

# THE WALL STREET JOURNAL.

## What's News

### Business & Finance

**The Trump administration** backed a plan to send checks directly to Americans as part of a stimulus package for households and businesses that could cost up to \$1 trillion, aiming to combat the economic slowdown caused by the coronavirus. **A1, A4**

◆ **The Fed said** it would start making loans to American corporations, relaunching a crisis-era tool to help calm short-term debt markets. **A4**

◆ **The IRS will extend** for 90 days the April 15 tax-payment deadline for millions of individuals. **A5**

◆ **The coronavirus pandemic** is devastating global travel in what is shaping up to be the biggest test the modern industry has faced. **A1**

◆ **SoftBank is backing away** from part of its planned bailout of WeWork, privately citing several regulatory probes of the office-sharing firm. **A1**

◆ **U.S. stocks clawed back** some ground, with the S&P 500 and Nasdaq rising 6% and 6.2%, respectively, The Dow gained 5.2%. **B1**

◆ **Authorities are** investigating whether traders at JPMorgan manipulated the market for Treasury securities and futures contracts. **B1**

◆ **The UAW and Detroit car firms** reached agreements on coronavirus-mitigation efforts that for now will avoid a two-week closing of U.S. plants. **A5**

◆ **FedEx said** it would reduce its delivery capacity and retire aircraft, unveiling new cost-cutting measures. **B3**

◆ **Private-equity firm Najafi and Trinity Broadcasting** have offered to buy Tegna. **B3**

### World-Wide

◆ **Biden won primaries** in Florida, Illinois and Arizona on a day filled with anxious voting, building a lead in the Democratic race that appears increasingly difficult for Sanders to overcome. **A3**

◆ **As the U.S. scrambles** to control the rapidly spreading coronavirus, government agencies are putting in place or considering a range of tracking and surveillance technologies that test the limits of personal privacy. **A1**

◆ **Cities, states and Washington** sought ways to mitigate the blow from the coronavirus. The EU said it would close its borders for 30 days. France locked down, following Italy and Spain. **A6**

◆ **The Trump administration** is considering a plan to shut the U.S. borders with Mexico and Canada to asylum seekers and others due to the pandemic. **A5**

◆ **Singapore, Taiwan and Hong Kong** are witnessing fresh waves of infections as the growing number of cases around the world test their successful early defenses against the disease. **A7**

◆ **Concerns are growing** that an emerging generational divide about how the disease is perceived could undo efforts to slow the spread of the virus. **A9**

◆ **China said** it would revoke the press credentials of Americans working for three major U.S. newspapers amid an escalating battle with the Trump administration. **A10**

◆ **Iraq's president** designated an ex-provincial governor with U.S. citizenship as prime minister. **A10**

◆ **Italy's hospitals** pushed to the brink as caseload soars

◆ **Tools for tracking outbreak of virus** risk privacy erosion

◆ **SoftBank backs off** part of WeWork plan

◆ **Salesforce** #1 CRM

# Trump Urges \$1 Trillion Aid Deal

### Virus-driven economic slowdown prompts a U.S. stimulus proposal; Fed also plans loans

WASHINGTON—The Trump administration backed a plan to send checks directly to Americans as part of a stimulus package for households and businesses that could cost as much as \$1 trillion, a dramatic step aimed at combating the sudden economic slowdown caused by the coronavirus pandemic.

The proposal in Washington followed similar moves in hard-hit Europe, as France and other countries pledged billions of euros in immediate aid for businesses and employees. And it came as other parts of the U.S. government unleashed their own responses, with the Federal Reserve planning loans to corporations, among other steps, and the Pentagon saying it would provide as many as five million respirator masks to safeguard front-line health workers.

The stock market rebounded on Tuesday, with the Dow

By Andrew Restuccia, Andrew Duehren and Lindsay Wise

Jones Industrial Average gaining 5.2% after having plunged 13% a day earlier. Markets continued to rally in Asia, with Japan's Nikkei Stock Average up 1.7% at midday Wednesday.

On Capitol Hill, Treasury Secretary Steven Mnuchin pitched Senate Republicans on a package that would include an initial \$250 billion for direct payments, according to admin-

istration officials and lawmakers. One of the officials said the administration would push for additional direct payments beyond the \$250 billion in the coming weeks, if needed.

"It is a big number. We've put a proposal on the table that would inject a trillion dollars into the economy," Mr. Mnuchin said at the Capitol.

Details of the proposal were being finalized and would be taken up by a Congress already working through legislation to offset the crisis. House Speaker Nancy Pelosi (D., Calif.) sees

cash assistance as one of several measures targeting those in need that should be considered, according to a spokesman. Some Senate Republicans, for their part, expressed reservations about the cash-assistance idea.

The total \$1 trillion proposal would far outstrip the \$787 billion package passed in 2009 in the midst of the financial crisis, and the number could change, officials said. The package also includes about \$50 billion for the airline industry, which has

Please turn to page A4

## Biden Sweeps Florida, Illinois and Arizona, Solidifying Lead



PRECAUTIONS: A voter in Peru, Ill., fills out his ballot Tuesday. Former Vice President Joe Biden won the Florida, Illinois and Arizona primaries. Ohio's primary was placed on hold because of health concerns over the coronavirus. A3

## Italy's Hospitals Pushed to the Brink As Caseload Soars

By Marcus Walker and Mark Maremont

BERGAMO, Italy—Ambulances here have stopped using sirens. The frequent blaring only adds to local fears. Besides, there are few other vehicles on the road in Italy's national lockdown.

Most are headed to the Papa Giovanni XXIII Hospital, a large, modern medical facility in a prosperous Italian city that has been overwhelmed by the coronavirus disease. There aren't enough ventilators to intubate all patients with Covid-19 who have severe breathing trouble. The intensive-care unit is taking almost no patients older than 70.

A normally disused section of the hospital is filled with the critically ill and the hissing sound of oxygen. Patients lie quietly, with worried or exhausted faces, visible to others in the series of half-open rooms. Each focuses on the struggle to breathe. There are patients with airtight oxygen helmets over their heads, like transparent buckets taped at the neck.

"Some of them would have needed intubation in intensive care," anesthesiologist Pietro Brambillasca said. The rest ought to be better isolated, he said, where they can't contaminate anyone.

That is no longer possible. Please turn to page A8

## Tools for Tracking Outbreak of Virus Risk Privacy Erosion

As the country scrambles to control the rapidly spreading coronavirus, government agencies are putting in place or considering a range of tracking and surveillance technologies that test the limits of personal privacy.

By Kirsten Grind, Robert McMillan and Anna Wilde Mathews

The technologies include everything from geolocation tracking that can monitor the locations of people through their phones to facial-recognition systems that can analyze photos to determine who might have come into contact with

people who later tested positive for the virus, according to people familiar with the matter.

Data-mining firm Palantir Inc., which was credited with helping to find Osama bin Laden, is working with the federal Centers for Disease Control and Prevention to model the virus outbreak. Other companies that scrape public social-media data have contracts in place with the agency and the National Institutes of Health, documents show.

The push is in part being coordinated by a task force working in conjunction with the White House, and includes startups as well as tech giants such as Alphabet Inc.'s Google Please turn to page A8

## Global Travel Industry Confronts Crisis

The coronavirus pandemic is devastating global travel, causing business to evaporate and forcing companies to slash payroll in what's shaping up to be the biggest test the modern travel industry has ever faced.

By Craig Karmin, Katherine Sayre and Costas Paris

Longer term, the crisis could permanently reshape attitudes toward travel, fundamentally changing the landscape for hotels, airlines and cruise companies, and the millions of smaller businesses that make up the industry.

No corner of the industry, market or region of the world has been spared. In the U.S. alone, hundreds of hotels are preparing to shut down this week, and cruise ships and jets are idled.

Tuesday, Marriott International Inc., the world's largest hotel company, considered a bellwether for the industry with nearly 1.4 million rooms worldwide, said it is starting to furlough what it expects will be tens of thousands of employees as it ramps up hotel closings.

United Airlines Holdings Inc. is grounding half its planes, and

Please turn to page A10

### THE CORONAVIRUS PANDEMIC

Stocks advance in volatile trading, B1

Fed turns to crisis-era tool to aid companies, A4

Second wave of cases grips parts of Asia, A7

Assessing the risks of food delivery, A11

### New Hot Spot For Hoarders: Libraries

As they close down, rush is on for books, DVDs

By James R. Hagerty

MT. LEBANON, Pa.—More than a dozen people were waiting outside the public library here shortly before the 9 a.m. opening Saturday.

Among them was Mary Ann Gabriel, a retired accountant, wearing a pink tracksuit.

"People act like it's the end of the world!" she said in a tone suggesting that she was unconvinced. Still, precautions were in order.

It was less frantic than the scenes at ransacked supermarkets, but Ms. Gabriel is part of a nationwide rush for books, CDs, and DVDs at public libraries that began closing Please turn to page A2

## SoftBank Backs Off Part of WeWork Plan

By Liz Hoffman and Eliot Brown

SoftBank Group Corp. is backing away from part of its planned bailout of WeWork, people familiar with the matter said, privately citing several regulatory investigations of the office-sharing company.

A notice sent to WeWork shareholders Tuesday said that SoftBank believes regulatory probes into the startup's business, including from the Securities and Exchange Commission and Justice Department, give it an out under the deal struck last fall to purchase \$3 billion of WeWork shares from existing investors.

That would include Adam Neumann, former chief executive of WeWork parent We Co., who had the right to sell up to \$970 million in stock as part of the October deal that led to his ouster from the board.

The development won't affect the \$5 billion lifeline Soft-

Bank agreed to give WeWork directly—cash the startup badly needed then as it ran out of runway, and which it is likely to continue to need as the worsening coronavirus outbreak empties out its desks.

Some of that money, including \$1.5 billion in fresh equity, already has been invested.

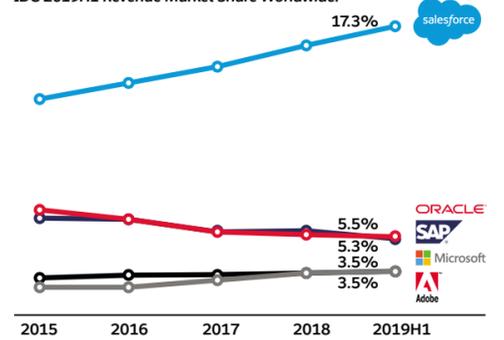
The Japanese investment giant didn't explicitly cancel the deal, and its notice to WeWork could be a negotiating tactic, or a way to delay the investment as markets remain volatile. U.S. stocks have plunged—then risen, only to fall again—on fears of the long-term economic effects of the outbreak.

Representatives for SoftBank, WeWork, the SEC and Justice Department declined to comment.

SoftBank shares tumbled. By late morning in Tokyo on Wednesday, they had declined Please turn to page A6

## Salesforce. #1 CRM.

Ranked #1 for CRM Applications based on IDC 2019H1 Revenue Market Share Worldwide.



Source: IDC, Worldwide Semiannual Software Tracker, October 2019.



salesforce.com/number1CRM

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## U.S. NEWS

## Retail Sales Dim, but Steeper Drop Looms

BY HARRIET TORRY

WASHINGTON—American shoppers reined in their spending last month and factory production was broadly flat, signs the economy began to strain as the threat from the new coronavirus started to take hold.

The Commerce Department's reading on retail sales in February showed they declined by a seasonally adjusted 0.5%, falling well short of expectations and suggesting coronavirus concerns dented consumers' appetite for spending on purchases like vehicles and electronics.

While some of the retail-sales decline was attributable to a drop in gasoline prices,

overall weakness suggests consumers began to pull back on spending last month as the coronavirus outbreak spread within U.S. borders.

Meanwhile, the Federal Reserve said Tuesday that manufacturing production edged up 0.1% in February as disruptions at Boeing Co. continued to hold down overall factory output.

Overall industrial production, a measure of factory, mining and utility output, increased a seasonally adjusted 0.6% in February from the prior month, the Federal Reserve said, as utility output rose strongly due to cold weather.

Tuesday's reports encompassed a month in which coronavirus began to spread within the U.S., although the number of cases remained relatively low. Since last month, financial markets have plummeted and consumers have begun to self-isolate amid a widening coronavirus pandemic—factors that are likely to hit the economy hard in the months ahead.

"With strict measures restraining social activities now in place to contain the coronavirus outbreak, consumer spending is poised for a severe pullback in coming months," Gregory Daco of Oxford Economics said in a note to clients, adding that "disruptions from the coronavirus will bring the economy's main engine to a halt."

Americans reined in spending on dining out, as sales at bars and restaurants dropped 0.5% in February. Sales at clothing, building material, grocery and health stores also dropped. One bright spot was nonstore retailers, a category that includes internet merchants such as Amazon.com Inc., which rose 0.7% as consumers shunned malls and brick-and-mortar stores.

"The March [retail sales] figures are going to be off-the-charts bad, and the April results may not show much of a rebound, depending on how long the more extreme social distancing steps remain in place," Stephen Stanley, chief economist at Amherst Pierpont Securities, said in a note to clients.

Grocers, drugstores and mass merchants that sell food and household staples such as Walmart Inc. and Target Corp. have said they plan to stay open but many clothing and mall-based chains have announced temporary closures.

Over the weekend, Apple Inc. and Nike, which are big drivers of foot traffic, said they would shut their U.S. stores for two weeks. The list of retail closings has expanded by the day to include chains such as Nordstrom Inc., Foot Locker Inc., Williams Sonoma Inc. and J.Crew Group Inc. Even those that are staying open, such as Kohl's Corp. and J.C. Penney Co., said they would reduce hours this month.

Recreational Equipment Inc. said Sunday that it would close all 162 retail stores for nearly two weeks due to the outbreak, although customers can still shop online.

REI said it would continue to pay store employees during the temporary store closures.

The pandemic is also hitting smaller business operators. Dante Hill, a chef in Austin, Texas, said the cancellation of the South by Southwest festival means "70% of my work for the next two weeks is gone."

"I work with several companies in Austin and this has hit everyone, some to the tune of several hundred thousand dollars," Mr. Hill said.

## U.S. WATCH

## CALIFORNIA

## Ex-Rep. Hunter Gets 11 Months in Prison

Former California Republican Rep. Duncan Hunter was sentenced Tuesday to 11 months in prison after pleading guilty to stealing campaign funds and spending the money on everything from outings with friends to his daughter's birthday party.

The ex-Marine's defense attorneys had asked for home confinement, citing his military service including fighting in Iraq and Afghanistan, and his nearly six terms in Congress. Mr. Hunter resigned from Congress in January after representing one of Southern California's last solidly Republican districts.

Mr. Hunter and his wife, Margaret, were accused in a 60-count indictment of stealing more than \$250,000 in campaign contributions and trying to hide it on financial disclosure records, listing some personal expenses as contributions to wounded warriors. They each had faced up to five years in prison.

Each pleaded guilty to a single count in separate plea agreements last year. Mr. Hunter asked the court Tuesday to spare the mother of his three children jail time. He was ordered to report to prison on May 29.

—Associated Press

## DELAWARE

## Remains Identified As Missing Man

Skeletal remains found in a wooded area have been identified as a man who went missing



**HIGH-WIRE ACT:** Workers begin installing lights on the Owensboro Bridge, which spans the Ohio River between Indiana and Kentucky.

## ATLANTA

## Police Kill Suspect Who Was Firing Gun

Atlanta police killed an armed suspect near one of the city's most famous parks in a shooting Tuesday morning, authorities said. Two officers suffered minor injuries.

The shooting occurred near Piedmont Park in the city's Midtown neighborhood, the police department said. When police officers arrived to engage a man who was firing rounds, the man fired at an officer and grazed him in the head, police spokesman Carlos Campos said. Authorities shot back and killed the suspect, he said.

"It was later determined a second officer felt pain in his foot and we believe he, too, was grazed by gunfire resulting from the shooting," Mr. Campos added. Investigators didn't immediately release information about the dead suspect.

—Associated Press

## OBITUARY

## 'Carol Burnett Show' Cast Member Dies

Lyle Waggoner, the tall, dark-haired and handsome comic foil on "The Carol Burnett Show" who also played a superhero's partner on "Wonder Woman," died Tuesday. He was 84.

Mr. Waggoner was the Burnett show's announcer when it premiered in 1967. He proved so adept that he eventually became a regular cast member. He stayed with the show until 1974.

—Associated Press

in September, state police said.

Delaware's Division of Forensic Science determined the human remains discovered in Selbyville on March 2 belonged to David T. Hickey, police said. The police issued a missing persons alert for the 36-year-old from Laurel in October, about two days after he was last seen. His cause and manner of death are still being determined, but police said it didn't appear to be suspicious.

—Associated Press

## NEVADA

## Snowfall Leads to Over a Dozen Crashes

Another round of snow snarled traffic with more than a dozen crashes on slippery roads in the Reno-Sparks area and triggered chain controls on Interstate 80 in the Sierra.

The Nevada Highway Patrol said at least 18 traffic accidents were reported Tuesday during

the morning commute in Reno and Sparks, where several inches of snow fell in some areas.

One crash involved a state trooper's vehicle. No serious injuries were reported.

