodynamicist for Formula One’s Mercedes-AMG Petronas team, says, “Over one lap, an electric car can be very fast compared to a Formula One car. But over a race, it just comes back to the energy-density problem.” Batteries are typically heavier than fuel tanks and deliver less energy in relation to their mass.

If batteries can be developed that are lighter and have greater energy density, the Formula E car “should be faster,” says Forster. But, he adds that while “a lot of people expect the improvements in batteries to come in at the rate of computer improvements, batteries just don’t improve at that sort of rate.”

The 2023 Hankook London ePrix in London in July. Most races are outside the U.S. at this point.

electric car company in 2025.

For many automakers, Formula E is already more important than Formula One, says James Barclay, Jaguar’s team director for Formula E.

“Formula E was perfectly timed,” says Barclay. “The technology we’re developing is more relevant to the cars we produce in the future.”

Dieter Holger is a writer in Santa Cruz, Calif. He can be reached at reports@wsj.com.

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How Far Will My Electric Car Really Go? Depends On Whom You Ask

Continued from page R1
understating the distance that can be driven, sometimes by 25% or more.

How can that be? Below are questions and answers about how driving ranges are calculated, what factors affect the range, and things EV owners can do to go farther on a charge.

• **How far will an electric vehicle go on a full battery?**

The distance, according to EPA testing, ranges from 516 miles for the 2023 Lucid Air Grand Touring with 19-inch wheels to 100 miles for the 2023 Mazda MX-30.

Most EVs are in the 200- to 300-mile range. While that is less than the distance that many gasoline-engine cars can go on a full tank, it makes them suitable for most people's daily driving and medium-size trips. Yet it can complicate longer journeys, especially since public chargers can be far apart, occupied or out of service. Plus, it takes many times longer to charge an EV than to fill a tank with gas.

• **How accurate are the EPA range estimates?**

Testing by Car and Driver magazine found that few vehicles go as far as the EPA stickers say. On average, the distance was 12.5% shorter, according to the peer-reviewed study distributed by SAE International, formerly the Society of Automotive Engineers.

In some cases, the estimates were further off: The driving range of Teslas fell below their EPA estimate by 26% on average, the greatest shortfall of any EV brand the magazine tested. Separately, federal prosecutors have sought information about the driving range of Teslas, The Wall Street Journal reported. Tesla didn't respond to a request for comment.

The study also said Ford's F-150 Lightning pickup truck went 230 miles compared with the EPA's 300-mile estimate, while the Chevrolet Bolt EV went 220 miles versus the EPA's 259. A GM spokesman said that

"actual range may vary based on several factors, including things like temperature, terrain/road type, battery age, loading, use and maintenance." Ford said in a statement that "the EPA [figure] is a standard. Real-world range is affected by many factors, including driving style, weather, temperature and if the battery has been preconditioned."

Meanwhile, testing by the car-shopping site Edmunds found that most vehicles *beat* their EPA estimates. It said the Ford Lightning went 332 miles on a charge, while the Chevy Bolt went 265 miles.

• **That is confusing. How can the test results vary so much?**

Driving range depends largely on the mixture of highway and city roads used for testing. Unlike gasoline-powered cars, EVs are more efficient in stop-and-go driving because slowing down recharges their batteries through a process called regenerative braking. Conversely, traveling at a high speed can eat up a bat-

ter's power faster, while many gas-engine cars meet or exceed their EPA highway miles-per-gallon figure.

• **What's the reasoning behind the different testing methods?**

Edmunds believes the high proportion of city driving it uses is more representative of typical EV owners, says Jonathan El-falan, Edmunds's director of vehicle testing. "Most of the driving [in an EV] isn't going to be road-tripping but driving around town," he says.

Car and Driver, conversely, says its all-highway testing is deliberately more taxing than the EPA method. High-speed interstate driving "really isn't covered by the EPA's methodology," says Dave VanderWerp, the magazine's testing director. "Even for people driving modest highway commutes, we think they'd want to know that their car could get 20%-30% less range than stated on the window sticker."

• **What does the EPA say about the accuracy of its range figures?**



Range depends largely on the mixture of highway and city roads used for the testing. Shown, L.A. traffic.

• **What types of driving situations do the various tests use?**

Car and Driver uses only highway driving to see how far an EV will go at a steady 75 mph before running out of juice. Edmunds uses a mix of 60% city driving and 40% highway. The EPA test, performed on a treadmill, simulates a mixture of 55% highway

The agency declined to make a representative available to comment, but said in a statement: "Just like there are variations in EPA's fuel-economy label [for gas-engine cars] and people's actual experience on the road for a given make and model of cars/SUVs, BEV [battery electric vehicle] range can exceed or fall short of the label value."

• **What should an EV shopper do with these contradictory range estimates?**

Pick the one based on the testing method that you think matches how you generally will drive, highway versus city. When shopping for a car, be sure to compare apples to apples—don't, for instance, compare the EPA range estimate for one vehicle with the Edmunds one for another. And view all these figures with skepticism. The estimates are just that.

• **Since range is so important to many EV buyers, why don't carmakers simply add more batteries to provide greater driving distance?**

Batteries are heavy and are the most expensive component in an EV, making up some 30% of the overall vehicle cost. Adding more could cut into a vehicle's profit margin while the added weight means yet more battery power would be used to move the car.

But battery costs have declined over the past 10 years and are expected to continue to fall, while new battery technologies likely will increase their storage capacity. Already, some of the newest EV models can store more power at similar sticker prices to older ones.

• **What can an EV owner do to increase driving range?**

The easiest thing is to slow down. High speeds eat up battery life faster. Traveling at 80 miles an hour instead of 65 can cut the driving range by 17%, according to testing by Geotab, a Canadian transportation-data company. And though a primal appeal of EVs is their zippy take-off, hard acceleration depletes a battery much quicker than gentle acceleration.

• **Does cold weather lower the driving range?**

It does, and sometimes by a great amount. The batteries are used to heat the car's interior—there is no engine creating heat as a byproduct as in a gasoline car. And many EVs also use electricity to heat the batteries themselves, since cold can deteriorate the chemical reaction that produces power.