Chains were mandatory for a 55-mile stretch of I-80 from the California-Nevada line west of Reno over the top of Donner Pass in Placer County, Calif.

Ten inches of new snow were reported Tuesday in the moun-

tains north of Reno near Susanville, Calif., where about 3 feet of snow have fallen since the storm began Saturday. About 9.5 inches also were reported just south of Lake Tahoe at Myers, Calif.

Several areas around Lake Tahoe have received more than 2 feet of snow since Saturday, including 27 inches at the Mount Rose Ski Resort southwest of Reno.

—Associated Press

## Libraries Close Down

Continued from Page One over the weekend to deter spreading of the coronavirus.

Librarians across the country promised to maintain their digital services, including online access to electronic books and research databases. The Indian Trails Public Library in Wheeling, Ill., initially pledged to provide books through a drive-up window but then slammed that shut as contagion worries mounted. Others, lacking drive-up windows, said they might deliver books at the curbside.

Ruthie Maslin, director of the Madison County Public Library in Kentucky, which has branches in Richmond and Berea, said her staff is preparing to put books in lockers outside the libraries. "People could call, we could disinfect the books and the locker, they could come and get the books," Ms. Maslin said. Two volunteers already have offered to deliver books to homes, she said.

Those who rely on the library for internet access could still get Wi-Fi service outside the building. "Come to the parking lot," Ms. Maslin suggested.

Public libraries in major cities including New York, Los Angeles and Atlanta are closed. All Library of Congress buildings and facilities are closed to the public. An informal list compiled by librarians showed more than 1,160 U.S. libraries closed as of Tuesday afternoon, including tiny ones and major urban institutions with many branches.

The Des Moines, Iowa, public library initially resisted closing its doors. It canceled programs, intensified cleaning routines and removed Lego blocks. On Sunday, however, the library announced it, too, was closing.

The Natrona County Public Library in Casper, Wyo., also tried to stay open. Librarians there hoped to get by with canceling children's story time and other programs and wiping down surfaces more frequently. "We're not panicked," the library's director, Lisa Scroggins, said Sunday. A day later, though, the library announced its closure.

In Seattle, where the public libraries closed Saturday and aren't expected to open until at least April 13, Cynthia Pang Nowak made a run with her 6- and 7-year-old sons Friday afternoon. "It was just packed," said Ms. Nowak, vice president for marketing at eXp Realty. "They were pulling everything out of the backrooms," including Christmas books. Her sons joyfully gathered 15 to 20 items each, including "Captain Underpants" and Minecraft-related books.

In Mt. Lebanon, a prosperous suburb south of Pittsburgh, the library announced late Friday afternoon it would close for at least a month. Saturday was the last chance to raid the shelves. At least one person had checked out more than 100 items, said Robyn Vittek, director of the library. Some tottered out with beach bags full of books. Ms. Gabriel limited herself to six, including novels by Lisa Scottoline and Stuart Woods.

In all, 8,530 items were checked out Saturday, more than eight times the library's daily average. Saturday's total accounted for roughly 6% of the number of items available for checkout. By the end of



Public libraries across the country have shut down because of coronavirus concerns. Left, people checked out books at the Seattle library last week before it closed; right, Becky Weber hoisted a stack of large-print books she found at the Mt. Lebanon, Pa., library for her father.

the day, nearly all of the books displayed on tables near the checkout desk were gone. The library director, Ms. Vittek, joined her staff on the front line, at the checkout desk. "You don't have to worry," she told people checking out books. "There won't be any late fees while we're closed."

Jill Brodbeck grabbed a couple dozen DVDs, including

"Moby Dick," "Cleopatra" and "Hairspray."

Susan Pettigrew nearly missed her chance. She called a neighbor late Saturday afternoon to report that evening Mass at their church had been called off. The neighbor informed Ms. Pettigrew that the library was closing, too. Ms. Pettigrew, in a bright blue sweater, hustled in half an hour before closing time.

"Any books left?" she asked cheerily. There were plenty. She picked out "Revelation" by C.J. Sansom and "Fools and Mortals" by Bernard Cornwell.

Pete Thompson, a consultant, checked out several gardening books, a primer on caring for chickens, and a travel book, "1,000 Places to See Before You Die."

Peggy Kelley, a librarian, looked exhausted as she fin-

ished her shift. "This is what Black Friday must be like at Walmart," she said. Another librarian, Sharon Bruni, was relieved to find that people would rush to stock up on books, not just tuna fish and toilet paper. "It's unreal," she said, "but it's so good."

On their way out of the library, many people paused at a wall-mounted dispenser for a free shot of hand sanitizer.

## CORRECTIONS &amp; AMPLIFICATIONS

**EO Products** is based about 20 miles north of San Francisco. An Exchange article Saturday about the maker of hand sanitizer and other products incorrectly said it is south of San Francisco.

**U.S. assets** under management using sustainable strategies reached \$12 trillion at the start of 2018, roughly a quarter of all professionally managed assets in the country, according to US SIF: the Forum for Sustainable and Respon-

sible Investment. An article about financial advisers and sustainable investing in Monday's Journal Report incorrectly said the \$12 trillion total was reached at the end of 2018 and incorrectly attributed the data to the Global Sustainable Investment Alliance.

**The name** of Bryn Mawr, Pa., was misspelled as Bryn Marr in one instance in an Off Duty article Saturday about galanthus bulbs.

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

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## U.S. NEWS

# Biden Shuts Out Sanders In 3 States

By JOHN McCORMICK

Joe Biden won all three primaries held Tuesday on a day filled with anxious voting, building a lead in the Democratic presidential nomination race that appears increasingly difficult for Bernie Sanders to overcome.

The contest lurched forward amid major disruptions triggered by the coronavirus pandemic as the first balloting was held—in Florida, Illinois and Arizona—since the crisis engulfed the nation.

After all of the day's votes are counted, the former vice president is likely to have a majority of the delegates awarded so far. As of late Tuesday, he already had secured more than half of the 1,991 needed to win the nomination.

In Florida, a critical general election battleground, Mr. Biden won nearly three times as many votes as the Vermont senator and carried all 67 counties. In Illinois, with 85% of precincts reporting, he was racking up a 59% to 36% margin. The Associated Press called the race in Arizona for Mr. Biden with early results coming in.

The latest large victories by Mr. Biden are likely to place more pressure on Mr. Sanders to exit from the race so the party can focus on competing against President Trump in November. A Wall Street Journal/ABC News poll released Sunday showed Mr. Biden was favored nationally,

## Ohio's primary was canceled at the last minute because of the pandemic.

61% to 32%, among those who have already voted in the Democratic primary or plan to do so.

Mr. Biden is already trying to unify the party behind him, endorsing policy proposals related to bankruptcy laws and college tuition in a bid to woo liberals. Mr. Sanders acknowledged last week that he's losing the "debate over electability" among Democrats.

Time is running out for Mr. Sanders to catch up with more than half of state primaries and caucuses already held. He would have to capture a large share of the remaining delegates to win the nomination—and no other states are expected to hold contests until early April.

Mr. Biden, speaking from his home in Wilmington, Del., reached out to his rival's supporters. He noted he was delivering his address by live stream to avoid gathering supporters during the pandemic.

"We've moved closer to securing the Democratic Party's nomination for president, and we're doing it by building a broad coalition," he said.

Mr. Biden said he and Mr. Sanders "may disagree on tactics, but we share a common vision" on issues such as health

care, wealth inequality and climate change. He told young voters inspired by Mr. Sanders, "I hear you, I know what's at stake."

During a live-stream address earlier Tuesday evening, Mr. Sanders outlined his proposals to blunt the effects of the coronavirus outbreak. He didn't mention the primary elections or his narrowing prospects.

Ohio had been expected to hold a primary on Tuesday, but it joined a growing list of states that have delayed their contests until May or June in hopes the coronavirus situation will improve.

On the eve of the balloting, a court there rejected a request to postpone the state's primary until June 2 as Republican Gov. Mike DeWine had recommended. The in-person voting was subsequently placed on hold after the state's top health official ordered polls closed.

The state Supreme Court denied a last-minute legal challenge to the postponement, and county election boards were deluged with phone calls from confused, frustrated voters.

Late Tuesday, Democratic National Committee Chairman Tom Perez called for states with upcoming primaries and caucuses to use voting by mail and other alternatives to casting ballots in person.

"What happened in Ohio last night has only bred more chaos and confusion," he said. "States that have not yet held primary elections should focus on implementing the aforementioned measures to make it easier and safer for voters to exercise their constitutional right to vote, instead of moving primaries to later in the cycle when timing around the virus remains unpredictable."

Florida and Arizona are battleground states, so they may offer insights into general-election trends. This round of contests might be the last significant ones for some time, if more states announce primary postponements.

States that move their contests later than June 9 will need a waiver from the party to avoid losing delegates to the July convention, the DNC wrote in a memo this week.

Voters, sobered by the health crisis, also cast ballots in local and state contests as they confronted school closures, travel limitations, event cancellations and a stressed global economy. Germs were also on their minds.

At a polling location inside a Miami fire station, workers wore gloves as they inspected voter identification cards and dispensed hand sanitizer to visitors. Some voters arrived with their own pens, gloves and disinfecting wipes.

Meanwhile, the Republican National Committee noted Tuesday night that Mr. Trump had secured enough delegates through the GOP primaries to become the party's presumptive nominee for president.

—Eliza Collins, Alexa Corse, Arian Campo-Flores, Chad Day and Ken Thomas contributed to this article.

rushed on stage while Mr. Biden was speaking in Los Angeles as Super Tuesday results came in. The protesters were restrained by Mr. Biden's wife, Jill Biden, a member of his security team and several aides.

The next day, House Homeland Security Committee Chairman Rep. Bennie Thompson (D, Miss.), asked the Department of Homeland Security to determine whether any Democratic candidates should receive Secret Service protection.

The Secret Service can offer protection to major-party presidential and vice presidential nominees within 120 days of the general election. But candidates often receive Secret Service details earlier in the campaign.

Mr. Biden's Secret Service code name will be "Celtic," according to a law-enforcement official, the code name that he used as vice president.

An aide to Sen. Bernie Sanders, Mr. Biden's chief rival, said the Vermont senator doesn't have Secret Service protection.



A trolley passed City Hall in Savannah, Ga., on Tuesday. The city's St. Patrick's Day parade was called off over coronavirus fears.

# Muted St. Patrick's Day Celebrations Go On Without Parades, Green Beer

By JOE BARRETT AND PETER GRANT

CHICAGO—Molly Gstalter missed out on a lot of must-do's this St. Patrick's Day, as the new coronavirus nearly shut down the celebration of all things Irish.

She normally grabs a Shamrock Shake at McDonald's, listens to Irish playlists, including "My Irish Molly," which her grandmother used to sing to her, drinks green beer and has the students in her high-school German class practice using the German word for luck.

This year, she didn't do any of it, including the corned beef and cabbage she normally eats at her mother's house. "It's not worth risking her," said Ms. Gstalter, 28 years old, who did wear a pair of green tights and a green headband for a shopping trip Tuesday to celebrate the day.

St. Patrick's Day in Chicago usually covers the weekend before and after March 17, and includes the dyeing green of the Chicago River and a huge downtown parade as well as a separate parade in the historically Irish neighborhoods of the city's South Side. Pretty much throughout the entire stretch, people in their 20s can be found dressed in green going from pub to pub.

The city, along with the plumbers union that handles the nearly 60-year-old tradition of dyeing the river, called it all off.



A priest blessed a visitor outside St. Patrick's Cathedral in New York, which also canceled its parade.

There also was no party in New York City, where the St. Patrick's Day Parade dates back to 1762. The event, which was expected to attract 1.2 million people, was canceled at the request of New York Gov. Andrew Cuomo because of contagion concerns.

In both cities, bars and restaurants have been closed. The timing has been especially devastating for businesses that have depended on the St. Patrick's Day celebrations for

one of their strongest sales events of the year.

At Corcoran's Grill & Pub, which was open for takeout only in Chicago's Old Town neighborhood, workers on Tuesday were taking down St. Patrick's Day decorations. Owner Kevin Vaughan said most restaurants scrape through winter and then stock up for St. Patrick's Day, which kicks off spring. "It came at the worst possible time," he said of the shutdown.

One part of the New York tradition was preserved: Early Tuesday morning, the 69th Regiment of the New York State National Guard, which has led the parade for over 160 years, held a small march from its armory to St. Patrick's Cathedral.

"We kept it very, very quiet to stay within the guidelines," said Sean Lane, the chairman of the parade committee. Marchers "were well spaced-out" to avoid contagion, he said.

# In a Twist, Asbestos Suit Targets College

By KRIS MAHER

PITTSBURGH—Peter Labosky Jr. had been retired for 12 years from his job as a professor of wood sciences at Pennsylvania State University when he was diagnosed in 2014 with mesothelioma. He died five months later.

Mr. Labosky's family alleges in a lawsuit filed in 2016 that the university negligently exposed him to asbestos dust after failing to clean it up in buildings where he taught. The case is working its way through state court in Pittsburgh.

The lawsuit is proceeding amid louder calls to clean up asbestos and halt its use nationally. It appears to be the first of its kind brought against a university, creating a new path for asbestos litigation, said legal experts. It could open the door to similar suits in Pennsylvania, and raise awareness about potential exposures at universities in other states.

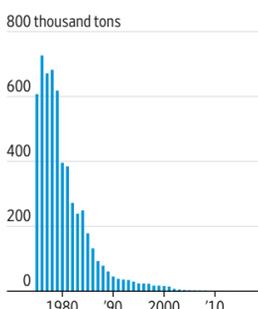
"This could raise a lot of concern by employers with regard to the facilities they provide to their workers which may contain asbestos products," said Lester Brickman, an emeritus professor at Benjamin N. Cardozo School of Law in New York who has written extensively on asbestos litigation.

Penn State defends its handling of asbestos as proactive and careful, and doesn't comment on pending litigation, said Lisa Powers, a spokeswoman for the university.

Asbestos was widely used

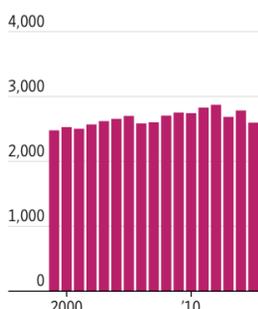
Asbestos, which can lead to mesothelioma, remains in many buildings today after being widely used from the 1940s to the 1980s.

## U.S. asbestos use in products



Sources: U.S. Geological Survey (use); Centers for Disease Control and Prevention (deaths)

## U.S. deaths from malignant mesothelioma



from the 1940s to the 1980s and is still in hundreds of thousands of buildings, including schools, across the country. Asbestos was banned from most building materials in the 1980s, but older buildings, including schools, typically contain ceilings, floor tiles, pipe insulation and other materials with asbestos used for its fireproof and acoustic qualities.

Last year, 18 state attorneys general asked Congress to prevent all uses of the material. A bill in the House would ban the manufacture and distribution of asbestos.

In Pennsylvania, Gov. Tom Wolf in January proposed spending more than \$1 billion to remove asbestos and lead in schools. The School District of Philadelphia said it has 175 buildings with asbestos, and it has closed nine since Septem-

ber due to health concerns.

"Asbestos can be contained and managed on-site," said Claire Barnett, executive director of Healthy Schools Network, which advocates for removing environmental hazards in schools. But if maintenance is poor, moisture can cause asbestos to crumble, exposing its deadly dust, she said. "It happens everywhere."

An estimated 40,000 people die in the U.S. from asbestos-related diseases each year, including mesothelioma, a cancer of the linings of the lungs or stomach that can develop 30 years or more after exposure.

Asbestos litigation, which has been moving through court dockets for years, has to date largely targeted product manufacturers. Workplace injuries are usually handled

through workers' compensation claims, but people who develop asbestos-related diseases years after retiring are often beyond the deadline for filing such a claim against an employer.

A 2013 court ruling in Pennsylvania allowed people who develop an asbestos-related disease to sue an employer for negligence outside of the workers' compensation act and made the suit against Penn State and other potential cases possible.

Universities typically monitor asbestos, as required by federal and state regulations, and remove it during renovations. Penn State found in the 1970s that close to 100 buildings contained asbestos, according to court documents. By 1984, the school had spent over \$500,000 removing asbestos.

During the 1980s the cost of removing asbestos at the university rose fivefold, according to court documents. In 1989, a Penn State official stated in a memorandum that the school would no longer remove asbestos when it was encountered.

"In all future projects, our goal should be to minimize the removal of asbestos to only what is absolutely required," the official wrote. "Obviously, this will help us a lot in the area of project budgets."

Michael Robb, a Pittsburgh attorney representing the Labosky family, alleges that the university scaled back its asbestos removal to cut costs while it knew about health risks.

## Secret Service Is Now Guarding Biden

WASHINGTON—Former Vice President Joe Biden, the leading contender for the Democratic presidential nomination, is now receiving Secret Service protection, officials said Tuesday.

The U.S. Secret Service said it had "initiated full protective coverage," for Mr. Biden, who has been staying at his Delaware home since departing the campaign trail last week given the coronavirus outbreak.

Biden campaign spokesman T.J. Ducklo said the campaign "does not comment on security measures."

Mr. Biden has used private security since announcing his candidacy last year, and local law enforcement have also provided security measures at larger campaign events before the pandemic.

His security came under scrutiny earlier this month when anti-dairy industry protesters

## THE CORONAVIRUS PANDEMIC

## Plans in Works to Help Pay the Bills

BY JON HILSENRAITH  
AND NICK TIMIRAOS

Behind a flurry of activity in Washington on Tuesday was an increasingly urgent problem for a nation grappling with the novel coronavirus pandemic: The growing risk that millions of businesses and households won't be able to pay their everyday bills—rent, payroll, utilities—as business activity grinds to an unprecedented halt.

The Federal Reserve launched a program to provide short-term loans to businesses in commercial-paper markets, while White House officials and lawmakers scrambled for ideas to get funds into the private sector, and the Treasury postponed one of the biggest bills coming due for anyone: individual income taxes.

In a normally functioning economy, paychecks and revenues roll in for workers and their employers, and they use a good chunk of that money to pay the bills they have coming due. In the business world, it's called working capital.

Now as restaurants close, airlines stop flying and streets go empty, businesses and households have a similar and pressing problem: The money just isn't coming in, but bills still have to get paid.

The financial system typically serves as a backstop. Businesses use credit lines to alleviate short-term funding squeezes. A household might draw from savings or tap a home-equity line.

But those systems are becoming overloaded. It's an especially pressing problem for millions of low- and middle-income households. Nearly 4 in 10 Americans don't have the savings in hand to cover an unexpected, \$400 expense with cash, according to Fed surveys.

Fed data show nonfinancial businesses had \$1.53 in liquid assets like cash and securities on hand for every \$1 in short-term liabilities in the fourth quarter. That is down from \$1.80 when Lehman Brothers collapsed in 2008, but up from \$1.34 during the September 11, 2001, terrorist attacks, according to Moody's

## Under Pressure

Ratio of business short-term assets such as cash and securities to short-term bills that are coming due.



Note: Quarterly data doesn't include financial firms.

Source: Moody's Analytics

Analytics. The more liquid assets they hold, the better positioned they are to handle a cash crunch.

The Fed took additional steps to address the problem Tuesday, throwing a rescue line to commercial paper markets, where banks, money market mutual funds and others provide short-term loans

of a few days, weeks or months directly to businesses.

The Fed will provide funds to financial firms for up to three months and take their commercial paper as collateral. The central bank hopes that with a place to park their commercial paper, lenders will make more of it available in markets. The program will be backstopped by the U.S. Treasury to cushion losses the Fed might take in the process.

A pressing question is whether Congress and the White House can fill that void.

"We desperately need...a dedicated pool of money that is available to step in and salvage viable companies that are struggling," Scott Miner, chief investment officer at money-manager Guggenheim Partners LLC, said Tuesday. A global depression is possible "if policy makers don't act quickly," he said.

Some ideas—such as a broad payroll tax cut—might not deliver funds quickly enough or directly to the people in most dire need to hold off the impending cash crunch. For the moment, the White House and

a growing number of lawmakers seemed to be turning to more immediate measures.

For starters, the Internal Revenue Service will postpone the April 15 tax-payment deadline. The Trump administration also said it backs a plan to send checks directly to Americans.

Sen. Mitt Romney (R., Utah) on Monday backed giving each American adult \$1,000.

Among Democrats, Sens. Cory Booker of New Jersey, Michael Bennet of Colorado and Sherrod Brown of Ohio propose sending \$2,000 to every adult and child below a set income, with future payments in July and then quarterly, until unemployment levels drop after an expected rise.

Last week, Reps. Ro Khanna (D., Calif.) and Tim Ryan (D., Ohio) proposed sending a check between \$1,000 and \$6,000 to every American who earned less than \$65,000 last year.

"To me, this is about cash," Mr. Ryan said.

—Asa Fitch, Richard Rubin and Natalie Andrews contributed to this article.

## Fed Acts To Ease Corporate IOU Strain

BY NICK TIMIRAOS

The Federal Reserve said it would start making loans to American corporations, relaunching a financial-crisis-era tool to help calm short-term debt markets that have faced intensifying strains in recent days.

The Fed trained its sights Tuesday on dysfunction in the \$1.1 trillion market for short-term corporate IOUs called commercial paper. Companies use commercial paper to finance their day-to-day business operations such as payroll expenses.

While the Fed can't buy corporate debt or lend directly to households and businesses, it can invoke emergency powers to establish lending facilities that, in turn, extend credit.

"The commercial paper market has been under considerable strain in recent days as businesses and households face greater uncertainty in light of the coronavirus outbreak," the Fed said.

By launching the Commercial Paper Funding Facility, the Fed bank is trying to encourage investors to return to that market to ensure eligible issuers can roll over maturing obligations. The central bank's facility will purchase three-month debt from firms with high credit ratings. The Fed deployed a version of the tool between 2008 and 2010, during and after the financial crisis.

To create the facility, the Fed had to invoke special powers by citing "unusual and exigent circumstances" to authorize one of its reserve banks, the New York

## Treasury Secretary Mnuchin gave his approval to the program Tuesday.

Fed, to extend credit. In 2010, Congress required the Fed to seek approval from the Treasury secretary before using these so-called 13(3) powers, named for the section of its charter that allows it to stand up such last-resort programs.

Treasury Secretary Steven Mnuchin gave his approval to the program Tuesday. The Treasury will also provide \$10 billion from a pool of money it retains called the Exchange Stabilization Fund, which has around \$94 billion in it, to cover credit losses for the Fed.

The commercial paper market has been strained as money-market mutual funds and other investors seek to sell commercial paper at the same time that demand for short-term borrowing is rising from companies that face unanticipated, virus-related funding needs.

Already, the pandemic has delivered a blow to corporate credit markets by raising concerns that borrowers will be unable to make good on their obligations because they face falling revenues. Clogged commercial-paper markets could lead companies to draw down their bank lines of credit, which could in turn raise funding needs for banks.

The Fed said it would lend to commercial paper issuers at a rate of 2 percentage points above overnight lending rates for three months at a time. The facility will last for at least one year.

"The terms are not easy. It was a mild disappointment to the market," said Julia Coronado, a former Fed economist and founder of economic-advisory firm MacroPolicy Perspectives.

While the rates offered by the Fed might look high relative to traditional market prices, the fact that many issuers haven't been able to borrow at any rate in recent days suggests the facility will be helpful, said Roberto Perli, an economist at research firm Cornerstone Macro.

Later on Tuesday, the Fed announced another 13(3) lending program that will enable 24 large financial institutions called primary dealers, which function as the Fed's exclusive counterparties when trading in financial markets, to seek loans of up to 90 days.

◆ Bank of England governor is urged to close markets..... B12

## Trump Backs Aid Package

Continued from Page One  
been hit hard by the outbreak, and as much as \$500 billion to boost small businesses and for other needs. The cash payments could eventually total as much as \$500 billion, one of the officials said.

As the number of confirmed cases climbs, Congress has raced to pass legislation.

In phase one of the aid plan, Congress passed and President Trump, a Republican, signed into law an \$8.3 billion bill funding vaccine development and prevention efforts. Lawmakers are almost finished with the second phase of legislation, with a bill focused on workers pending before the Senate following some late changes made Monday to scale back a paid-leave expansion. Lawmakers are now charting out the third phase of their response.

Mr. Mnuchin told Republican senators on Tuesday that the administration hopes to send the first batch of checks to the public by the end of April. He added that the payments, which could initially amount to about two weeks of pay, would be means-tested to ensure they don't advantage the wealthy, according to people familiar with his comments.

Mr. Mnuchin told GOP senators that the unemployment rate, which was at 3.5% in February, could potentially climb



Nurses wait for a patient to arrive for a Covid-19 screening at a clinic in Seattle on Tuesday.

as high as 20% absent any intervention by policy makers to safeguard the U.S. economy.

Mrs. Pelosi, who spoke with Mr. Mnuchin Tuesday, outlined her requests for the third stimulus package in a statement, as Mr. Mnuchin met with Senate Republicans.

Among other measures, Mrs. Pelosi called for making long-term leave available to workers grappling with the virus and expanding refundable tax credits to self-employed workers.

Some of these items were in the original bill pitched by House Democrats last week but were scaled back in the legisla-

tion that eventually passed the House.

And Senate Democrats have proposed their own \$750 billion package for the third phase of the response.

"I would say to my Republican colleagues: we want to work with you, you will have different ideas, but our ideas must be contained in a package," said Sen. Chuck Schumer of New York, the chamber's Democratic leader, whose plan includes a moratorium on evictions and foreclosures.

Administration officials and lawmakers were discussing which income brackets would

receive the direct payments. One official said millionaires and billionaires would be excluded, and the administration currently estimates that the amount per adult would exceed \$1,000.

After the meeting with Mr. Mnuchin, Senate Majority Leader Mitch McConnell (R., Ky.) said the chamber would move to vote on the phase-two House bill as soon as possible, and immediately launch broader stimulus negotiations. Senate Republicans who had concerns about the House bill said that the Tuesday meeting with Mr. Mnuchin had resolved some of their concerns.

## Europe's Fiscal Remedies Risk Deepening Its Economic Gaps

BY TOM FAIRLESS  
AND LAURENCE NORMAN

European governments have pledged hundreds of billions of euros to help economies, companies and workers hit by the coronavirus, applying tools developed during the euro crisis and casting aside strict prohibitions on state subsidies.

The stimulus moves, which come on top of increased government spending automatically triggered during a downturn, could help fiscally sound countries including Germany and the Netherlands to weather the growing economic crisis. But it might not alleviate hardship for weaker countries such as Italy.

That divergence could aggravate an economic gap at the heart of Europe's currency union if it widens the gulf between the region's strong and weak economies, which in the long term could further cloud the single currency's future.

Only a small amount of the total amount pledged so far is stimulus spending that will go directly to business or workers, and most are commitments that may never be drawn on. The amounts are designed both as direct help and to boost confidence among banks, employers and investors.

European Union finance

ministers said that already announced fiscal-stimulus plans amounted to 1% of the bloc's output in 2020 and that liquidity support through government guarantees and deferred tax payments was at least 10% of the EU's GDP.

"These figures could be much larger going forward," the ministers said.

At the onset of the financial crisis in late 2008, the EU pumped €200 billion (\$220 billion) into the economy, around 1.5% of GDP.

France and the Netherlands on Tuesday became the latest countries to open the spigot. France promised €45 billion in immediate aid for businesses and employees hit by the coronavirus pandemic, which is slowing or shutting down swaths of the global economy. French Finance Minister Bruno Le Maire said provisional predictions show the response to the coronavirus will slash 1% from France's gross domestic product this year.

"This economic war will be long-lasting and violent," Mr. Le Maire said on French radio.

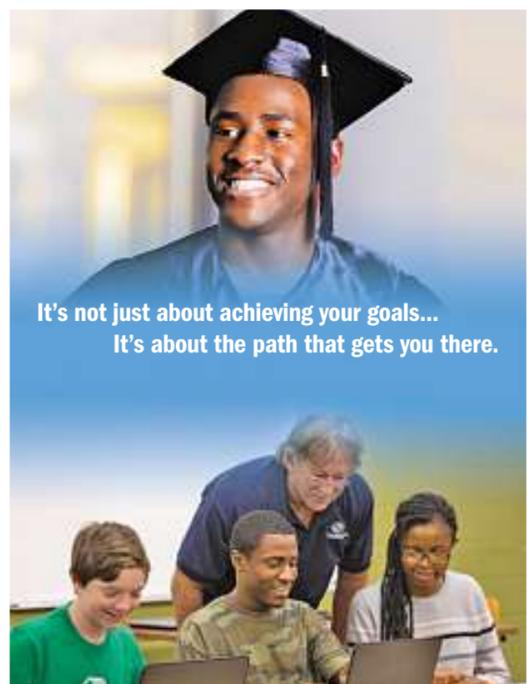
The Dutch government announced a raft of measures to support companies, ranging from tax exemptions to having up to 90% of wages paid by the government. The measures are expected to cost €10 billion

to €20 billion over the next three months, but that sum could increase, said Finance Minister Wopke Hoekstra.

The move followed the crisis response measures of Germany, Europe's biggest economy and so far the country that has pledged the greatest action. Government officials said last week they would provide potentially unlimited government financing for disrupted businesses, including measures that helped Germany emerge from the financial crisis a decade ago largely unscathed.

Central to Berlin's plan is a €550 billion loan and loan-guarantee program for businesses of all sizes, though the government stressed that it has no limit on financial support.

But Italy and Spain, two nations currently hit hardest by the virus, have been more cautious. Italy's government announced a €25 billion spending plan on Monday that included additional funds for health care, and provisions to suspend tax payments and provide mortgage relief to affected businesses and households. Spain on Tuesday announced up to €200 billion in support, including private funds the government hopes to mobilize. Only €17 billion of the total would be direct support.



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# THE CORONAVIRUS PANDEMIC

## Auto Makers Agree to Protective Measures

### Companies to allow time for cleaning factories as workers express fears of virus

BY MIKE COLIAS AND BEN FOLDY

The United Auto Workers and Detroit car companies reached agreements on coronavirus-mitigation efforts that for now will avoid a two-week shutdown of U.S. factories.

The UAW had been pressing General Motors Co., Ford Motor Co. and Fiat Chrysler Automobiles NV to idle their plants to protect workers from the virus. The union said late Tuesday that company executives agreed to partial shutdowns of plants to allow for cleaning between shifts and longer periods for shift changeovers, along with other measures to minimize worker contact, the UAW said.

A GM spokesman declined to comment on the new measures and said the company has been working on mitigation efforts for weeks. Ford and Fiat Chrysler didn't immediately reply to requests for comment. The companies earlier said they had adopted extensive measures to protect workers.

Meanwhile, Ford confirmed Tuesday evening it temporarily closed the company's Chicago assembly plant because of a parts shortage. A nearby Lear Corp. plant that supplies parts to the Ford factory is closing temporarily after two employees tested positive for Covid-19,

people familiar with the matter said. The plant was closed for disinfection after one worker tested positive and another is likely to have contracted the disease, a Lear spokesman said.

The Ford factory, which makes the Ford Explorer and Lincoln Aviator sport-utility vehicles, is expected to be down for at least Tuesday night's eight-hour shift and for part of Wednesday, the people said.

Shutting off production across U.S. factories would deal another financial blow to the Detroit auto makers, which have been grappling with virus-related disruption globally. The outbreak in China has decimated vehicle sales there and caused ripple effects through the global automotive supply chain.

Ford is considering cutting shifts at some of its U.S. factories to limit the risk to employees, although no final decision has been made, people familiar with the matter say. If the cuts are enacted, it would mark the first time an auto maker in the U.S. has significantly curtailed production because of the outbreak.

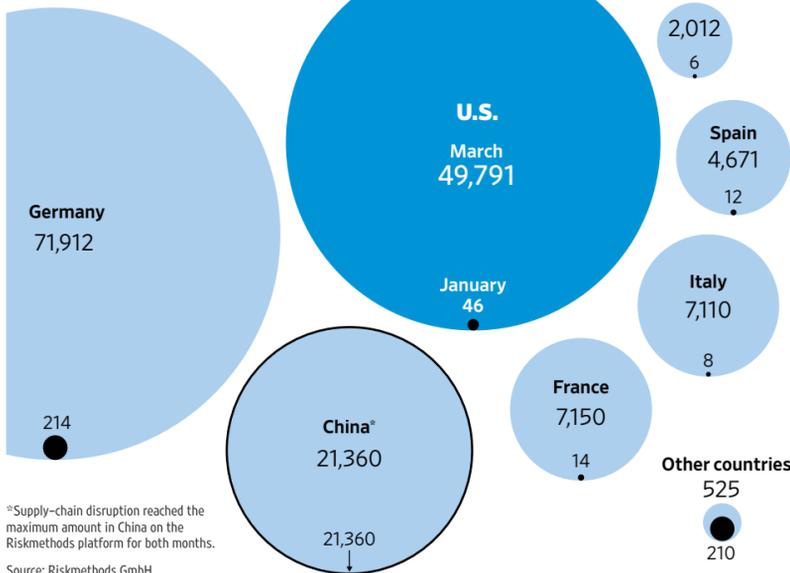
Eliminating a shift at a factory that works round-the-clock on three shifts would allow more time for disinfecting the facility, a person with knowledge of the company's deliberations said. It also would reduce the mingling that occurs between workers on shift change, the person said.

In Europe, Ford and other major car companies have temporarily closed their factories as the outbreak has spread there.

### Weak Link

The number of potential supply-chain disruptions around the world has increased sharply.

Number of disruptions in March compared with January



\*Supply-chain disruption reached the maximum amount in China on the Riskmethods platform for both months.

Source: Riskmethods GmbH

Shutting down plants results in an immediate hit to the bottom line for car companies, which book revenue as soon as they ship vehicles from the factory to dealerships. A 40-day strike at GM's U.S. plants last fall drained \$3.6 billion from GM's bottom line.

Some factory workers have complained on social media that they feel unsafe showing up for work, particularly as many of the companies' white-collar employees were told to

work from home.

"There is serious concern from our employees and rightfully so," said Todd Dunn, president of the union's chapter representing Ford's Louisville, Ky., plants. "If I could send them home and give them money, I would."