Testing by Consumer Reports found that driving in 15- to 20-degrees Fahrenheit weather at 70 mph can reduce range by about 25% compared to similar-speed driving in 65 degrees.

which many EVs have, so you be comfortable even if you keep the cabin temperature lower. In the summer, try to park in the shade.

• **What about the impact from driving in a mountainous area?**

Going up hills takes more power, so yes, it drains the battery faster, though EVs have an advantage over gas vehicles in that braking on the downside of hills returns juice to the batteries with regenerative braking.

• **Are there other factors that can affect range?**

Tires play a role. Beefy all-terrain tires can eat up more electricity than standard ones, as can larger-diameter ones. And underinflated tires create more rolling resistance, and so help drain the batteries.

• **Most EVs give the remaining driving range on a dashboard screen. Are these projections accurate?**

The meters are supposed to take into account your speed, outside temperature and other factors to keep you apprised in real time of how much farther you can travel. But EV owners and car-magazine testers complain that these "distance to empty" gauges can suddenly drop precipitously if you go from urban driving to a high-speed highway, or enter mountainous territory.

So be careful about overly relying on these gauges and take advantage of opportunities to top off your battery during a multihour trip. These stops could be as short as 10 or 15 minutes during a bathroom or coffee break, if you can find a high-powered DC charger.

• **Before embarking on a long trip, what should an EV owner do?**

Fully charge the car at home before departing.

This sounds obvious but can be controversial, since many experts say that routinely charging past 80% of a battery's capacity can shorten its life. But they also say that charging to 100% occasionally won't do damage. Moreover, plan your charging stops in advance to ease the I-might-run-out panic.

• **So battery life is an issue with EVs, just as with smartphones?**

Yes, an EV battery's ability to fully charge will degrade with use and age, likely leading to shorter driving range. Living in a hot area also plays a role. The federal government requires an eight-year/100,000-mile warranty on EV batteries for serious failure, while some EV makers go further and cover degradation of charging capacity. Replacing a bad battery costs many thousands of dollars.

• **What tools are available to map out charging stations?**

Your EV likely provides software on the navigation screen as well as a phone app that show charging stations. Google and Apple maps provide a similar service, as do apps and websites of charging-station networks.

But always have a backup stop in mind—you might arrive at a charging station and find that cars are lined up waiting or that some of the chargers are broken. Damaged or dysfunctional chargers have been a continuing issue for the industry.

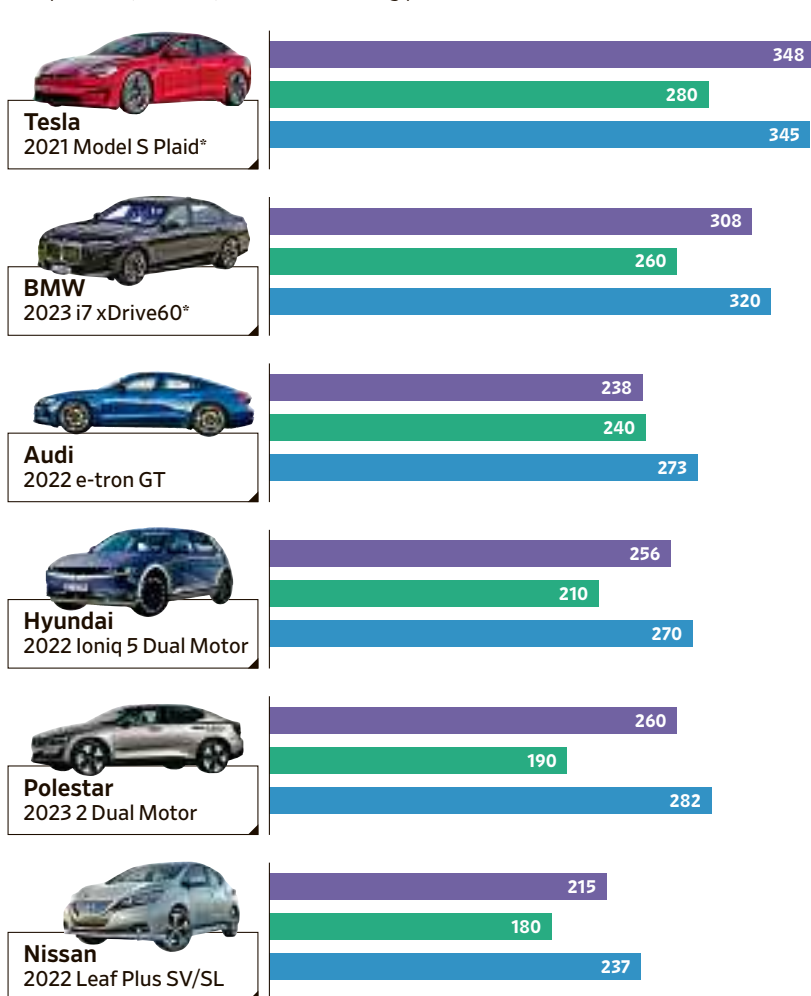
• **Any more tips?**

Be sure to carry a portable charger with you—as a last resort you could plug it into any 120-volt outlet to get a dribble of juice.

Bart Ziegler is a former Wall Street Journal editor. He can be reached at reports@wsj.com.

Electric Slide

The estimated driving range for a fully charged electric vehicle varies widely, depending mostly on the mixture of highway and city driving used in testing. Here are some comparisons, in miles, from three testing providers.



Ranges may vary for different model years than those tested. *With optional 21-inch wheels
Sources: EPA, Car and Driver, Edmunds

Car and Driver magazine says that its all-highway testing is deliberately more taxing than the EPA's method. The EPA, for its part, says that EV range can vary from the label just as it can with gas-engine cars.

at the start of each of three such drives. The result: range dropped by about 50%.

• **Does air conditioning degrade range?**

Testing by Consumer Reports and others has found that using the AC has a much lower impact on battery range than cold weather, though that effect seems to increase in heat above 85 degrees.

• **I don't want to freeze or bake in my car to get more mileage. What can I do?**

"Precondition" your EV before driving off, says Alex Knizek, manager of automotive testing and insights at Consumer Reports. In other words, chill or heat it while it is still plugged in to a charger at home or work rather than using battery power on the road to do so. In the winter, turn on the seat heaters,

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Will You Keep Driving When Autonomous Cars Surpass Humans?