Global auto makers have been relying on the health of the U.S. market this year, as China and more recently Europe have seen car sales and production collapse as a result

of the pandemic.

So far, car companies have fended off parts shortages to keep plants running in the U.S., which accounts for the lion's share of profits at GM, Ford and Fiat Chrysler. The prospect of auto makers cutting U.S. production has Wall Street analysts scrutinizing their balance sheets to gauge how well they could weather a prolonged shutdown.

—Jan Lovett contributed to this article.

### Tesla's California Plant Ordered Shut

Tesla Inc. must halt production at its California car factory as part of an order for noncritical companies to scale down operations to mitigate the effects of the novel coronavirus pandemic.

The auto maker must conduct "minimum basic operation only" at the Fremont factory as part of the order issued Monday, Alameda County sheriff spokesman Raymond Kelly said in an email reviewed by The Wall Street Journal on Tuesday. The county issued the order as part of a broad effort in the San Francisco area to get people to seek shelter at their homes to avoid the spread of the virus.

His email followed a tweet by the sheriff's office declaring Tesla is "not an essential business as defined" in the order.

The directive could threaten Tesla's plan to boost deliveries by more than 36% this year, fueled in part by a new factory in China and the arrival of the Model Y compact sport-utility vehicle.

Tesla Chief Executive Elon Musk has said panic over the coronavirus is more dangerous than the actual disease and has said he would continue to show up at work.

—Tim Higgins



House Speaker Nancy Pelosi (D., Calif.) said she would continue to push for expanded leave, including for health-care workers.

## House Cuts Back Paid-Leave Plan

WASHINGTON—The Democratic-led House scaled back a paid-leave program that the chamber had tried to enact days earlier, following pressure

By Siobhan Hughes, Natalie Andrews and Kate Davidson

from businesses worried about financial burdens from the sweeping bill in response to the coronavirus crisis.

In revised legislation that Democratic leaders billed as a technical correction, but represented a significant rewrite, the House modified a program aimed at providing paid leave to people affected by the coronavirus. The new measure would still provide two weeks of sick leave to a wide swath of workers affected by the pandemic, including those who

are in quarantine, caring for family members with Covid-19, and those who have children whose schools or day-care centers have closed.

But for the next 10 weeks, paid leave would be limited only to workers caring for a child whose school or day care had been shut. Workers who had been in quarantine or caring for a family member affected by the virus wouldn't be eligible for the additional 10 weeks of leave. Health-care providers and emergency responders aren't guaranteed the additional 10 weeks of paid leave, with the decision up to the Labor secretary, given that the government might face a shortage of such workers.

In the original version, all the workers who received paid sick time would be eligible for another 10 weeks of paid leave

at two-thirds pay, in what would have represented a major expansion of the Family and Medical Leave Act, the 1993 law that provides 12 weeks of unpaid leave to workers at larger companies.

Democratic aides were alarmed by the changes, which were passed with no objections because House lawmakers are away from Washington. The changes weren't shown to most lawmakers before the vote.

House Speaker Nancy Pelosi (D., Calif.) appeared to address the criticism Tuesday, saying she said she would continue to push for expanded leave, including for health-care workers and those who need longer leave because they get sick.

"During negotiations, the Democratic House will continue to make clear to the Ad-

ministration that any emergency response package must aid to corporate America is considered," she said.

The bill passed Saturday morning allowed businesses with fewer than 50 workers to win exemptions under rules to be developed by the Labor Department. Many businesses had expressed concerns about cash flow and had worried that they might suffer additional disruptions during a crisis by losing workers on whom they relied.

To become law, the legislation must next pass the Senate, where some Republicans have raised concerns that the legislation places too much of a burden on small employers.

The legislation also makes coronavirus testing free and increases access to food assistance to those who need it.

## New Testing Policy Could Lift Access, But Risk Accuracy

By Thomas M. Burton and Sharon Terlep

WASHINGTON—A federal agency's decision to allow lab companies to release coronavirus tests without prior government approval should help ease the shortage of test kits, but at the potential cost of compromised results, medical experts said on Tuesday.

"It's a pretty good idea to allow for companies to get tests out in a national emergency," said Paul Fey, research medical director at the University of Nebraska Medical Center. But he added that "these tests may not perform as well."

The new policy was announced late Monday by Food and Drug Administration Commissioner Stephen Hahn, who conceded there were risks but said they were warranted by the circumstances.

Efforts to combat the virus have suffered from a shortage of test kits, which has typically required people with symptoms of the disease to get permission from a doctor for testing.

At the same time, inaccurate tests create their own set of problems, medical experts say.

False negatives, in which a person is deemed healthy while

actually sick, could mean that person infects others unwittingly. But a false-positive test is also problematic, as it could lead healthy people to end up in the hospital, wasting medical resources.

"It is not scientifically valid to just say 'What the hell' and let tests indiscriminately onto the market," said Diana Zuckerman, president of the National Center for Health Research. "It does a lot of harm if the test isn't accurate."

Ravi Thadhani, chief academic officer at Partners HealthCare, a group of Boston-area hospitals that includes Harvard teaching hospitals, said "the likelihood is much higher" of such misleading results with the FDA decision.

The FDA's Dr. Hahn said the agency is striking a balance between speed and scientific rigor. He said that "inaccurate diagnoses during a pandemic can impair prevention efforts and delay appropriate treatment."

In its announcement, the FDA said it would try to weed out bad tests by requiring lab companies to submit data demonstrating accuracy within about two weeks of the tests' release.

◆ Lack of blood samples stalls work on virus drug..... B1

## U.S. Weighs Partial Shutdown of Borders

By Michelle Hackman and Alicia A. Caldwell

Due to the coronavirus pandemic, the Trump administration is considering a plan to shutter the U.S. border with Mexico and Canada as soon as this week to asylum seekers and other foreigners who don't have permission to enter the country, people familiar with the plan said.

Under the plan, the administration would keep ports of entry open to U.S. citizens, permanent residents and foreigners with legal permission to enter the country. Foreigners covered by President Trump's existing travel restrictions on China and Europe already aren't permitted to enter at either of the U.S.'s land borders.

Migrants crossing the southern border between legal ports of entry, including those claiming asylum, would be swiftly returned to Mexico by the U.S. Border Patrol.

The administration plans to use a provision of public-health

law that allows immigration officials to deny entry to foreigners who pose a risk of spreading infectious diseases, the people familiar with the plan said. The government is expected within the next two days to publish a rule that would take immediate effect. It wouldn't require congressional approval.

"The President is 100% focused on protecting the American people from the coronavirus and all options are on the table," Heather Swift, spokeswoman for the Department of Homeland Security, said in a statement. The Department of Health and Human Services, which oversees public-health laws, didn't return a request for comment.

Asked during a White House news conference earlier Tuesday whether he is considering shuttering the U.S. land borders, Mr. Trump said: "I don't want to say that, but we are discussing things with Canada, and we're discussing things with Mexico, quite honestly."

The plan was earlier reported by the New York Times.

## IRS Extends April 15 Deadline for Payments

WASHINGTON—The U.S. government will postpone the April 15 tax-payment deadline for millions of individuals, giving Americans an additional 90

By Richard Rubin, Laura Saunders and Andrew Restuccia

days to pay their 2019 income-tax bills in an unprecedented move intended to ease the economic pain inflicted by the coronavirus.

The IRS, using authority under President Trump's national-emergency declaration, will waive interest and penalties as

well, Treasury Secretary Steven Mnuchin said Tuesday. The delay is available to people who owe \$1 million or less and corporations that owe \$10 million or less, he said.

Mr. Mnuchin said the move could provide \$300 billion in temporary liquidity, giving households and businesses a financial cushion as they cope with the sudden slowdown in economic activity caused by the coronavirus epidemic.

"We are going to use all the tools we have," Mr. Mnuchin said. "And what tools we don't have, we're going to go to Congress."

The IRS will continue to process tax refunds. Taxpayers should file their returns as usual by April 15 but they can defer payment for up to 90 days beyond that, according to the Senate Finance Committee. Presumably, they can also seek six-month extensions and defer payment, but the IRS hasn't made that clear yet.

Tax preparers warned that requiring taxpayers to file returns or requests for extensions by April 15 would create unnecessary work and stress over the next month as people try to complete returns or extensions. "Had they not decoupled the

payment date from the due date, and just blanket extended everything to July 15, we as tax preparers and employers, and just plain old citizens, could ratchet back the amount of time we spend together daily and weekly," said Ken Goodrow, an accountant at Tyler, Simms & St. Sauveur in Lebanon, N.H. "Unless this return due date moves we are all in for a much busier, much more stressful month than normal," he said.

The IRS hasn't explained whether taxpayers can also defer estimated-tax payments for the first quarter of 2020, which are also due on April 15.

## THE CORONAVIRUS PANDEMIC

## U.S. Tries to Soften Impact of Coronavirus

Cities, states and Washington sought ways to mitigate the blow of the coronavirus as businesses closed, the European Union planned to shut its borders and fears of a pandemic-induced recession kept markets on edge.

By Jennifer Calfas,  
Jim Carlton  
and Sam Schechner

U.S. Treasury Secretary Steven Mnuchin is pitching Senate Republicans on a \$1 trillion stimulus plan that would include roughly \$250 billion in direct payments, according to a White House official. The Federal Reserve also took steps to prevent further strains in short-term commercial debt markets. The moves helped push U.S. stocks higher Tuesday following a punishing selloff a day earlier.

Around the country, disruptions to daily life continued unabated. New York City Mayor Bill de Blasio said he was considering a shelter-in-place order requiring residents to stay at home for a period, while officials in Hoboken, N.J., ordered residents to self-isolate. Texas Gov. Greg Abbott activated the state's National Guard as the number of infections there grew and the state reported its first coronavirus-related death. More states, including North Carolina, added restrictions on bars and restaurants.

States including Ohio and Maryland delayed their primary elections. Florida, Illinois and Arizona forged ahead with their contests, but last-minute changes to polling locations caused confusion among some voters.

The coronavirus has now officially spread throughout the entire nation, as West Virginia on Tuesday became the 50th state to disclose it has a confirmed case.



A San Francisco-bound Caltrain was nearly empty on Tuesday, as a legally mandated lockdown went into effect in the city.

Efforts to slow the virus's impact and spread across the U.S. followed more drastic moves in Europe, where France and other countries pledged billions of euros in immediate aid for businesses and employees hit by the pandemic.

Confirmed cases of the novel coronavirus rose globally to more than 196,600 on Tuesday as the death toll hit 7,893, according to data compiled by Johns Hopkins University.

Among the new cases were four players on the NBA's Brooklyn Nets, according to the team. Star player Kevin Durant told The Athletic he was one of them.

The swift increase has set off more lockdowns and travel halts.

The EU said it would close its borders for 30 days—an unprecedented move. The travel ban will allow exemptions for citizens and long-term residents or their immediate families returning home; medical staff and others dealing with the coronavirus; diplomats, frontier workers and people transporting goods. The U.K. and Ireland, which share a common travel zone, aren't covered by the measures.

A nationwide lockdown in France took effect Tuesday, following Italy and Spain, where confirmed cases hit 31,506 and 11,309, respectively, Tuesday. Governments in Asia, meanwhile, are limiting visitors from foreign countries as travelers

bring a second wave of the new coronavirus to the region.

The United Nations High Commissioner on Refugees, which coordinates refugee flights around the world, said it was pausing all resettlement flights within the next couple of days. The pause will likely mean the U.S.—which is accepting a record low 18,000 refugees this year—could end up resettling even fewer people than it had planned.

Infections in the U.S. surpassed 5,850 Tuesday, with at least 97 deaths. The number of cases is expected to increase as testing capabilities expand.

The U.S. military said Tuesday it would open its labs, ready its hospital ships and

distribute key medical equipment in response to the growing crisis. The Trump administration announced new steps to increase access to telehealth, allowing patients to reach doctors remotely for care.

In San Francisco, where a legally mandated lockdown went into effect Tuesday, police patrols were light. But citizens mostly appeared to be complying with the edict, which says residents may venture outside only for groceries or medical appointments. Walks and other exercise are also allowed, but not in groups.

When Cathy Bayer left her home in the city's Miraloma Park neighborhood to stock up on groceries, she said she ex-

pected to see some form of police presence.

"I was worried if I would be stopped driving down the street, but so far I don't really see anything different," Ms. Bayer, a 64-year-old administrator, said as she loaded three bags of groceries into her car.

Notably outdoors were San Francisco's large homeless population, which city officials exempted from the order.

Manufacturers in the U.S. are improvising to keep factories humming as the coronavirus pandemic threatens one of the biggest disruptions in memory to supply chains, staffing and demand. Amazon.com Inc. said it is taking steps to prioritize shipments of medical supplies, household staples and other high-demand products.

Marriott International Inc., the world's largest hotel company, said it is starting to furlough what it expects will be tens of thousands of employees as it ramps up hotel closings. Meanwhile, retailers including Macy's, Foot Locker, Ralph Lauren, Chico's, American Eagle Outfitters and Fossil announced plans to close stores in the U.S. temporarily.

Governments around the globe are enacting more aggressive measures amid fears of the pandemic's spreading economic impact.

France, where the number of confirmed cases rose to more than 7,600, pledged €45 billion (\$50 billion) in immediate aid for businesses and employees hit by the pandemic. The U.K., Germany and other European countries have also announced assistance measures for businesses.

In Iran, site of the third-worst outbreak in the world behind China and Italy, worshippers defied restrictions on access to holy shrines and mosques, as the country's leaders struggle to stem soaring infection and death rates.

## For Pregnant Women, Data on Risks Is Scant

By DANIELA HERNANDEZ

Raquel Iacurto went to sleep with a bad headache on Tuesday March 10.

The next day, she said, "I had some tightness in my chest, and really bad body aches." She called in sick at work and went to an urgent-care center, where she tested negative for the flu and was sent home to her apartment in Valley Stream, N.Y.

That night, Ms. Iacurto woke up with a fever. She worried she could have the novel coronavirus, an especially frightening thought since she is about 27 weeks pregnant.

As cases of Covid-19—the disease caused by the coronavirus—continue to rise in the U.S. and globally, there is still scant data available about how the virus affects pregnant women and fetal development, according to doctors and researchers. It is that lack of information that is most unnerving and stressful, according to interviews with several expectant moms.

The World Health Organization doesn't have a breakdown of how many of the world's more than 190,000 confirmed cases were among pregnant women, nor what the full range of outcomes has been, according to a spokesperson. The data are crucial for as-



Raquel Iacurto, a special-education teacher, and her husband, Joseph.

sessing the level of risk for pregnant women and helping clinicians efficiently mobilize medical resources for the most critical patients, especially with health-care systems already experiencing surges in cases, according to doctors.

Meanwhile, clinicians and scientists are gaining insights from past reports out of China and past research on respira-

tory illnesses to inform care strategies and reassure pregnant women and their families.

The new coronavirus, similar to viruses within the same family, doesn't seem to be transmitted from mother to child in the womb or through breast milk, according to some peer-reviewed studies. A study of nine live births among coronavirus patients in China

didn't find the virus in samples of amniotic fluid, cord blood or breast milk, according to research published in February in the Lancet medical journal. Throat swabs in the newborns also tested negative.

The virus can still be transmitted after birth through contact, posing tough questions about whether a mother and her newborn should be separated and for how long.

Scientists are trying to determine whether infection earlier in pregnancy might increase a risk of preterm labor, miscarriage or birth defects.

In limited studies of SARS cases, women didn't seem to have an increased risk of having babies with abnormalities, said Liona Poon, a clinical professor at the Chinese University of Hong Kong and an author of an interim report on how to manage Covid-19.

A February WHO report found that pregnant patients "do not appear to be at higher risk of severe disease," citing an investigation of 147 confirmed and suspected cases among Chinese women. The report said that 8% of patients were found with severe symptoms and 1% of them ended up in critical condition.

Data from China also suggest the risk of getting seriously ill is low among younger

patients, unless they have underlying health conditions, like diabetes, heart disease or respiratory issues.

"The data coming out of China has been very reassuring," said Brenna Hughes, vice chair for obstetrics and quality at Duke University Medical Center. "But we really don't know how this virus is going to behave in the American pregnant population."

Pregnant women in general are already considered higher risk, in part because they are more prone to infection.

Several pregnant women in the U.S. said they had taken their school-age children out of school, upped their home-cleaning and personal hygiene regimens, and canceled play dates and family visits.

Ms. Iacurto, a special-education teacher at a public school in Brooklyn, has spent time in recent weeks at work. Her last day in the classroom was March 10.

On Thursday, Ms. Iacurto, 32, went to the emergency room. There, she was tested for the coronavirus. Saturday night, her doctor called to tell her she had tested positive.

She said Monday afternoon she was still experiencing chills, body aches and had a cough.

"But every day is a little better," she said.

## SoftBank Backs Off On WeWork

Continued from Page One

more than 8%, hitting their lowest levels since 2016.

SoftBank recently has received information demands from the SEC and the Justice Department as well as New York state regulators about WeWork's business practices and communications to investors, some of the people said. The company previously had told shareholders that it expected to go ahead with the purchase of the existing shares on April 1.

The \$3 billion stock purchase that SoftBank is backing

## Coronavirus is expected to hurt WeWork as more offices are closed.

away from was a key part of the company's October bailout of WeWork. SoftBank saved the company from a cash crunch following WeWork's failed IPO by agreeing to provide about \$5 billion of debt and speed up a prior commitment to invest an additional \$1.5 billion in the company.

The IPO, which was pulled after a rough reception from Wall Street, would have raised more than \$3 billion.

SoftBank struck the deal after a negotiation with WeWork board members and Mr. Neumann, who agreed to cede his board seat and voting rights of his shares and receive a \$185 million consulting fee. Mr. Neumann has returned to Israel, where he was raised.

The coronavirus is expected to have a large impact on WeWork's business, as companies around the globe have sent their employees home to work, hurting demand for short-term office space.

Several cities and states, including San Francisco, have ordered residents to shelter in place.

A possible recession could hurt small companies that are among WeWork's important customers.

—Konrad Putzier  
contributed to this article.

## A Storied Eatery's Plans to Reopen Are Now on Hold

## MAKING IT WORK

As the new coronavirus forces big changes in how we

work, The Wall Street Journal is looking at how different people are coping with the stresses and risks.

By STEVEN RUSSOILLO

St. John Frizell and his partners have spent much of their recent time buried in work on a March 15 grand reopening for Gage & Tollner, a 19th-century chop-and-oyster restaurant in downtown Brooklyn that closed in 2004. The finishing touches included taking delivery of alcohol and training 50 employees.

On Sunday, however, he had to lay off the entire staff after delaying the launch due to the new coronavirus pandemic. Now, Mr. Frizell is trying to

figure out what is next for the storied eatery.

"It's heartbreaking," he said in an interview Sunday. "We built this machine and were just about to take it out and see what it could do, and now we don't have the opportunity."

The days leading up to the reopening delivered equal parts anxiety and success. Trial dinners for friends and family went off well, but Mr. Frizell and his two co-owners also watched the news nervously as the number of confirmed cases mounted.

"It was literally all set to go," Mr. Frizell, 46 years old, said, noting that as of Friday he was still optimistic that Gage & Tollner would open its doors on time. The next day, however, he started packing up the restaurant. A walk-in refrigerator was converted into a freezer to help store unused food.

Laying off the staff was

tough but necessary. Paying employees while the restaurant sat idle wasn't feasible. He is hopeful he will be able to rehire many, if not all of them, after the pandemic slows.

Mayor Bill de Blasio is now limiting New York City restaurants, bars and cafes to providing takeout and delivery.

Mr. Frizell needs to figure out how to shift gears. "In the weeks leading up to the opening of a restaurant, there's no rest," he said. "You work non-stop, at least 12-hour days. That's what it's been like for me and for everyone involved."

And now? "I think I might take a day and just read a book, put my feet up, relax and get ready for whatever comes next," he said.

Mr. Frizell won't be idle. In addition to the Gage & Tollner venture, he has owned Fort Defiance, a bar in Brooklyn's Red Hook, for more than a decade.

He said sales fell 20% last Thursday from the prior week and 30% on Friday. By Saturday, sales plunged 42% from a week earlier.

"It's a pretty clear indicator that New Yorkers don't feel comfortable going out to eat right now," he said.

Mr. Frizell is crafting a business model for a takeout and delivery service at Fort Defiance, trying to figure out how many employees are needed. He plans to assign shifts to his current staff based on seniority. "Unfortunately, there won't be enough to go around," he said.

Gage & Tollner's reopening, meanwhile, is on hold. "If you could tell me when the coronavirus panic will be over, I'll set the date for the day after that," Mr. Frizell said.

The restaurant originally opened in 1879 and moved to what is now its present location in downtown Brooklyn in

1892. New York City started designating Gage & Tollner a landmark in 1974. It was the first landmark dining room and the city's third interior landmark of any kind.

Its return to the Brooklyn dining scene is anticipated. The restaurant has already made about \$5,000 from selling gift cards online.

Mr. Frizell and his partners are working to secure a loan and negotiating with creditors to defer some payments and ease the financial burden.

But it could all be for naught if the restaurant remains closed for an extended period. "It's going to be impossible to make the rent going forward," he said.

Still, Mr. Frizell is optimistic. "This institution survived two world wars, the Spanish flu, the Great Depression and Prohibition," he said. "It will survive this as well."

## THE CORONAVIRUS PANDEMIC

## A Second Wave of Cases Grips Singapore, Taiwan, Hong Kong

By LIZA LIN  
AND JOYU WANG

Singapore, Taiwan and Hong Kong are witnessing fresh waves of coronavirus infections, as the growing number of cases around the world test their successful early defenses against the disease.

Singapore reported 23 new cases late Tuesday, its highest daily count since the epidemic started. Taiwan recorded a single-day high of 10 cases of infection, bringing its total to 77. Hong Kong added five new cases—a day after it recorded nine—the most since Feb. 9.

Singapore, Taiwan and Hong Kong, which were hit early by the fast-spreading coronavirus because of their close economic and social ties with China, have been lauded for effectively controlling initial outbreaks with fast and aggressive responses. Now, they face fresh challenges as coronavirus cases soar in Europe and the Middle East and returning travelers bring back new risks.

“The trouble with this virus is that it is very unpredictable. We do not know who will be at the center of a super-spreading event,” said Paul Anantharajah Tambyah, the president of the Asia-Pacific Society of Clinical Microbiology and Infection. “We are not safe in any place until everyone all over the world is safe.”

Globally, cases of infection rose to more than 182,000 on Tuesday and the number of deaths hit 7,155, according to Johns Hopkins University. The fast rise has set off more lockdowns and travel halts.

The Trump administration urged Americans to put off traveling and avoid gatherings

## Malaysian Curbs Spark Panic Buying

News that Malaysia would implement severe international border restrictions until the end of the month led to a wave of panic buying in Singapore’s supermarkets.

Singaporeans were seen cleaning out trays of fresh vegetables, poultry and toilet paper within an hour of the announcement, which came late Monday night.

“Everybody is afraid the Malaysian border closures would mean we’ll end up with limited fresh vegetables and eggs,” said Linus Lim, a 45-year-old Singapore information-technology executive, who stopped by a large supermarket with his two colleagues, hoping to buy some fresh poultry.

They found empty shelves

and only one or two packs of chicken.

Trays containing fresh potatoes, broccoli and carrots were bare and shoppers were picking over the last packs of green beans.

Mr. Lim left with ice cream and milk instead.

A store assistant who was manning the poultry counter at the supermarket said the crowd started coming in at 8 a.m. and had cleaned out coolers of fresh pork and chicken by mid-morning.

By Tuesday afternoon, the supermarket had started to limit purchases of meat, instant noodles and toilet paper.

The government sent out a statement later Tuesday to try to reassure citizens that Singapore had an adequate supply of food and essentials and the country wouldn’t be affected by Malaysia’s border shutdown.

of more than 10 people, as infections and deaths outside China exceeded those inside. Its guidance expanded on earlier restrictions that banned most inbound travel from Europe and the U.K.

Millions of people in the San Francisco Bay Area were ordered to remain at home for three weeks and restrictions on bars and restaurants were expanded beyond New York City and Los Angeles to Minnesota and Kentucky.

In addition, Germany unveiled broad restrictions on travel and public life, while France ordered a nationwide quarantine.

The growing tally of infections globally is also forcing new steps in parts of the world that had appeared to have a handle on the virus’s spread.

Taiwan reported its first case in early January and moved quickly to enforce quarantine rules on arrivals from China, Hong Kong and Macau. This kept the island’s daily new infection counts to single digits for two months—until the center of the pandemic shifted from Asia. The past three days have brought more than 30% of Taiwan’s total cases, most of them involving travelers returning from vacations in places like Europe.

“You can see from the current situation—compared with the previous wave—it came much more quickly,” Taiwan Minister of Health and Welfare Chen Shih-chung said Monday.

The recent clusters of Taiwanese patients included nine people returning from a vacation in Turkey with the same tour group, provoking a social-media outcry about leisure travel in the wake of the global pandemic.

“If you know a friend who is still traveling for fun, please immediately break up with him—Right now!” one Twitter user wrote.

On Tuesday, Taiwan extended its self-quarantine rules to cover travelers coming from Washington state, New York and California, as well as Japan and a number of countries in Southeast Asia. Mr. Chen, the island’s top health official, strongly advised citizens to avoid unnecessary travel to those places. He said people who knowingly ignore the travel warning won’t be eligible for government subsidies during their 14-day quarantines and their names would be made public.

Singapore closed its borders to Chinese travelers on Feb. 1, about a week after China said it would lock down the city of Wuhan, where the first coronavirus infections were reported. It set up a national task force to coordinate its response, ran detailed contact-tracing searches and imposed strict quarantines.

In the past week, after imported cases rose, authorities restricted entry for visitors from many European countries, South Korea and Iran and imposed two-week quar-

## Shifting Threat

Many Asia-Pacific countries are experiencing a recent increase in coronavirus cases, in contrast to mainland China, where infections have slowed.

## Daily new cases



Note: Scale varies each country to show the daily change in the country.

Source: Johns Hopkins CSSE

antines for residents and short-term visitors from Southeast Asia. They also strongly discouraged citizens from traveling overseas and recalled exchange students who are studying abroad.

Hong Kong leader Carrie Lam said arrivals from all foreign countries would be placed under home quarantine for two weeks beginning Thursday—extending a quarantine rule that had previously affected travelers from hot spots like China, Iran, Korea and parts of Europe.

“From now on, I would say the majority of arrivals in Hong Kong will be put under

home quarantine or medical surveillance of some form,” Mrs. Lam said at a press conference on Tuesday.

Elsewhere in the Asia-Pacific region, the disruption and number of cases continued to mount. National Australia Bank, vacated its headquarters in Melbourne after an employee tested positive for the virus. The building will be “pandemically cleaned,” NAB Chief Executive Ross McEwan said in a letter to staff posted online Tuesday. Johns Hopkins data show Australia has 377 confirmed cases of infection.

—Rachel Yeo  
contributed to this article.

## Devout Iranians Defy Tehran’s Call to Avoid Shrines

By SUNE ENGEL RASMUSSEN  
AND ARESU EQBALI

TEHRAN—Iranian worshippers have attempted to break into holy shrines and mosques, defying Iran’s leaders who are trying to bar access to religious sites as they struggle to stem a soaring death rate caused by the new coronavirus.

Police in the central city of Qom on Tuesday apprehended 11 rioters who the night before clashed with mosque guards as they tried to enter one of Iran’s holiest sites, the Masoumeh shrine, the Qom prosecutor told state television. The same night in the city of Mashhad, worshippers tried to enter the largest religious site in the country, the Imam Reza shrine. The shrine remained shut on Tuesday.

President Hassan Rouhani is trying to balance demands from some Iranians for mass quarantines with pushback from those who oppose restrictions on religious and economic activities. The tension comes as some experts warn that fatalities in Iran from Covid-19 could reach into the millions if public disregard for official guidelines continues.

The acts of the worshippers in Qom went against not just the central government, but also against Supreme Leader Ayatollah Ali Khamenei, who has urged all Iranians to follow the measures introduced by the Health Ministry.

Mr. Khamenei last week said medical personnel who die after contracting the coronavirus should be considered martyrs, a title usually reserved for those who perish in war. On Tuesday, the supreme leader issued a religious ruling prohibiting unnecessary travel during the outbreak.

Iran is battling one of the world’s worst outbreaks of Covid-19. The Health Ministry on Tuesday logged 135 deaths over the previous 24 hours, bringing the number of fatalities to 988. More than 16,000 people have been infected from the illness caused by the new coronavirus in Iran.

Some are warning that Iran’s death toll will continue to soar—and just how high will depend on compliance with public-health advice.

In a new study, cited by Iranian state media, researchers at the renowned Sharif University of Technology in Tehran said if the Iranian population begins fully cooperating with advice from authorities



Worshippers, above, prayed at the closed door of Masoumeh shrine in Qom on Monday, while on Sunday a militia handed out packages containing precautions against the disease.

now, the outbreak will peak in early April, leading to an estimated 12,000 deaths. If they refuse to cooperate, Iran’s strained medical system will be overwhelmed, and the peak will occur in June, causing as many as 3.5 million people to die, the study said.

Iran isn’t alone in attempting to stem the tide of worshippers to holy sites—and containing the risks such mass congregations pose in spreading the virus.

On Tuesday, Grand Ayatollah Ali al-Sistani, the paramount spiritual authority in Iraq, who also commands loyalty among millions of Shiites across the world, issued a religious edict designating the fight against the coronavirus a collective duty.

Mr. Sistani likened the work of medical workers to that of “heroic fighters” and said those who fell in the line of duty should be considered martyrs. Both the Shiite and Sunni authorities have instructed all mosques under their authority across Iraq to be closed.

Saudi Arabia also on Tuesday suspended all mass prayers, including Friday prayer, in all mosques, with the exception of the two holy mosques in Mecca and Medina, the official Saudi Press Agency reported.

In Iran, authorities on Mon-



day closed four important religious sites after weekslong calls to shut shrines and mosques to avoid mass gatherings. The Masoumeh shrine in Qom and the Imam Reza Mosque in the eastern city of Mashhad are two of the country’s holiest sites. Authorities also closed the Shah-Abdol Azim shrine in Tehran and the Jamkaran Mosque in Qom.

While Iranian authorities say Qom is the source of its

Covid-19 epidemic, they hadn’t until Monday restricted travel or closed religious sites in the city, although local authorities had banned hotels and guest houses from taking travelers.

The Imam Reza shrine in Mashhad attracts up to 25 million Iranian and non-Iranian pilgrims a year. The Astan Quds Razavi, which runs the shrine, is one of Iran’s wealthiest and most politically powerful foundations.

Some Iranian conservatives have for decades resisted government interference in religious practices. A video circulated on social media showed a worshiper on Monday outside the Masoumeh shrine in Qom accusing Iran’s Ministry of Health of obeying orders from the World Health Organization, which he said didn’t believe in religion.

“If you are a true believer, this door must be opened to-

night,” the instigator said, adding that for 1,400 years no Iranian ruler had managed to shut the shrine.

Iranian politicians criticized attempts to breach the shrines. Prominent reformist Mostafa Tajzadeh called the rioters an irresponsible minority, while lawmaker Ali Motahari said they should be prosecuted for spreading the virus and defaming Islam.

The Iranian government has urged people to minimize travel around the country and those with symptoms to stay home, but it has refrained from imposing quarantines, even during the two-week Persian New Year, which begins March 20.

Iranian police on Monday banned the annual fire festival, slated for Tuesday, which is part of the New Year celebrations, but police chief Hossein Ashtari blamed “enemies” of Iran for spreading rumors about a quarantine with the aim of causing panic buying and a shortage of essential goods.

The government’s opposition to lockdown measures stems partly from fears over the potential damage to a fragile economy, which has been the source of recent unrest. As U.S. sanctions have hammered Iran’s economy, domestic tourism—particularly to religious sites—has provided a lifeline.

—Rachel Yeo  
contributed to this article.

## THE CORONAVIRUS PANDEMIC

## Tracking Tools a Risk To Privacy

Continued from Page One

unit, Facebook Inc. and Amazon.com Inc. The task-force discussions involving the White House and tech companies were reported by The Wall Street Journal on Sunday.

Other efforts are more grassroots, with tech companies pitching state agencies and governments.

Tech and government officials are struggling to find a balance between deploying technology and keeping patients' data—particularly medical information—safe. Some privacy advocates worry that little has been disclosed about what is being planned or implemented.

Technology executives spent much of an hour-long call Sunday discussing ways to track hospital-bed availability across the country using geolocation data, but also how the data could be aggregated so that personal information of cellphone users wouldn't be shared, according to people familiar with the call. It isn't clear which companies would handle that kind of tracking.

Other countries have already deployed location-tracking systems and other tech solutions to fighting the pandemic, but many such efforts could run afoul of U.S. privacy laws.

In China, telecom companies helped the government track and contact people who had traveled through Hubei province during the early days of the virus. Location data were funneled to China's National Health Commission and other agencies, allowing them to re-create the steps of virus carriers and people that they may have encountered and issue warnings via social media.

As part of the task-force discussions, Facebook and Google are exploring ways to use data to help the U.S. government track outbreaks of the disease, according to a person familiar with those discussions. Facebook is already sharing disease-mi-

gration maps to help combat the spread of coronavirus, a company spokesman said.

In the U.S., the government could legally request location data from telecom carriers or from Google, which has access to more-precise data belonging to its Android and Google Maps users, said Al Gidari, director of privacy at Stanford Law School. This information can't typically be released without user consent or a court order, but the government has broader authority to request such data in the event of an emergency, he said. "I don't think anybody would dispute that this is an emergency," he said.

White House and CDC representatives didn't respond to requests seeking comment.

Camber Systems, a Washington, D.C., location-tracking startup founded by former government officials, says on its website that it leverages "data, machine learning and artificial intelligence" to help cities manage transportation and infrastructure. The company is among the firms in talks with the White House, according to people familiar with the matter.

"If we're to leverage commercial technology to save lives, how do we put in the policy framework so we're not South Korea or China or Israel?" said Ian Allen, Camber's chief executive, in an interview.