Some WSJ readers will gladly give up driving if AI does it safer. Others say no way.

BY DEMETRIA GALLEGOS

FOR EVERY story about advancements in artificial intelligence technology in the driverless cars business, there are concerning headlines

about recalls and accidents with autonomous vehicles. Still, we appear to be approaching a time when self-driving systems will be safer than having humans behind the wheel.

How will you handle such an inflection point?

As part of a series on the everyday ethical dilemmas posed by AI, we asked Wall Street Journal readers the following questions:

If AI systems become appreciably better at driving cars than humans are, would it be unethical for people to drive on their own, since this increases the risk of an accident and could cost tens of thousands of lives a year? What if AI was only somewhat better, but in the aggregate would still save thousands of lives a year?

Here are some of the thoughts they shared.

AI can't account for human behavior

"In the aggregate" seems to be the justification. Will that be a comfort when the system fails and runs into a school bus filled with children? AI may be better than some drivers, perhaps the elderly and impaired, or the very juvenile. But it cannot make the judgment that the guy in the next lane who is blaring music and revving his engine is probably going to jump the green light aggressively, even if you hear a siren in the distance. Driving isn't just assessing the movement of boxes, but the expected behaviors of their drivers.

—Dorothy McGarrah, Woodland Hills, Calif.

It is simple math

Self-driving cars should be approved for mass use the second

it can be shown that the probability of crashing is equal to or less than a human. That was *yesterday*, in my opinion.

Once AI's safety advantage is proven, if you can find an insurer for your self-driven Porsche, have at it.

—Alan Wells, Louisville, Ky.

Keep out of traffic

Yes, humans should not be allowed to drive, at least not in traffic, when AI reaches any level that cuts back on traffic accidents. If humans, generally, were smart enough to make a good decision about whether they should drive—given a safer, convenient, affordable alternative—they would be smart enough to drive safely now.

—Rob Norton, Sammamish, Wash.

We're only human

Anything that can do a job better or is at par with humans should be adopted. The testing of AI's driving capability in unique scenarios is required but overall, AI drivers aren't emotional, don't have road rage, won't be distracted with other things happening and they will not be tired.

—Nauman Sheikh, Marriottsville, Md.

Just like smoking

It wouldn't be unethical, but auto-insurance companies and their actuaries will simply factor "human driver" into the insurance premium the driver pays. The better AI-driven cars get at driving—and "driving down" accidents—the more expensive it will be to drive on your own. It is just like people who smoke pay higher insurance premiums.

—Tim McGuckin, Reston, Va.

Safety isn't everything

Safety cannot be made the be-all, end-all for how individuals are permitted to live and find happiness. It is somewhat unsafe to travel in a jet or a train, but does that make it unethical to

use those to travel? We know it is unsafe to smoke cigarettes, and there's an ethical argument about how smoking hurts others, but we still let people choose to smoke, just drawing lines around where.

I'm sure that if the AI-driven cars became prevalent, those who wanted to drive themselves would be made pariahs, as having no concern for the welfare of their fellow humans. The battle between individual freedoms and the government mandating what is good for the public is just getting started.

—Carol Healey, San Francisco

Depends how good AI gets

If AI-guided cars become what designers have been trying to achieve (nearly perfectly safe), then manually driving a car on public roads (except for an emergency) should be a traffic violation for the first offense, a misdemeanor for the second offense, and a felony for any subsequent offense. Safety of the general public takes precedence over a person's desires.

But if an AI is only slightly better, that's a different story. Those who are "driving challenged" (like most humans) are lazy, so they'll take to using AI much more readily than a skilled human driver. In that case, leave everything alone: Allow both manually and AI-guided vehicles on the roads.

—John Parziale, Ocala, Fla.

Dollars will decide

The cost of repairing damaged vehicles and providing medical care for accident survivors is rising quickly, and insurance rates are rising in response. When next-generation, self-driving cars are rarely involved in accidents, insurance rates will rise dramatically for people who insist upon self-operating the vehicle.

—Dave Christy, San Luis Obispo, Calif.

Distrusting the data

The most important step toward autonomous driving is the fund-

ing of unbiased studies and a thorough review of the metadata before the federal government fully approving autonomous driving. Most of the studies to date are biased, being sponsored by big tech and auto companies.

Only after a thorough and unbiased data analysis can we move toward autonomous driving. Human drivers should be allowed, however insurance premiums will be much higher for human drivers. That will discourage humans behind the wheel.

—Nicholas Rao, Roswell, Ga.

Who's to blame?

People make ethical decisions while driving. Someone needs to be responsible for those decisions, not something. If AI messes up, there is no accountability. If my doctor messes up, he will have to deal with that emotionally, socially, legally and financially. AI doesn't, which makes it dangerous. Can AI have checks and balances in the same way humans can?

—Brad Grizenko, Wake Forest, N.C.

Almost all or nothing

It will only be unethical for humans to drive when (and if) AI consistently and reliably can drive vehicles, under all circumstances, better than humans, and 99% of vehicles have self-driving.

—Jeff Emerson, Portland, Maine.

'Somewhat better'? Hmm.

Yes, at some point it will be unethical for people to drive on their own. Right now it's already so with inexperienced drivers or people with poor vision. This logic is similar when applied to AI. As to the question of the "somewhat better AI" warranting limits in human driving, the quick answer is "no." The answer, however, can change back to "yes" should limiting human driving make a big difference in the evolution of lifesaving technology. That is, should AI's development be greatly hastened with less human driving, then this is a significant factor supporting the human driving limitations.

—Wendelin Comen, Raleigh, N.C.

Not an ethics question

We already have a safer alternative to humans driving cars—flying in airplanes. Still, lots of people prefer to drive. I don't think it's unethical to prefer driving over flying, so I don't think it would be unethical to drive instead of handing the wheel over to an AI.

—Clint Eubanks, Houston

Driving test for humans

Humans should be able to take more sophisticated, logic-based driving tests. If they score within the range of an AI vehicle's driving, they should be allowed to drive. Another idea would be to have separate roads for humans and for AI-driven machines.

—Dawn Taggblom, DeLand, Fla.

God-given right

Take my car away? No way. People in many countries and cultures consider their decision to drive as a God-given right. Especially in the United States. No matter what the data of auto manufacturers and insurance companies says, mandating AI as the designated driver is unethical and a dangerous precedent. Only exception, and then on an individual case-by-case basis: someone who shouldn't drive because of age, physical limitations, or mental or emotional problems.

—Gerry Mandel, St. Louis

Ultimately, no choice

We have continually demonstrated that we need all the help we can get to save us from ourselves. When my friends drive away, I admonish them to stay alert, as every smartphone-wielding driver they meet is playing with a lethal weapon.

AI will eventually be a mandatory vehicle safety system that takes over when humans choose to control the vehicle themselves, but make a subsequent error in judgment that could prove injurious or lethal to themselves or others.

—Wister Smith, Scottsboro, Ala.

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JOURNAL REPORT | ALTERNATIVE ENERGY

What Is the Future for Carbon Capture Technology?

There's a debate over whether carbon capture is crucial for emissions-reduction goals, or is a distraction from the transition to renewable energy

BY BART ZIEGLER

MAJOR efforts are under way to reduce emissions of carbon dioxide, the gas that is the main cause of global warming. A key goal is to move away from using oil, natural gas and coal in power generation and other industrial processes that release carbon dioxide as a byproduct.

But another strategy, still in its early days, is to capture the carbon dioxide from fossil fuels before it enters the atmosphere and store it deep underground. So far this technology, which involves using chemicals to absorb the carbon found in exhaust fumes, is expensive and energy-consuming. Also, approved storage sites are scarce. But some experts believe this type of approach is needed to meet carbon-reduction goals.

Others say that carbon capture is a wasteful distraction from transitioning much faster to green energy that doesn't create the pollutant in the first place.

The Wall Street Journal gathered three experts to discuss carbon capture and storage, or CCS: Charles Harvey, a professor of civil and environmental engineering at Massachusetts Institute of Technology; Benjamin Longstreth, global director of carbon capture for the Boston-based environmental group Clean Air Task Force; and Naomi Oreskes, professor of the history of science and affiliated professor of earth and planetary sciences at Harvard University.

Below are edited excerpts from our conversation, held online.

The big picture

• **WSJ:** Is carbon capture needed to combat global warming?

• **NAOMI ORESKES:** The idea of capturing carbon and storing it in the ground is obviously attractive. If we could do it economically while at the same time phasing out fossil fuels so that we stop adding to the problem, that would be great. But that is not what is happening.

What is happening is the U.S. government has created a massive new subsidy for the already heavily subsidized fossil-fuel industry, in the form of the 45Q tax credit for CCS. The credits are mostly going to fossil-fuel companies whose stated goal is to continue to use fossil fuels. They are helping to prop up an industry that needs to see the sun set.

In the future, CCS will likely be part of the portfolio of solutions to fix, and maybe, ideally, reverse climate change. But right now it is deflecting attention away from the urgent need to phase down, and ultimately more or less phase out, carbon-polluting fossil fuels.

• **WSJ:** Ben, is carbon capture a diversion that is largely benefiting fossil-fuel companies?

• **BENJAMIN LONGSTRETH:** Incentives for carbon capture aren't a subsidy. Companies continue to extract and sell fossil fuels because of the continued demand for their products, not because Congress passed a tax credit for pollution abatement. Nor do incentives for carbon capture come at the expense of investments in wind and solar.

The opposite is true. We were able to pass incentives for renewables because those were bundled with incentives for carbon capture and nuclear. Different constituencies support carbon capture, renewables and nuclear.

To maximize our chances of hitting our decarbonization goals we need a broad portfolio of decarbonization tools and carbon capture is a key part.

• **WSJ:** Charlie, do we need carbon capture as part of the toolbox to combat global warming?

• **CHARLES HARVEY:** Fifteen years ago, I was a small part of a com-



• Charles Harvey



• Naomi Oreskes



• Benjamin Longstreth

pany dedicated to carbon capture and storage. We had a very successful pitch to investors that CCS was a mature technology that provided the least expensive way to cut industrial emissions. For five years, we thrived. But then the costs of renewable energy and energy storage plummeted. By 2014 we couldn't honestly claim that CCS was a good option for reducing emissions.

Over the past 15 years, billions of taxpayer dollars have been wasted on CCS projects that failed to inject any carbon into the ground. The small amount that has been sequestered is almost all for enhanced oil recovery, a process in which carbon dioxide is injected into oil fields to force out more petroleum.

• **WSJ:** Ben, do you agree that taxpayer money was wasted on CCS projects? And what about the fact that most CCS so far has been used to enhance oil extraction?

• **LONGSTRETH:** Government support has a key role to play in advancing new climate technologies. This was true for renewables and electric vehicles, and it is true for carbon capture. This is because early projects carry risks.

make cement. In other words, we need carbon capture to decarbonize the process of making cement even if we tried to use a different fuel.

Many other industrial processes involve chemical reactions that release CO₂ as an inherent part of making the product. There may eventually be ways of making these products at scale in a way that doesn't cause pollution, but meanwhile we will emit too much carbon—we should be using carbon capture to decarbonize as much as possible today.

• **HARVEY:** Steel provides a clear example of how subsidizing CCS kneecaps technologies that don't produce carbon dioxide to begin with. Steel is hard to decarbonize because conventional methods require high temperatures and use coke. Private capital is flowing toward zero-carbon solutions. If we massively subsidize CCS for steel, we will block promising technologies that don't produce CO₂.

• **LONGSTRETH:** Look, there is unfortunately more than enough pollution to go around. We can use carbon capture to cut pollution from steel plants today and there will still be plenty of opportunities for new technologies to enter the market for low-carbon steel in the future.

jected over a billion tons of carbon dioxide into geologic formations to enhance oil and gas extraction. There have been no documented cases of CO₂ leaking into underground sources of drinking water.

• **ORESKE:** Charlie and I are both geologists, and I think we can say with confidence that there is no such thing as a "leakproof" place to keep gas forever.