Some privacy advocates worry that the crisis of the moment could create a new paradigm.

"We understand that given we are in this crisis, that some temporary adjustment of our digital liberties may be necessary, however it's really important that those adjustments be temporary," said Adam Schwartz, a senior lawyer at the Electronic Frontier Foundation, an advocacy organization for civil liberties and technology.

Palantir is working with the CDC on data collection and data integration related to disease tracking, according to a person familiar with the company.

During the cholera outbreak in Haiti in 2010, the CDC used Palantir to "monitor the situation and inform their response efforts," according to a paper later published by Palantir.

The company said it is making privacy a priority.



A funeral this month in Bergamo, Italy, where a hospital doctor estimated 60% or more of residents have the coronavirus.

## Italy's Hospitals In Crisis

Continued from Page One

The number of ill has outstripped the hospital's capacity to provide the best care for all. The coronavirus is devastating Bergamo and pushing a wealthy region with high-tech health care toward a humanitarian disaster, a warning for the U.S. and other developed countries. The city's experience shows how even advanced economies and state-of-the-art hospitals must change social behaviors and prepare defenses ahead of a pandemic upending the rules.

Some U.S. doctors are trying to understand how the coronavirus defeated all efforts so far to contain it in Lombardy, the Italian region that includes Bergamo and Milan. They seek lessons but don't have much time, as the

pandemic, now coming under control in China, takes off throughout the West.

Maurizio Cereda, an intensive-care doctor and anesthesiologist in Philadelphia, recently circulated a list of lessons from Italy to colleagues. Dr. Cereda, now at the Hospital of the University of Pennsylvania, trained in Milan and has been in close touch with Italian colleagues in Bergamo and elsewhere.

Many of the lessons relate to public health, to avoid overwhelming hospitals. "Mild-to-moderate cases should be managed at home, not in the hospital, and with massive deployment of outreach services and telemedicine," he wrote. Some therapies could be delivered by mobile clinics.

Another lesson: Italian emergency-medical technicians have experienced a high rate of infection, spreading the disease as they travel around the community.

Dr. Cereda warned that smaller hospitals "are unprepared to face the inflow of patients" and are likely to collapse. He suggested admitting the sickest patients to bigger facilities and using dedicated ambulances for suspected coronavirus patients.

Italy's death toll from the coronavirus hit 2,158 on Monday, up 349 since Sunday. The country is on course to overtake China's toll within days. Its large elderly population is especially vulnerable to Covid-19, the respiratory disease caused by coronavirus.

About two-thirds of Italy's dead, 1,420 people, are in Lombardy, the ground zero of Europe's epidemic. It is where the virus is all the more deadly because hospitals in the worst-hit towns have reached their limits. Bergamo, in particular, has become Italy's symbol of an epidemic spinning out of control.

Studying the dire turn of events in Italy has helped U.S. doctors better prepare, said Brendan Carr, chair of emergency medicine for The Mount Sinai Health System, a New York City hospital network.

Dr. Carr said he and other U.S. physicians have had informal calls with Italian doctors in recent weeks. "It's terrible to hear them talk, but it benefits us to learn from it," he said. One lesson, he said, is to build capacity for the expected influx of Covid-19 patients before it's needed. Mount Sinai is clearing out space and creating new ICU beds, he said.

Bergamo shows what happens when things go wrong.

In normal times, the ambulance service at the Papa Giovanni hospital runs like a Swiss clock. Calls to 112, Europe's equivalent of 911, are answered within 15 to 20 seconds. Ambulances from the hospital's fleet of more than 200 are dispatched within 60 to 90 seconds. Two helicopters stand by at all times. Patients usually reach an operating room within 30 minutes, said Angelo Giupponi, who runs the emergency response: "We are fast, in peacetime."

Now, people wait an hour on the phone to report heart attacks, Dr. Giupponi said, because all the lines are busy. Each day, his team fields 2,500 calls and brings 1,500 people to the hospital. "That's not counting those the first responders visit but tell to stay home and call again if their condition worsens," he said.

The Papa Giovanni XXIII Hospital, a 950-bed complex that opened in 2012, is among

the most advanced in Italy. It treats everything from trauma and heart surgery to organ transplants for children.

More than 400 of the beds are now occupied by confirmed or suspected coronavirus patients. The intensive-care unit has swelled to around 100 patients, most of whom have Covid-19. New cases keep arriving. Three of the hospital's four top managers are home with the virus.

"Until three weeks ago, we did everything for every patient. Now we have to choose which patients to put in intensive care. This is catastrophic," said anesthesiologist and intensive-care specialist Mirco Nacoti.

Dr. Nacoti worked for Doctors Without Borders in Haiti, Chad, Kurdistan and Ivory Coast, and he is one of the few medics in Bergamo who has seen epidemics. Yet, those were diseases with vaccines, such as measles and rubella.

He estimated around 60% or more of the population of Bergamo has the virus. "There is an enormous number of asymptomatic people, as well as

pitals and use them exclusively for coronavirus cases.

Regional managers at the time were dealing with an outbreak south of Milan. "We haven't slept for three days and we do not want to read your bullshit," Dr. Giupponi recalled their reply.

Since then, Italy's lockdown has turned Bergamo into a ghost town.

Death notices in the local newspaper, the Bergamo Echo, normally take up just over a page. On Monday, they filled nine pages.

Doctors on a break at the Papa Giovanni swap stories of woe, including the call from an elderly care home reporting suspected virus sufferers who were over 80 years old. The hospital said the elderly residents had to stay put.

"None of us have ever seen such a thing," trauma surgeon Michele Pisano said. "We're trained for emergencies, but for earthquakes, not epidemics." Dr. Pisano has little to do these days: Italy's lockdown means there are virtually no car crashes, bicycle accidents or broken bones from skiing. He helps out in the coronavirus wards however he can.

In small towns around the province of Bergamo, the pressure on hospitals is worse.

Dr. Nacoti helps at a hospital in San Giovanni Bianco, located in the foothills of the Alps. On Sunday evening, the facility had around 70 coronavirus patients. The hospital, which specializes in outpatient surgery, normally has 20 beds.

Recently arrived patients lay on gurneys, filling the emergency room and a corridor while they wait for beds.

Upstairs, more than 50 patients were administered oxygen through helmets or masks. Some were in critical condition, but the hospital has no intensive-care unit and no ventilators. "We thought seven beds downstairs and seven upstairs would be enough," senior nurse Fiorella Busi said.

The hospital had planned to send severe cases to Bergamo. "But we got indications that, if patients are over 65 or 70, they won't get intubated," said Davide Grataroli, one of the hospital doctors. "So, we've chosen to manage them here as best we can."

Patients know that the lack of intensive-care facilities dooms those not strong enough to survive with only limited help. "They accept it with resignation and no complaints," said Ms. Busi, the nurse.

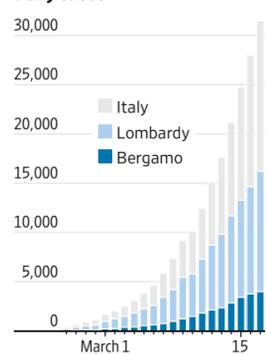
"The most devastating part is that they are dying alone," she said. "Families see the patient for the last time at the emergency room. The next time is at the mortuary."

Such a lonely death is hard to take, the nurse said: "It's not our culture. We're very connected here."

## Italy's Epicenter

Lombardy, the Italian region that includes Bergamo.

## Daily cases



Source: Italy's Ministry of Health

unknown dead who die in their home and are not tested, not counted," he said. "The ICU is the tip of an iceberg."

Hospitals in the U.S. and across Europe must organize in advance, Dr. Nacoti said, and governments need community lockdowns early. "An epidemic doesn't let you proceed by trial and error," he said. "Every day you lose, the contagion gets worse."

Bergamo, a city of about 120,000 northeast of Milan, sits at the heart of one of Italy's wealthiest regions. Companies nearby make San Pellegino mineral water, luxury yachts, and brakes for Ferrari.

When Bergamo discovered a clutch of coronavirus cases in its outlying towns around Feb. 22, Dr. Giupponi of the Papa Giovanni hospital emailed Lombardy's regional health authorities. He urged them to empty out some hos-



Mirco Nacoti of Papa Giovanni XXIII Hospital in Bergamo, Italy.

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## THE CORONAVIRUS PANDEMIC

# Generation Gap Widens as Cases Spread

In U.S. and Europe, some younger people take cavalier attitudes in the face of outbreak

Scientists and government officials fighting the coronavirus epidemic say they have a problem: Carefree youths.

As authorities moved to restrict social gatherings last week, bars and restaurants

By *Bojan Pancevski* in Berlin, *Stacy Meichtry* in Paris and *Xavier Fontdegloria* in Barcelona

from New York to Berlin filled up with revelers, illegal “lockdown parties” popped up in France and Belgium, and campuses in the U.S. lit up for end-of-the-world dorm parties.

So far, most young Covid-19 patients have experienced mild or no symptoms from the virus, while more severe cases are concentrated among those age 50 and over. Data released last week by the National Health Institute in Italy, currently the world’s worst-hit country, shows mortality rates starting at 0% for patients aged 0 to 29 and edging up to peak at 19% for those over 90.

Yet scientists say tests have shown children and young adults are no less likely than older people to get infected and transmit the virus. Epidemiologists are growing concerned that the millennial pushback against social-distancing measures—and an emerging generational divide about how the disease is perceived—could undo all efforts to slow the spread of the virus and put vulnerable people at high risk.

President Trump on Monday stressed that young people can spread the virus even if they only have mild symptoms and recommended that Americans avoid restaurants and gatherings of more than 10 people. French President Emmanuel Macron announced a nationwide lockdown and punishment for those who vio-



Crowds return to Hong Kong's trendy Peel Street. Right, Colorado College senior class members hold a bittersweet celebration at the probable end of their school year on campus.



late the rules.

So far, the young don't seem to be listening.

After social media became filled with reports of packed bars and restaurants in New York, 30-year-old Rep. Alexandria Ocasio-Cortez (D., N.Y.) tweeted to her millions of followers on Saturday.

“To everyone in NYC but ESPECIALLY healthy people & people under 40, (bc from what I'm observing that's who needs to hear this again), PLEASE stop crowding bars, restaurants, and public spaces right now. Eat your meals at home.”

Across Europe, where social life is shutting down faster than in the U.S., a divide is

spreading between the young, many of whom say they don't fear the virus, and their elders, including politicians and scientists, whose alarm about the illness is growing.

On Sunday, Berlin health officials said 42 people were thought to have infected themselves in Berlin clubs. Some of those were club-hopping, spreading the virus as

they went.

“This is the attitude of people who are part of this nightlife,” said Lutz Leichsenring, a director of the association of Berlin club owners. “So what?”

You get the flu, you're not going to die.”

Despite the pointed fingers and occasional excesses, many young people bristle at the accusation of selfishness, saying the new social constraints are disproportionate and unfairly target their generation.

“They're preventing us from living,” said Timothée Thierry, a 30-year-old statistician at France's health ministry. He spoke on Sunday, after the government shut bars but before it locked down the entire country.

Some say they are less frustrated by the prospect of extreme confinement than they are doubtful it could ever work in the West, which prizes individualism and freedom.

“If I get sick, I will spend some days at home to avoid spreading it to others,” said Monica Rubio, 19, who was having a late breakfast with three friends late last week in Barcelona, Spain, one of Europe's most heavily affected countries. “Otherwise I won't change my life because of it. I can't imagine people would stop shaking hands, kissing or hugging. It is deeply entrenched in our society.”

In Asia, there have been fewer complaints from authorities about younger people flouting social-distancing rules, but with the epicenter of the pandemic now shifting to Europe, the sense of urgency, palpable at the peak of the Chinese epidemic, has begun to recede.

On a recent night in Hong Kong, Peel Street, a thoroughfare lined with bars and popular with expats, thronged with hundreds of maskless drinkers.

“I stayed at home for two months. I'm not staying any more,” said Ryan, 26, who was walking with his friends down the main strip of nearby Lan Kwai Fong, a series of streets filled with bars and clubs.

“Life goes on.”  
“We worry,” said Nicole, 25. “But either you worry yourself to death or you drink yourself to death.”

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### SEIZE THE MOMENT ALBERT JANESCH



**Important artist. Rare self portrait. Hidden meaning.** This original oil by the Viennese painter Albert Janesch is exemplary of his distinctive style. Within this self portrait, he is shown enjoying life's simple pleasures with his wife and dog. Yet, a reminder of his mortality looms in the distance, urging the viewer to seize every moment of happiness. Signed (center right). Dated 1933. Canvas: 40" h x 36" w; Frame: 46 1/4" h x 42 1/2" w. #31-1115

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## THE CORONAVIRUS PANDEMIC

## Travel Industry Feels Crisis

Continued from Page One

expects the ones that fly will be just a quarter full. Companies including Hilton Worldwide Holdings Inc. have pulled 2020 earnings guidance. Hilton told employees Tuesday it would suspend operations at the Capital Hilton in Washington, D.C., and the New York Hilton Midtown, which combined have about 2,400 rooms, according to a person familiar with the situation.

In a meeting with President Trump on Tuesday, leaders of the hotel and travel industries made the case for financial aid that would include direct cash payments, for a total of \$250 billion. U.S. air carriers are also in talks with the Trump administration to secure an additional \$50 billion in aid.

The U.S. Travel Association projected Tuesday that total spending on travel in the U.S., including transportation, lodging, retail, attractions and restaurants, would plunge by \$355 billion for the year—and that 4.6 million American jobs would be lost. Those losses would boost the overall U.S. unemployment rate to 6.3% from 3.5%, the USTA said.

The travel industry has never faced such a broad and potentially long-lasting challenge. Many weaker firms might not survive.

Airlines were grounded immediately after the terrorist attacks of Sept. 11, 2001, but business recovered at hotels, restaurants and bars, and airlines to a large degree, within months. Even then, a public afraid to fly shifted to shorter trips with domestic travel, filling regional hotels and attractions. Political leaders encouraged Americans to go out and spend to boost the economy.

During the financial crisis period of 2008 and 2009, companies slashed business travel and families cut back vacation budgets, but wealthy travelers enjoyed reduced rates at luxury resorts, and many families still found ways to take holidays.

The current emergency has brought different obstacles that can't be overcome with cheaper fares or clever marketing: government-imposed travel bans, canceled conferences and orders to shelter in place.

Workers in the industry could be among the hardest hit.

"I just got married and I'll probably be out of work," said Tilemahos Konstantinou, a crewman at Celestyal Cruises, which suspended sailings to the Greek islands and the eastern Mediterranean last week, until May 1. "My boss said he will start looking for another job and I should do the same."

Celestyal Cruises didn't return calls for comment.

Mr. Konstantinou's wife, Angeliki Konstantinou, was let go from a tourist shop near the Parthenon in Athens on Monday. "We were planning to hire three more people for the summer, but instead, four of us were let go," she said. "Not a single soul came into the shop in the past four days. I feel desperate."

The travel industry is one of the largest global businesses and a major contributor to the



Few people last week visited the Parthenon, usually jammed with tourists, in Athens.

U.S. economy. Foreign and domestic travelers last year spent \$1.1 trillion in the U.S., which directly supported nine million American jobs, according to the USTA, a nonprofit trade organization. Nearly 3% of U.S. gross domestic product can be attributed to travel and tourism, the association said.

The business has been growing steadily for years, and U.S. tax revenue from the industry has increased by more than 50% over the past decade to \$180 billion last year. Travel and hospitality companies employ executives with business degrees and also millions of lower-income workers including line chefs, housekeepers, wait staff and drivers.

The coronavirus pandemic is slamming that growth into reverse. The last several days have been as bad as any in memory, industry participants said.

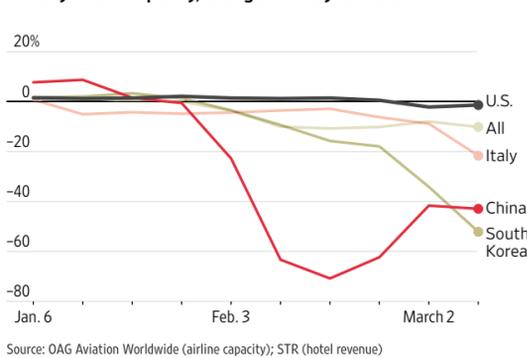
"This is unprecedented," said Richard Born, a principal of BD Hotels, which operates and has ownership interests in 28 New York City hotels. "There's never been a case on a fairly worldwide basis where people stopped traveling and likely will not be traveling again, at the very least, for months."

America's hotel business took a direct hit during what was supposed to kick off a busy time of the year. Instead, businesses are freezing travel, families are canceling spring break vacations and major conferences from Austin to Chicago

## Hit to Airlines and Hotels

The number of flights departing from China swooned in February amid the height of the coronavirus outbreak there. U.S. flights and hotel revenue began to drop toward the end of February, as infections started to spread.

Weekly airline capacity, change from a year earlier



Source: OAG Aviation Worldwide (airline capacity); STR (hotel revenue)

expected to draw tens of thousands of visitors were called off.