The obvious suggestion for storage is depleted oil and gas fields. But a depleted field isn't the same as the original field. It has been perforated by wells, which are essentially short circuits to the surface. The wells will be sealed, but we know from more than 100 years of experience in the oil-and-gas industry that wells leak.

And CO₂ isn't the same as oil. So a reservoir that safely held oil for millions of years won't necessarily safely store CO₂.

Ben says there have been "no documented cases of CO₂ leakage into underground sources of drinking water." But it isn't at all clear that existing monitoring is adequate to detect leakage.

The pipeline problem

• **WSJ:** Let's discuss how to get captured carbon to storage sites.



SNATCHING THE CARBON: The Shell Quest Carbon Capture and Storage facility near Edmonton, Alberta.

Importantly, most of the money that's available for carbon capture, the 45Q tax credit, is a production tax credit—the reward only kicks in if the carbon pollution is captured and stored. Its design inherently prevents waste of taxpayer money.

As for enhanced oil recovery, almost all of the recent activity on the carbon-capture side has been focused on geologic storage of carbon that doesn't involve enhanced oil recovery. Where new carbon-capture projects do use enhanced oil recovery, the captured carbon dioxide will likely displace carbon dioxide that is currently mined from natural underground deposits.

Targeted industries

• **WSJ:** Aren't there some industries for which carbon capture and storage might be the only practical way to reduce their carbon-dioxide emissions?

• **LONGSTRETH:** We need CCS to decarbonize cement, steel and chemical processing. In making cement, 60% of the emissions are process emissions, meaning that the emissions occur no matter how you heat the limestone used to

There is no reason why using carbon capture to cut pollution today will block promising technologies.

The storage issue

• **WSJ:** Where would captured carbon dioxide be stored? Are there leakproof and permanent places to keep the gas, which liquefies when injected deep underground?

• **LONGSTRETH:** Yes, there are places where captured carbon dioxide can be safely stored. The fact that other fluids like oil and gas have been underground for millions of years shows that fluids can remain underground for that length of time. We know that carbon dioxide in particular can remain underground for millennia because large accumulations of primordial CO₂ have been trapped for millions of years.

The Environmental Protection Agency's rules for geologic storage of carbon dioxide require careful analysis of geology to show that injected CO₂ will remain underground, and extensive monitoring to prove that that is actually happening.

In the U.S., we have already in-

There aren't enough pipelines to do that.

• **HARVEY:** The existing pipelines are for transporting geologic CO₂ to enhanced-oil-recovery fields. We would need to build out a new network for industrial sources. The cost is prohibitive and the community resistance is intense. Emissions will be cut much more efficiently, with less cost, through wind, solar, energy storage, electrifying transportation, heat pumps, better agricultural and forestry practices, insulating buildings, improving efficiency, stopping methane leaks and grid improvements.

• **LONGSTRETH:** There are over 5,000 miles of existing carbon-dioxide pipelines in the U.S. These have been operating for 50 years. We will be able to build the additional pipelines that we need and can do so carefully and with strong community engagement.

All of the decarbonization technologies that we are relying on need significant infrastructure build-out. To hit our climate goals we need to build this infrastructure, whether it is transmission lines or carbon-dioxide pipelines.

• **ORESKE:** I don't share Ben's optimistic view. Public resistance to pipelines is dramatically increasing for a variety of reasons, including the gross infringements we have witnessed in recent years on tribal authority, on local governance and on private property rights.

• **LONGSTRETH:** Naomi is right that resistance to pipelines has increased. This has mostly been opposition to pipelines that would carry fossil fuels. But for the most part we have been able to build the pipelines we need. We have over 2 million miles of fuel pipelines in the U.S. We will need to build just a tiny fraction of this mileage for carbon management.

• **WSJ:** What about Charlie's contention that building carbon-dioxide pipelines would be too expensive? Who would pay for them?

• **LONGSTRETH:** The cost of carbon-dioxide pipelines and geologic storage isn't prohibitive. The Energy Department recently estimated that the cost of building and operating pipelines can be as low as \$5 a ton of carbon dioxide transported for where multiple sources of carbon pollution share a long pipeline. That's a cost that polluting industries can easily pay for.

And in many cases geology for storage is in proximity to pollution sources, so only short, even less expensive pipelines are needed. The overall costs of decarbonizing will be lower if we include carbon capture alongside Charlie's preferred tools.

Federal assistance

• **WSJ:** Will the billions of dollars of money for CCS in recent federal legislation change the outlook for carbon capture? Or will it lead to waste?

• **LONGSTRETH:** The funding in the bipartisan infrastructure law and the Inflation Reduction Act will go a long way to establish a carbon-capture industry. Deploying carbon capture on a range of industries like cement and steel and power plants is key. These early projects can help eliminate the first-of-a-kind risks and bring down the costs.

Estimates suggest that the existing incentives should allow 100 million tons a year of carbon capture by 2030 and potentially up to 300 million tons a year. This level of deployment will set us up to hit the ambitious targets identified by the U.N. Intergovernmental Panel on Climate Change and International Energy Agency.

• **ORESKE:** I am worried that the 45Q tax credit will be worse than waste. As written, the credit helps to perpetuate the fossil-fuel industry, and creates the erroneous impression that the industry's CCS projects are a climate solution.

• **WSJ:** What about the very early efforts to capture carbon in the atmosphere, so-called direct-air capture? Can this very costly and energy-intensive technology become viable?

• **HARVEY:** Natural processes remove a large portion of emissions from the atmosphere. We would be in much worse shape without these sinks. Yet we still will likely need to remove more carbon. However, it is ridiculous to spend \$500 or more per ton of CO₂ removed by direct-air capture. It implies \$6 to clean up the CO₂ from burning each gallon of gasoline.

• **ORESKE:** The only way to slow and eventually stop disruptive climate change is to stop putting more carbon pollution into the atmosphere. However, assuming that we can stabilize and then cut out carbon emissions—a big assumption—then there will come a time when we might try to undo some of the damage. That means removing CO₂ from the atmosphere. So I'd like to see federal funding for a major project to bring down the price.

• **LONGSTRETH:** Yes, carbon-dioxide removal is viable. But it will almost always be cheaper to capture carbon from a smokestack because the concentration of CO₂ is many times higher than it is in the atmosphere. So we need to cut carbon pollution as quickly as possible through CCS and every other means available.

Bart Ziegler is a former Wall Street Journal editor. He can be reached at reports@wsj.com.

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Clockwise from top left: Orsted-owned wind farm off Block Island, R.I.; turbine sections arrive in New Bedford, Mass.; Two Mile Beach in Cape May, N.J.; a humpback off the Provincetown, Mass., coast.

Environmentalists vs. Environmentalists

Proponents of offshore wind projects insist that, when done properly, projects can avoid harming marine species. But critics are skeptical.

BY KEN WELLS

OFFSHORE WIND turbines are pitting environmentalists against environmentalists—threatening to impede progress toward an ambitious U.S. goal for such projects.

The Energy Department estimates offshore wind turbines could produce as much as 20% of regional power needs along the densely populated Eastern Seaboard from Florida to Maine by 2050.

To reach that goal, the Biden administration had hoped to green-light 30 gigawatts from utility-scale offshore wind farms by 2030—enough to power nine million homes. That now seems wildly ambitious, as billions of dollars in projects have been canceled amid staggering cost overruns, soaring interest rates and supply-chain delays.

Added to these economic woes are persistent environmental concerns, as attested to by some recent federal lawsuits. In September, for example, Cape May County, N.J., and a coalition of regional environmental, fisheries and tourism groups sought to stop development of two utility-scale projects off the New Jersey coast.

The projects have since been canceled by the developer for economic reasons. But the lawsuit neatly summarizes environmentalists' concerns with offshore wind farms in general. It contends that the farms present a dire threat to the endangered Atlantic right whale and sea turtles; that spinning turbines kill birds and interfere with seabird migrations; and that vast fields of turbines will disrupt economically vital commercial fisheries by blocking access to fishing grounds and disturbing bottom habitats critical to species like cod, haddock and lobster.

But environmental groups that support offshore wind, including the National Audubon Society, are rushing to its defense. Beyond the obvious benefit of producing millions of megawatts of carbon-free energy, offshore wind farms, when developed properly, can avoid harming marine species or interfering with commercial fisheries, these groups contend. And

some developers are working on technologies that could even go beyond protecting marine life and help it prosper.

"While it takes time to understand and to get it right—and we're all about that—we can't put everything on hold for another decade waiting to see what might happen," says Garry George, senior director for climate strategy for the National Audubon Society. "The biggest threat to whales and the world's oceans is climate change."

Tracking whales

Whales, in fact, are one focus of concern for the environmentalists fighting offshore wind projects. Two federal lawsuits filed against the Vineyard Wind I project 12 miles off the coast of Nantucket island in Massachusetts have been dismissed, but a group calling itself Nantucket Residents Against Turbines filed an appeal in October. The group contends that federal agencies have ignored new information about the dangers to the right whale, and that unless the project is halted it will send the whale "careening further down the road toward extinction."

One theory is that noise from the high-resolution geophysical surveys used to site turbines interferes with whales' navigation mechanisms, potentially sending them into fatal collisions with ships. Inflaming matters are an unusual number of near-shore whale deaths off the Atlantic coast this year—at least 14 humpback whales, and an endangered right whale struck by a ship—that some say are linked to wind-farm surveying and construction.

Vineyard Wind's developers say they have taken abundant precautions to prevent harm to whales. And the industry strongly denies sonar activities are to blame for whale deaths, citing a number of studies by the National Oceanic and Atmospheric Administration published in 2022 that found no causation.

Meanwhile, a number of pro-wind groups, among them the Energy and Policy Institute, which calls itself a green energy "watchdog," contend that the whale-death link to offshore wind is being fanned in part by fossil-fuel interests opposed to renewable energy progress.

Some wind-farm developers are going a step further, working

on technology that would help actively avoid harm to whales. Off the New York state coast, sophisticated monitors are being deployed to track whale movements during turbine construction so as to avoid collisions with ships and construction machinery.

In the long term, such systems may vastly increase knowledge of whale migration patterns and behavior and help better protect whale populations, says Emily Woglom, executive vice president of the Washington, D.C.-based Ocean Conservancy, a nonprofit dedicated to protecting the ocean and its inhabitants.

The industry also is exploring technology to reduce bird deaths from collisions with offshore wind turbines. A technology being tested by Norwegian scientists may soon allow offshore wind turbines everywhere to be equipped with cameras and radar systems that identify approaching flocks of birds—and slow the speed of the blades to reduce the chances of deadly collisions. Land-based turbines in Wyoming are already equipped with a similar system

agreement in mid-2022 between developers and three environmental groups for the South Fork Wind project as an example of how the industry takes environmental concerns seriously.

South Fork, a joint venture between Danish-based Orsted, the world's largest wind-farm developer, and Eversource Energy, a Connecticut-based regional power supplier, is under construction 35 miles east of New York's Long Island. Its 12 towering turbines will generate about 130 megawatts of power—enough to power approximately 70,000 Long Island homes—when it goes into operation early next year.

The agreement with the National Wildlife Federation, Natural Resources Defense Council and Conservation Law Foundation commits the developers and their contractors to "monitoring measures to help ensure right whales are not in close proximity to the construction site during construction activities, implement mitigation to reduce noise during piling, and evaluate other new monitoring technologies."

The developers are testing

The National Audubon Society says voices opposing offshore wind should be heard—but climate change won't wait.

designed to stave off collisions of bald eagles with turbine blades.

Efforts are also being made to keep wind turbines away from areas where they could endanger wildlife. By the time final decisions for offshore wind-farm leases are made by the U.S. Bureau of Ocean Energy Management, "the high-conflict areas" where collisions with birds are most likely have largely been eliminated as options, says the Audubon Society's George. And even then stakeholders—the public, fisheries and localized green groups, and others who might be interested—can voice objections if they feel if some vital issue hasn't been addressed.

"We feel the system is working with adequate safeguards," he says.