U.S. hotel revenue per available room, or RevPAR, a key financial indicator for the industry, fell 11.6% during the first week of March, hotel data firm STR said. That was the biggest weekly decline since 2013, and lodging analysts expect the data to show the figure worsening as the month progresses.

Hotel owners in most every major urban market in the U.S. are now experiencing occupancy levels around 20% or less, a rate that will make it challenging to meet payroll, let

## Cheaper fares or clever marketing can't overcome this crisis for the industry.

alone pay other expenses and meet debt obligations, owners said.

Chip Rogers, head of the American Hotel & Lodging Association, said the impact "to our industry is already more severe than anything we've seen before, including Sept. 11th and the great recession of 2008 combined."

Most travel from Europe has been temporarily banned, and Vice President Mike Pence has said a domestic travel ban is also under consideration, which would help slow the spread of

the virus but could shrink any remaining U.S. travel.

American Airlines Group Inc., the world's biggest carrier, will fly to only two long-haul destinations—Tokyo and London. Executives at British Airways, Korean Air and other large airlines have said they are in a battle for survival. Many smaller carriers, which form the bedrock of the 13,000 new jets ordered from Airbus SE and Boeing Co., have less access to new capital, and aren't expected to survive.

The spread of the new coronavirus has also ground to a halt the roughly \$40 billion U.S. cruise industry. The world's four biggest cruise lines announced last week that they were cutting short voyages and suspending sailings for a month, promising to refund thousands of passengers and leaving more than 200 ships sitting idly at sea.

In the tourist mecca of Las Vegas, MGM Resorts International, Wynn Resorts Ltd. and Las Vegas Sands Corp. are closing all of their casinos on the famed Strip, along with other casino closures across the U.S.

At least 31,500 Las Vegas workers represented by the Culinary and Bartenders unions have been laid off, a union spokeswoman said. The unions represent 60,000 workers, including housekeepers, porters and kitchen staff, in Nevada.

Cy Anderson, an Aria hotel concierge on the Las Vegas Strip who has worked for MGM for six years, said the company

notified her by email Friday that she was being laid off from her nonunion job.

"The idea that Las Vegas Boulevard, which is 24-7-365, will have mega-properties that are completely closing their doors...is shocking," Ms. Anderson said.

Ms. Anderson, who is married with children ages 8 and 13, said she is also worried about the larger impact on all of Las Vegas's businesses that rely on casinos, from grocery stores that stay open all night for casino workers getting off graveyard shifts, to all of the vendors. "It's the ripple effect that concerns me and what that ultimately means for the city, long-term," she said.

State officials in Massachusetts, Illinois, Indiana, Michigan, Maryland, Rhode Island, New York, New Jersey, Pennsylvania and Louisiana shut down casinos, wiping out revenues for MGM, Wynn, Caesars Entertainment Corp. and Penn National Gaming Inc. Commercial casinos in the U.S. generated about \$45 billion in revenue from gambling alone last year. Wynn Resorts and Las Vegas Sands said they will continue to pay workers.

Once the virus is under control and business normalizes, travel could rebound fast. Lodging analysts say leisure travel snaps back quickly after a downturn, and that pent up demand can lead to a sudden spike in business.

"There's probably a certain percentage of the population that have fears and will not want to travel," said Rick Takach, CEO of Vesta Hospitality, owner and operator of 17 hotels. "I personally don't think the overall population will feel that way. From a business standpoint, there's no substitute for developing relationships in person."

When it's vacation time, he added, "people want to travel."

But organizers of conferences might skip 2020 rather than try to squeeze their events in the second half of the year, even if the worst of the crisis has passed. That would be a blow to the large conference-oriented hotels, restaurants and bars in the cities that host them.

Some travel executives worry

that the pandemic could have permanent repercussions. Businesses might find that teleconferencing is an acceptable alternative to face-to-face meetings.

"I don't know if people in the industry are focused on this yet, but they need to, because it's going to happen," said Jim Butler, chairman of the Global Hospitality Group at law firm Jeffer Mangels Butler & Mitchell LLP. "People have Zoom"—a web conferencing app—"and are learning how to work at home. People will get used to it, and get used to the technology."

For now, hoteliers are focused primarily on getting through the next several weeks. Some said it is cheaper to close a property than operate it with very low occupancy rates.

Mr. Born of BD Hotels said he has already given notice to workers at some hotels. Like many hoteliers this week, he is also weighing the prospect of temporarily closing some hotels. He hopes to avoid this step, he said, because of how hard it is on workers. Longer term, some of them might get other jobs and never return.

"I'm taking a hard look at the numbers, with all the financial and human issues under consideration," he said. "But I fear it may be inevitable. There is a real possibility that by next week all or virtually all New York City hotels will have elected to shut their doors."

In New York City, a glut of new hotel supply was already pressuring room rates when the pandemic hit the market. Before the disruption, room rates in New York City were roughly at the same level they were in 2006, Mr. Born said. He estimated that most hotel expenses have jumped considerably since then. The cost of labor over that 14-year period is up 50%, while real-estate taxes have as much as doubled, he said.

He said he hopes the city offers to forgo collecting property taxes until the virus passes, and that lenders are willing to negotiate terms.

Robert Habeeb, chief executive of Maverick Hotels & Restaurants, owner of 10 hotels, said properties in Chicago that had been fully booked for last weekend ended up only 20% occupied after the organizers of a housewares trade show expected to draw 60,000 people canceled. The city's decision not to hold the annual St. Patrick's Day parade, which typically draws two million people, may have also played a role in denting occupancy, Mr. Habeeb said.

Small hoteliers who own single properties in European hot spots have been particularly vulnerable to government travel restrictions. In Greece, where the government has closed down thousands of seasonal hotel businesses until April 30, Costas Yiannakakis said his 13-room boutique Corfu hotel on the Ionian Sea will miss out on the Easter holidays. That typically accounts for a quarter of his annual earnings.

"We are still fully booked for the summer, but my clients are calling and asking if we are going to open and if it's safe," Mr. Yiannakakis said.

"I can't give them an answer, but I have to cut costs now, so one of the room cleaners and the gardener were let go. It was the hardest thing I had to do. I'll do the garden and my wife will help with the rooms. I just hope we can stay in business, but it doesn't look good at all."

—Doug Cameron contributed to this article.

## WORLD NEWS

## China Banishes American Journalists

BEIJING—China said it would revoke the press credentials of Americans working for three major U.S. newspapers in the largest expulsion of foreign journalists in the post-Mao era, amid an escalating battle with the Trump administration over media operating in the two countries.

The Ministry of Foreign Affairs said Wednesday it was demanding all U.S. nationals working for The Wall Street Journal, the New York Times and the Washington Post whose credentials expire by the end of the year turn those credentials in within 10 days.

The measure would affect most of the U.S. journalists working at those newspapers in China, which issues press credentials for up to 12 months and has recently limited them to six and, in some cases, as little as one month.

The affected reporters won't be allowed to report

anywhere in China, including the semiautonomous territories of Hong Kong and Macau, the statement said.

It also ordered the three newspapers and two other media outlets—Voice of America and Time magazine—to submit information about staff, finances, operations and real estate in China.

The move heightens tensions between the U.S. and China, which have been engaged in a trade war over the past two years.

The U.S. National Security Council, in a pair of tweets on Tuesday, criticized China's latest action. "The Chinese Communist Party's decision to expel journalists from China and Hong Kong is yet another step toward depriving the Chinese people and the world of access to true information about China," the NSC wrote. In another tweet, the White House called on China to instead fo-

cus on helping the world combat coronavirus, which the NSC pointedly described as the "Wuhan coronavirus."

The actions are "reciprocal countermeasures that China is compelled to take in response to the unreasonable oppression the Chinese media organizations experience in the U.S.," China's Foreign Ministry said.

On March 2, the Trump administration announced a personnel cap on four state-run Chinese media outlets—Xinhua News Agency, China Radio International, China Global Television Network and China Daily—forcing them to reduce their Chinese employees in the U.S. to 100 in total, from 160.

That move came shortly after China expelled three Journal reporters over a headline on an Opinion column. Before that the White House had reclassified state-run Chinese media news organizations as "foreign missions," requiring

them to declare their personal and property to the State Department.

Secretary of State Mike Pompeo disputed China's contention that its action came in response to the Trump administration's measures.

"This isn't apples to apples," Mr. Pompeo said. "You all know the press freedoms you have...We know that that kind of freedom doesn't exist inside of China."

Matt Murray, editor in chief of the Journal, said in a tweet: "China's unprecedented attack on freedom of the press comes at a time of unparalleled global crisis. Trusted news reporting from and about China has never been more important. We oppose government interference with a free press anywhere in the world."

"Our commitment to reporting fully and deeply on China is unchanged," Mr. Murray added.

## WORLD WATCH

## IRAQ

## Ex-Governor Asked To Form Government

Iraq's president designated an ex-provincial governor with U.S. citizenship as premier, drawing criticism from Iran's allies in the country amid new tensions between Washington and Tehran.

President Barham Salih on Tuesday tasked Adnan al-Zurfi with forming a government in a bid to break a political deadlock undermining the country's ability to respond to the coronavirus outbreak and attacks on U.S. troops. It is the second attempt to form a government since Prime Minister Adel Abdul-Mahdi resigned last year.

—Ghassan Adnan

## YEMEN

## Fighting Leaves Dozens Dead

Heavy fighting in Yemen between pro-government forces and Shiite rebels killed more than three dozen people in the

past 24 hours, Yemeni officials and tribal leaders said.

Houthi rebels have been attacking forces of the internationally recognized government in central Marib province. The clashes left at least 38 fighters from both sides dead and dozens wounded, the officials said.

—Associated Press

## UNITED KINGDOM

## Manchester Bomber's Brother Convicted

The younger brother of the suicide bomber who killed 22 people at an Ariana Grande concert in Manchester, England, was convicted of murder for helping to plan the attack. A jury at London's Central Criminal Court found Hashem Abedi, 22, guilty of 22 counts of murder, one count of attempted murder for those injured and one count of conspiring to cause explosions.

His brother Salman died when he detonated a backpack in Manchester Arena in 2017. Hashem Abedi denied the charges.

—Associated Press

## GREATER NEW YORK

## ‘Dining Bonds’ Offer Restaurants Hope

By CHARLES PASSY

As concern among New York City restaurants grows about the financial toll the novel coronavirus is taking, some are trying to offset their losses with a new initiative: selling “dining bonds.”

The program, created by local hospitality publicists and consultants Steven Hall and Helen Patrikis, is designed so restaurants can offer gift certificates—“bonds”—at a reduced price for redemption at full value on a later date.

The idea is to provide another stream of revenue at a time when restaurants have been forced by the state to limit their business to takeout and delivery orders for the



A worker readied to-go orders Tuesday at Curry-Ya in the East Village.

foreseeable future. Some establishments have opted to close altogether during the pandemic.

“Even if this little bit of money helps a restaurant keep one staff member paid, then it’s worth it,” Mr. Hall said.

In a Tuesday interview on CNN, New York City Mayor Bill de Blasio warned that restaurants could be forced to stay closed until September. “We don’t have a crystal ball,” he added.

Under the bonds program, each restaurant can set its own terms, Mr. Hall and Ms. Patrikis said. In a possible scenario, a restaurant would sell a \$100 certificate for \$75, but the certificate couldn’t be redeemed for at least 30 days.

Mr. Hall allowed for the possibility that some participating restaurants could go out of business during the pandemic. In that case, Mr. Hall said, “We’re hoping the buyer would look at this as if they made a donation.”

The program is being promoted through a newly launched website, supportrestaurants.org. Customers must contact the individual restaurants to purchase the certificates because different establishments have different platforms or methods for selling them.

So far, more than 80 restaurants have signed up for the program, including such Manhattan establishments as Socarrat Paella Bar and the Rum House. Restaurants outside New York also are eligible to participate.

Andrew Rigie, executive director of the New York City Hospitality Alliance, a non-profit association that represents restaurants and nightlife

establishments, voiced support for the bond program. He noted that restaurants often operate at thin profit margins in the best of times and the pandemic has upended the industry altogether.

The T.I.C. Restaurant Group, which operates Japanese dining spots throughout the city, is among those feeling the pain. The company is participating in the bond program.

T.I.C. Chief Operating Officer Sakura Yagi said the program is likely not enough to offset the loss of revenue the company is facing, which could be as much as 90% with some of its restaurants. But Ms. Yagi said the effort could help. “It’s hope,” she said.

METRO MONEY | By Anne Kadet

## ‘Bag Daddy’ Has Been Riding High Since New York City Banned Plastic

The city’s switch to paper bags this month in the aftermath of the plastic-bag ban has many proponents. But there’s perhaps no bigger fan of the move than



Ron Raznick. His Manhattan business, RTR Bag, supplies paper shopping bags to hundreds of the city’s department stores, boutiques, museums and restaurants.

“I’ve been wanting this to happen for a long, long time,” says Mr. Raznick of the ban.

Indeed, his ads show a young Dustin Hoffman in the movie “The Graduate” with the caption, “Get out of plastics young man!”

Mr. Raznick says business has been steady since he launched in 1989, but the ban doesn’t hurt. Many stores

were forced as of March 1 to make the switch to paper. “The phone calls are coming in,” he says.

People who give Mr. Raznick a ring discover that commissioning a custom shopping bag is a bit like acquiring a custom-tailored suit—a sometimes lengthy process that includes the fun of hanging out with a quirky tradesman.

“I’m obsessed with bags,” he says. “I just love them.”

His Midtown Manhattan studio looks like a shopping-bag museum. Tall shelves display spot-lit, brightly colored paper totes designed and produced over the decades for clients such as Nobu, Bloomingdale’s, Karl Lagerfeld and the Guggenheim and Whitney museums.

And Mr. Raznick, who refers to himself as “Bag



Ron Raznick’s RTR Bag company supplies paper shopping bags to hundreds of New York City stores, museums and restaurants.

Daddy,” enjoys sharing his aesthetic insights on topics ranging from the joys of ironing to the eye appeal of dishwasher detergent cubes (“I’m afraid I’m going to swallow one in my sleep!”) and what colors flatter his customers.

“You could wear this,” he says, holding a bright yellow bag to my face. “Just cut the bottom out and slide it on!”

Clients typically are invited to review a dizzying array of sample colors, sizes, finishes and handle options. Natural, recycled kraft paper is hot right now, but Mr. Raznick is always experimenting. “You have to keep thinking of new materials and new ideas to stay in the game,” he says.

The plastic-bag ban has gotten many retailers rethinking their totes. But even before the ban, store owners—including small boutiques—were putting more thought and money into their bags than you might expect.

Mauri Weakley, owner of Collyer’s Mansion, a home-goods shop on Atlantic Avenue in Brooklyn, recently upgraded the kraft-paper shopping bags bearing her store’s logo to a sturdier and more expensive model.



SARAH WAGNER MILLER FOR THE WALL STREET JOURNAL (2)

When she buys the minimum order of 1,000 paper totes, the bags cost 75 cents to \$1, depending on size. The star-print tissue paper she uses to line the bags costs another \$45 a case, or 19 cents a sheet.

A dollar is a lot to spend on packing, especially if a customer is buying a \$15 item. “But we sell nice products and things that people are giving as gifts,” she says.

“A print bag with our name on it is great advertising,” she adds.

Tony Bates, who opened Bentley’s Shoes in Brooklyn Heights 39 years ago, switched from paper to plastic bags last fall to save money. His store’s pinstriped totes, which he designed himself after watching a Yankees baseball game, cost half

what he was paying for paper bags. He spent \$17,000 for a shipment of 15,000 plastic bags in three sizes—a supply that should last at least a year.

Happily, he says, the bags are thick enough to be considered reusable and are exempt from the ban.

Not all retailers were so fortunate. One shopkeeper told me he plans to use up the supply of 4,000 translucent plastic bags, which cost him \$2,000, even though they’re illegal. To comply with the law, he would have to toss the bags unused. “It’d be ironic to throw the bags away,” he said.

As retailers exploring their options are discovering, paper bags aren’t cheap. Mr. Raznick says per-unit prices for custom bags, which include design service, range from 40 cents for a small gift bag to as much as \$4 for a large, substantial shopping bag with hand-tied ribbon handles that is dyed through so it shows no white edges.

The service, however, often includes a lot of hand-holding. Some clients ask Mr. Raznick and his senior partner, Christian Cotrina, to guide them through everything from logo creation to bag size.

Others already have their minds made up about the most picaresque details, such as the timbre of the tissue paper. “They say ‘I want the tissue that sounds like this,’” Mr. Raznick says. “And they crumple it for me over the phone!”

Mr. Raznick has designed bags, which typically are produced in China, with LED lights, holograms and laser cutouts. He has made bakery bags sturdy enough to carry a 60-pound cake, and once drove to the Hamptons on Long Island to match a bag’s color to the green of local nursery’s sign.

Even in the face of the plastic-bag ban, of course, the paper shopping bag is vulnerable. As the storefront retail scene falters, Mr. Raznick says he is spending more time designing packing materials for online merchants.

“Bag Daddy going to die in this business,” he says. “My ashes are going to be in a bag in the East River.”