Working together

Pro-wind environmentalists point to a detailed mitigation

technologies—infrared thermal underwater cameras and acoustic sensors, among them—that can detect and have the potential to track whales and possibly other forms of marine wildlife. Ocean Conservancy's Woglom notes that these and several other technologies are undergoing independent testing by a group called the Regional Wildlife Science Collaborative, a consortium of federal and state agencies, environmental nonprofits, marine scientists and the offshore wind industry.

The collaborative's goal, she says, is to make sure not only that these technologies work but also that they can be standardized and made available to all offshore wind projects going forward.

Policy makers are also pushing their own forms of mitigation. The New York state Energy Research and Development Authority, which oversees the state's wind-development inter-

ests, recently added a provision that requires the developer that submits the winning bid for any of its offshore wind projects to add a \$10,000 per megawatt fee to be used for marine environmental research.

With the state recently calling for bids on another four gigawatts of new projects in the not-too-distant future, that can potentially raise some \$40 million "to do good regional science," says Carl Lobue, a senior marine scientist for the Nature Conservancy who monitors New York state's offshore wind ambitions. The state of Maine is considering a similar fee for future offshore wind projects there.

Saving land and sea

The Ocean Conservancy was part of a consortium of stakeholders—green groups, commercial fishermen, tourism officials and local, state and federal government agencies—that labored over the design, construction and operation of a wind farm off Block Island in Rhode Island for years before it gained approval. It's the only utility-scale offshore wind farm in operation, and wind backers say it proves offshore wind's potential. The day it went live in 2016, power from its five massive turbines began serving 17,000 island homes, replacing five carbon-belching generators.

The Block Island approval process, says Woglom, shows that, if done with care, utility-scale wind can be built "without compromising the environment."

She notes that the Conservancy was formed a half-century ago with the specific mission of protecting whales, and says it wouldn't lend itself to a project unless it felt that adequate protection was being taken. She accepts that industrial-scale development of the oceans—even for a good cause like climate-change mitigation—is disconcerting to many people, and states flatly, "We can't kill the ocean to save the land."

But she is confident the careful development of offshore wind will help to save both from climate change.

"We simply can't meet our goals without offshore wind," she says.

Ken Wells is a writer in Chicago. He can be reached at reports@wsj.com.

JOURNAL REPORT | ALTERNATIVE ENERGY

Fertilizer Companies Are Betting on Ammonia as a Low-Carbon Fuel

Ammonia, a key ingredient in fertilizer and made in massive amounts globally, is high on the list of potential replacements for fossil fuels

BY PHRED DVORAK

THE LOGO of Illinois-based CF Industries, one of the world's biggest fertilizer makers, used to be a stylized cornstalk meant

to represent the bounty of the harvest. Then a few years ago, the company changed its logo to a cluster of triangles meant to represent an ammonia molecule.

The logo change signaled a strategy shift at CF—and is part of a surprising development that has propelled fertilizer companies, and the ammonia they make for their products, to the bleeding edge of a global energy transition toward low-carbon fuels. Proponents say ammonia is one of the easiest alternative fuels to ramp up, and that it could eventually help drive electric generators, power cargo ships or even prove useful in making jet fuel.

There are still obstacles to overcome before that happens. One is that while ammonia burns clean, the way it is produced now generates a lot of carbon emissions. So fertilizer companies, which already make much of the ammonia that is traded around the world, are positioning themselves for that budding clean-energy market by taking steps to reduce those emissions and negotiate supply deals.

"Agriculture continues to be a critically important part of our business," says Tony Will, CF's chief executive officer. But CF is also seeing an "expanding belief and movement toward using decarbonized ammonia as a clean energy source," he says.

Ammonia's upsides

Ammonia is made by producing hydrogen, then adding nitrogen. It is made in massive volumes globally—the bulk as a building block for fertilizer and the rest for uses ranging from refrigerants for skating rinks to the smelly household cleaning liquids most people are familiar with.

While plants benefit from the

nitrogen portion of ammonia, the clean-fuel industry is interested in its hydrogen content.

Hydrogen, one of the world's most common elements, can burn like oil, gas or coal but doesn't emit carbon dioxide when it does, making it a favorite of clean-energy advocates for decades.

But hydrogen has drawbacks, too, which have stymied its development as a green fuel. It rarely occurs by itself, and separating it out of compounds such

as water or methane—the main ingredient of natural gas—is expensive and takes more energy than the hydrogen delivers when it is used.

Pure hydrogen also is extremely hard to transport and store. The atom is so small it tends to seep out of seams and welds in pipes and tanks. It takes up so much space at normal temperatures that the only way to carry it long distances is to compress it or liquefy it at minus 253 degrees Celsius, just above absolute zero.

Even hydrogen supporters say

it likely will be decades before the technology develops to transport it around the world, so until then it likely will need to be produced very close to where it is used.

Ammonia, though, can burn like pure hydrogen—with no carbon emissions—and is much easier to store and ship. Around 180 million metric tons of the chemical is produced, roughly 10% of which is traded globally.

Most of the hydrogen for that ammonia is made from natural gas in a process that generates a lot of carbon dioxide. Companies such as CF vent much of that CO₂ into the atmosphere. But they are starting to roll out

plans to store it deep underground instead, which would reduce emissions sharply.

Companies are also working on ways to scale up the production of hydrogen from water, using renewable energy—a much greener technology.

ernment subsidies for hydrogen production and carbon capture have spurred a rush of clean-ammonia project announcements.

Fertilizer makers are some of the first out of the gate, since they already have ammonia-manufacturing facilities, and experience with storage and shipping.

"Incumbents have a huge advantage to decarbonize first because if you think about it, like a race, you're already starting well ahead," says Ahmed El-Hoshy, chief executive of OCI Global, a Netherlands-based ammonia maker.

nia was high on its list of alternative-fuel candidates, and engine makers as well as shipbuilding companies are starting to design craft that can run on the chemical.

Another push came from Japan, when its biggest power company, JERA, in 2020 proposed lowering emissions at its coal-fired power plants by mixing in some ammonia as well.

JERA plans to start running one of its big coal-fired generators on an ammonia mix early next year as a final test of feasibility. Other Japanese utilities picked up the idea, as did many South Korean power companies.

In the U.S., meanwhile, gov-

OCI is planning to capture and store carbon at an existing fertilizer factory in Iowa, and it is building a low-carbon ammonia plant in Texas. It also is talking to shipping companies, as well as Asian power companies, to gauge potential demand for low-carbon ammonia, El-Hoshy says.

It's unclear whether the new markets for ammonia as a green fuel will develop. Current plans for making and using low-carbon ammonia may not be as clean as advertised and could end up just wasting time and money, some environmentalists say.

What's more, ammonia isn't yet made or traded at the volumes needed to start replacing fossil fuels, and companies are still figuring out how many new factories, tankers and terminals they might need, as well as how to pay for them. Low-carbon ammonia likely will be much more expensive than the fossil fuels such as coal or diesel that it replaces, so Japan and other countries are considering subsidies and other support to help potential buyers.

CF and other producers have to make sure they don't get too far over their skis as the market starts up, says CF's Will. "It's really the timing of supply and demand that needs to be threaded carefully," he says.

The shift at CF

CF started rethinking its corporate strategy in 2020, after spotting a number of trends that executives worried could reduce demand for fertilizer—such as interest in meat substitutes and thus declining demand for cattle feed. At the same time, they saw lots of headlines discussing future demand for hydrogen fuel, says Will.

CF's executives decided to capitalize on that potential clean-energy demand and lean a bit less on fertilizer. One advantage for CF is that it can convert its ammonia to a low-carbon variety relatively cheaply, since the company already captures much of the CO₂ generated. It just has to sequester that carbon dioxide instead of venting it.

The company is installing equipment to help it do that and expects to be making low-carbon ammonia at its biggest ammonia-production facility in Louisiana in early 2025. Thanks to U.S. government subsidies, that low-carbon ammonia will be cheaper to produce than normal ammonia, adding an estimated \$100 million a year in free cash flow.

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Inspecting filters at an ammonia plant at CF Industries in Donaldsonville, La.

as water or methane—the main ingredient of natural gas—is expensive and takes more energy than the hydrogen delivers when it is used.

Pure hydrogen also is extremely hard to transport and store. The atom is so small it tends to seep out of seams and welds in pipes and tanks. It takes up so much space at normal temperatures that the only way to carry it long distances is to compress it or liquefy it at minus 253 degrees Celsius, just above absolute zero.

Even hydrogen supporters say

plans to store it deep underground instead, which would reduce emissions sharply.

Companies are also working on ways to scale up the production of hydrogen from water, using renewable energy—a much greener technology.

Demand catalysts

One catalyst for demand occurred in 2018, when the United Nations agency that oversees global shipping pledged to cut greenhouse-gas emissions from international shipping in half by 2050. Ammo-

What Will Motivate More People to Make Their Homes More Energy Efficient?

Researchers find that certain kinds of financial incentives are more effective than others

BY LISA WARD

HOW DO you get people to reduce their home's carbon footprint?

The government hopes the answer is to appeal to their pocketbooks. As part of the Inflation Reduction Act, the government is rolling out increased federal tax credits and rebates to help offset the cost of energy-efficient upgrades such as electric heat pumps and added insulation, as well as rooftop solar.

But research suggests that some financial incentives might be more effective than others when it comes to getting middle- and lower-income consumers to make energy upgrades. Social pressure can be effective: Consumers notice what their neighbors do, and energy providers might be able to leverage that to get people to make changes.

Here is a closer look at what researchers have found:

Money makes a difference—sometimes

One concern about many clean-energy tax credits is that historically

they have disproportionately benefited the rich. Researchers say wealthier people are more likely to live in single-family homes, where it is easier to install things like rooftop solar and charge electric cars. It also could be that lower-income families have much lower taxes and thus benefit less from these kinds of tax breaks. So for many households, tax credits don't talk.

But recent research from Lucas Davis, a professor at the University of California, Berkeley's Haas School of Business, suggests that one of the enhanced energy tax credits could be an exception.

In a study published this year, Davis and his co-authors found that 14% of U.S. households have a heat pump as their primary heating equipment, and that adoption levels are remarkably similar across different income levels, and even between homeowners and renters. Heat pumps often cost less than installing separate heating and cooling systems. And states with low electricity prices tend to have more heat-pump users since they cost less to operate in those areas.

Those findings suggest that

the federal tax credit for purchasing and installing a heat pump—which increased to \$2,000 from \$300—has the potential to be more widely distributed across income levels than subsidies for many other low-carbon technologies, says Davis.

Another recent study looked at residential solar-adoption trajectories and why some communities lag behind others. The authors used satellite imagery and computer vision to capture the year-over-year growth of residential solar panels in 46 states between

2006 and 2017. They then looked at what the federal, state and municipal incentives were in place when the panels were installed.

They found that performance-based incentives—payments made to solar-panel owners based on how much electricity their system generates over a certain period—were associated with higher solar adoption rates in lower-income and middle-income communities than incentives tied solely to property taxes or rebates paid via lower state or municipal taxes.

"Performance-based incentives reduce the upfront costs of solar panels for homeowners," says Ram Rajagopal, an associate professor at Stanford University and one of the paper's co-authors, explaining that if solar installers collect the performance-based incentives, homeowners can lease the

panels at a discounted rate and still get the benefit of saving on their monthly electric bill.

A third recent study, meanwhile, finds that net metering and high electricity prices are two big factors that correlate with rooftop-solar adoption across the U.S. The authors conclude that anticipated electricity-cost savings could stimulate further solar deployment, especially in areas where people are skeptical about global warming.

Taken together, the recent studies suggest that when it comes to solar adoption, incentives that provide an immediate financial benefit could be more motivating to low- and middle-income households than tax credits they have to wait to collect.

Keep up with the Joneses

Researchers also are examining whether social networks and connections can be leveraged to convince more households.

"Social norms and interactions affect people's behavior, and alternative energy is no exception," says Kenneth Gillingham, a professor of economics and senior associate dean at Yale School of the Environment, whose work suggests solar-panel adoptions tend to happen in regional or geographic clusters.

For example, households are more likely to install solar panels if they can see their neighbors' solar panels from the road.

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Can social networks be used to convince people to buy solar?



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