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## GREATER NEW YORK

## Cuomo, de Blasio Clash on Quarantine

The governor rejects the mayor's warning that city residents might face restrictions

By PAUL BERGER  
AND JOSEPH DE AVILA

New York Gov. Andrew Cuomo and New York City's mayor delivered conflicting messages Tuesday on whether city residents could be forced to shelter in place because of the rapid spread of the new coronavirus.

Mayor Bill de Blasio said residents should be prepared for such a possibility and that a decision could be made in conjunction with the state in the next 48 hours.

Hours earlier, Mr. Cuomo squashed suggestions that New York City could quarantine residents. At a news conference, he said that only the state has the power to impose a quarantine and that such a move only would push people elsewhere. The governor said he would prefer to tighten restrictions on business activity.

He warned that further measures could be needed as the number of cases in the state is expected to peak in about 45 days, causing a massive shortage of hospital beds and intensive-care facilities.

Experts believe the state could need between 55,000 and 110,000 hospital beds for virus-related illnesses alone. Cur-



Children enjoyed a spin in Washington Square Park in Manhattan on Tuesday. Officials are weighing a possible shelter-in-place order.

rently the state has 53,000 beds, many of them already occupied by people with other health issues, Mr. Cuomo said.

New York also could need between 19,000 and 37,000 intensive-care beds for seniors and others with underlying medical conditions, he said. The city has 3,000 such beds, but officials say about 80% of them are occupied.

Six counties in the San Francisco Bay Area on Monday ordered residents to stay home for three weeks except when they have to go out for essentials.

On Tuesday, the city of Hoboken, N.J., said it is closing all nonessential businesses and limiting gatherings in public spaces to five people or fewer.

Mr. Cuomo said he doesn't intend to impose a quarantine.

"I have no interest whatsoever and no plan whatsoever to quarantine any city," he said. Mr. de Blasio said such scenarios are being discussed and New Yorkers have a right to know.

As of Tuesday afternoon, New York City reported 814 confirmed cases of the virus, an increase of about 350 compared with the previous day. They included Councilman Ritchie Tor-

res, who said he tested positive for the coronavirus.

There were 1,374 confirmed cases of the virus in the state, an increase of 432 from the previous day, state officials said Tuesday morning. So far, 12 people have died, including at least seven people in New York City.

The number of cases in New Jersey reached 267 on Tuesday,

up 89 cases from the previous day, Gov. Phil Murphy said. Indoor shopping malls, amusement parks and amusement centers were set to shut at 8 p.m. Tuesday, he said. The state, he said, has no plan to issue "shelter-in-place" restrictions at this time, but "we reserve the right to revisit all of this."

The virus is grinding life to a halt across the region as virus-induced closures take hold.

New York state Comptroller Thomas DiNapoli said Tuesday that estimated tax revenues would be at least \$4 billion short of the \$88 billion projections in the state's pending budget. Mr. de Blasio warned that bars and restaurants could be closed for months.

Meanwhile, the New York City Board of Correction called for prisoners at high risk of contracting the virus because of their age or underlying medical conditions to be released from jails. Brooklyn District Attorney Eric Gonzalez said he wouldn't prosecute low-level offenses and would consider releasing vulnerable people in pretrial detention.

Mr. Cuomo said he opposed quarantining residents in individual cities because people would move to neighboring counties or states. He said that is why he and the governors of Connecticut and New Jersey issued joint guidance Monday. "Ideally, whatever we do, we would do regionally," he said.

—Ben Chapman  
and Katie Honan  
contributed to this article.

## Hospitals Tap Firms for Face Masks

By KATE KING

The Greater New York Hospital Association is asking New York City's large companies and financial institutions to share their stockpiles of face masks as local hospitals grapple with dwindling supplies.

State and federal authorities have begun dipping into government stockpiles to distribute masks and other medical equipment. "We're turning over every stone to identify every kind of personal protective equipment that's out there," said Lee Perlman, executive vice president of the hospital association, which represents more than 160 hospitals and health systems.

Kathryn Wyld, chief execu-

tive of the business group Partnership for New York City, said she received a request from the hospital association for help securing mask donations from local companies.

Goldman Sachs has a large supply of N95 respirator masks, which health officials say offer the most protection against coronavirus if worn properly, and will donate 20,000 to New York City hospitals, she said. The masks were procured in the wake of previous epidemics, said Leslie Shribman, a Goldman Sachs spokeswoman.

Nasdaq Inc. has agreed to donate 7,000 face masks, a spokesman said. Mastercard Inc. will donate 25,000 masks, said Linda Kirkpatrick, president of U.S. issuers.

Carl Ginsburg, a spokesman for the New York State Nurses Association, said masks are in short supply. "Everyone is very concerned about having the necessary equipment, including N95 respirators. We're hoping there will be an organized effort to share them," he said.

Many financial institutions started building up supplies of face masks and sanitizers 15 years ago, when concerns began building about the avian-flu outbreak in China, said Regina Phelps, president of Emergency Management & Safety Solutions, a consulting firm that helps corporate clients with crisis management and pandemic planning. Stockpiling continued in 2009 when the H1N1 virus, or swine flu, became a pandemic.

A decade ago, many people believed face masks were an effective way to protect people from contracting respiratory illnesses, Ms. Phelps said. Now, public-health officials say paper surgical face masks don't necessarily guard against coronavirus. These masks should only be worn if you're sick, to prevent spreading germs, or if you're caring for someone who is ill, with medical professionals most in need of this protective gear.

"Companies don't really need a large supply of masks," Ms. Phelps said. "They can cough up those masks and give them to people who actually need them."

—Melanie Grayce West  
contributed to this article.

## MTA Seeks \$4 Billion Federal Bailout

By PAUL BERGER

The Metropolitan Transportation Authority has asked for a federal bailout of \$4 billion because of the growing cost of the novel coronavirus.

MTA Chairman Patrick Foye, in a letter to New York's congressional delegation Tuesday, said the authority estimates it will lose \$3.7 billion in fare revenues as ridership has plummeted since the start of outbreak this month and is expected to stay at a low level for six months.

Average daily ridership has fallen on the subway by 60% and on New York City buses by 49%, he said. Ridership on the

Long Island Rail Road has dropped by 67% and it has fallen by 90% on Metro-North.

"The stark reality is that as more people stay home following the advice of medical experts, the MTA is facing financial calamity," Mr. Foye wrote. He said the cost of cleaning the state-controlled transit system is expected to run a further \$300 million.

The MTA has an annual operating budget of \$17 billion. It relies on fares to cover nearly 40% of its budget. State and local taxes make up an additional 40%.

The authority has continued to run a full schedule of services during the crisis.



Faculty members learned remote-teaching methods Tuesday at Yung Wing Elementary/P.S. 124 in Manhattan.

## City's Blitz to Create Online Classes for 1.1 Million Students

By BEN CHAPMAN  
AND LEE HAWKINS

New York City's public-school system of more than 1.1 million students is undergoing a big shift to remote learning, after schools were closed this week to help contain the spread of the new coronavirus.

Training for about 80,000 teachers in the nation's largest school system began Tuesday in preparation for online lessons set to start on Monday for most students, according to city Department of Education officials.

The teachers are receiving instruction over three days this week on how to deliver lessons online using platforms, including Alphabet Inc.'s Google, for students in all grades, the officials said. The city's goal is to show public-school educators how to transform their curricula into virtual lessons and deliver them to students, city schools Chancellor Richard Carranza said. He warned the task wouldn't be easy.

"We have a vast array of educators that are prepared on different levels," in terms of their understanding of remote learning, he said.

Complicating matters is the diverse character of the student body in the city's schools, where roughly 13% of children are English language-learners and one in five students has a disability, city data show. Nearly three-quarters of the students come from low-income families and qualify for free or reduced-price lunches, and about one in 10 is homeless, according to the city and state.

As a result, many students require special lessons, while others could have trouble accessing remote classes without devices provided by the city, said Noliwe Rooks, director of American Studies at Cornell University. "Children who are not at grade level already, when you put them in an online cyber-only environment, they tend to lose where they are," she said. "So while we have to implement online

learning, given what's going on, we need to be figuring out how to actually support those vulnerable students."

School officials will begin to address some of those challenges by distributing 30,000 iPads to students who require them for remote lessons. The city also is working to provide free internet service to students who need it, Mr. Carranza said.

Amy Bernstein, a speech teacher at Public School 272 in Brooklyn, said the level of involvement of students' parents would play a significant role in students' ability to adapt to remote learning. "We can't do this on our own," she said.

Some parents expressed frustration that the system is only now preparing for remote teaching, given that city leaders knew of the coming pandemic weeks ago. "And now we're the middle of March and it doesn't feel like the DOE has been working on this," said Joanne Giordano, whose two children attend city schools.

## Bronx School Gets Crash Course in Remote Learning

By LEE HAWKINS

New York City schools are preparing to implement remote-learning plans in the wake of the decision to shut down the nation's largest school system.

The Bronx's Riverdale Country School already has had a preview of what students and teachers can expect. The private K-12 college-prep school closed March 10 and moved middle- and upper-school classes online, undertaking a two-day trial run before this week's spring break.

"I'm kind of impressed that Riverdale was able to roll out such a proficient system in such a short amount of time," said Kevin Pepin, a 16-year-old Riverdale 11th-grader.

Administrators and technology-team members started working on the plan a month ago, when Riverdale Country Head of School Dominic A.A. Randolph called for it in anticipation of possible coronavirus-related closings.

Within days, teachers began training on the Google Meet video-conferencing tool and Schoology, a tool the school already was using to post homework.

The middle- and upper-school students were trained in one-hour sessions on March 9, and the school continues to devise plans for younger students, according to Kelley Nicholson-Flynn, head of the upper school, science.

Kevin and his math teacher, Cat Crocker, invited a reporter to view their one-on-one remote-learning session Thursday, which followed a Google Meet session with all of Kevin's classmates. Kevin said he prefers the one-on-one ses-



Riverdale Country student Kevin Pepin takes a virtual math class.

sions.

In the full online class, he said he felt distracted by all the noise and different faces on the screen. With the images of classmates across a right-hand column and his teacher on the left, he zeroed in on his instructor.

The setup of the virtual classroom impacted the quality of the discussion, he said. "I didn't anticipate how difficult it would be to have class interaction and class debate," said Kevin.

Ms. Crocker reduced noise by asking students to mute themselves and send her messages using Google chat if they had questions—the virtual equivalent to hand raising. She plans to spend time over spring break thinking about other ways to ensure less-vocal students are included in the discussions.

The adjustment for Kevin and his classmates also transcends technology into time management. It was easy to get distracted by news and other sites on the internet, he said. "I think because it's on-

line it can be seen as a little less formal," Kevin said. "And I think students might take it less seriously because of that."

Ms. Crocker said the full-class sessions have "a different feel" than the one-on-ones.

"One of the things I rely on when I'm teaching is seeing their physical thinking," she said. "Seeing their facial expressions—the way that they're looking at what I'm writing on the board—gives me cues as to who is understanding and who is not understanding."

Ms. Crocker logs into each session on her computer and her iPad, so students can see her real-time notations. Despite slight delays of her voice and a lag time before students can see her notations on their screens, the students rated the experience positively in a survey, Ms. Crocker said.

In their one-on-one session, Kevin was laser focused.

With a room in her home as a backdrop, Ms. Crocker opened with encouragement. "I had a chance to take a look at your work, and overall, it looks pretty good," she said.

"There are just a couple things that are worth going over."

She pulled up his math problem on her iPad, so they could view his calculations and her markups in real-time.

Ms. Crocker said the one-on-one sessions are critical, especially in cases where she might want students to see her actually working through complex math problems.

If coronavirus concerns persist, Ms. Crocker said, she would be prepared to teach remotely through the end of the school year. "It would be hard, but it's definitely doable."

## LIFE &amp; ARTS

Baby boomers, a generation devoted to wellness and working out, bristle at the idea that they are elderly.

FROM TOP: GETTY IMAGES; KATHLEEN HUGHES



# Who Are You Calling Elderly?

Coronavirus risk has baby boomers dealing with the idea that maybe 60 isn't the new 40 after all

By KATHLEEN A. HUGHES

The text arrived on a Friday night, March 6, just as I was heading to a comedy show in New York City.

"Don't go," my daughter texted. "The CDC says the elderly need to stay home." "That's 60," she added, in the next text.

My daughter, meanwhile, at age 26, was heading out to a movie, with very little concern about her personal risk from the coronavirus.

I took my coat off. We may be in the midst of global health crisis, a crashing stock market and a political crisis, but I was momentarily focused on just one question:

At 64, am I really elderly?

I have completed 40 triathlons in the past seven years and I qualified for the ITU Multisport Championships this September in the Netherlands. (Although, as I fell back into the couch, I considered the treatment I had just had for arthritis in both knees.)

Like most baby boomers, a generation devoted to wellness and working out, I have been operating under the assumption that 60 is



The author with her daughter, Isabel, who ordered her not to go to a show.

the new 40.

Suddenly, 60 is apparently the new 80.

We're elderly and our millennial and Gen X children are worried about us. They're suddenly calling, emailing and texting, ordering us to stay inside, while many of them have been feeling less at risk.

Of course, this all seems to be changing daily with repeated warnings from health officials, but a generational divide remains.

wanting to know:

"What is your coronavirus plan?"

She didn't have one yet.

Naturally, some boomer parents are bristling a bit, despite all of the expressions of love and concern. They are bristling both at the idea that they are elderly and at the fact their offspring are suddenly telling them what to do.

Winter Hoffman, 63, and her husband, Fred Hoffman, a 75-year-old art dealer in Santa Monica, Calif., were on their way to an art fair earlier this month when they got their text.

"You can't go. You're elderly. This is attacking elderly people," their 30-year-old son wrote from his office in San Francisco, Ms. Hoffman remembers.

The older Mr. Hoffman had just checked himself out of the hospital after a bout of pneumonia and the couple wasn't about to change their plans based on their son's text.

"I was thinking...Mr. Bossy," says Ms. Hoffman. "We feel we are very much our own decision makers."

They enjoyed the fair and are still healthy. But now the couple is no longer going out of the house. Ms. Hoffman ordered a climbing machine on Amazon so

YOUR HEALTH | SUMATHI REDDY

## Assessing the Risks Of Food Delivery

AS PEOPLE RELY more on deliveries for groceries and food—especially now that so many restaurants are closing—a new concern is emerging amid the coronavirus outbreak: How safe is the food delivery?

Experts say the main risk from ordering food and groceries is that you could catch the virus from an infected delivery person, if he sneezes or coughs on you. That's because the virus spreads mostly by person-to-person contact.

It is less likely, although still possible, to get the virus from touching contaminated packaging. There may also be a small risk from touching raw food that has the virus on it and then touching your face. But there appears to be no risk of contracting the virus by eating it in cooked food, experts say.

Doctors say ordering food is generally safer than going to a grocery store or a restaurant, because you come into contact with fewer people. "Ordering at home may be the best way to get food," says Andrew Janowski, a pediatric infectious disease physician at Washington University School of Medicine and St. Louis Children's Hospital. "Simply because there's less people."

He recommends avoiding close contact with the delivery person, throwing away packaging, and washing your hands before touching the food. "Try not to be in

close proximity to the person delivering the food," he says.

A study published in NEJM Tuesday found that the virus that causes Covid-19 can live on cardboard for up to 24 hours and on hard surfaces such as stainless steel and plastic for two to three days.

"The virus can remain viable and infectious on a surface like cardboard and it can do so for quite a large number of hours," says James Lloyd-Smith, a professor in the department of ecology and evolutionary biology at the University of California, Los Angeles, and one of the study's authors. "So in principle if a food delivery person or someone in the restaurant sneezes or coughs on your cardboard container, there could be viable virus on there." One important caveat: Dr.

Lloyd-Smith says all the laboratory experiments were done at room temperature and viruses generally don't last as long at higher temperatures. So if hot food is in an enclosed container, then any viruses may have a shorter lifespan.

Dr. Lloyd-Smith says it's unclear if the type of plastic they tested is the same commonly used in plastic bags and containers, but any smooth plastic is likely "roughly equivalent," he says. "The big message is if you're touching things that are coming from the outside world and someone else has recently handled them, just be aware they could be contaminated and



wash your hands."

But experts note the study was done in controlled, artificial conditions with a lot of the virus and doesn't necessarily translate to real life where other factors—such as sunlight and the degradation of the virus—come into play.

They say the potential risks of becoming infected with the virus this way are very small. It's primarily person-to-person interaction that is driving the Covid-19 outbreak, rather than contact with objects.

"The risk of getting infected from food delivery is pretty low but not zero," says Daniel Kuritzkes, chief of the division of infectious diseases at Brigham and Women's Hospital in Boston.

Still, consumers like Atticus Francken, a 25-year-old business consultant in Chicago, say they aren't going to take the risk. "At this point I'm avoiding most any kind of food delivery," says Mr. Francken. "The virus could be on any surface—packaging, bags, receipts. You have the cooks preparing the food, the staff handling the food, the de-

livery drivers' car who may also be doing ride-sharing. Then the drivers and delivery persons. There are too many touchpoints."

Among the steps that can be taken to minimize exposures, experts say, is paying ahead of time with a credit card, and including tips, to avoid exchange of money. If there is an option for "no-contact" deliveries, select it. Services such as DoorDash and Postmates are beginning to offer customers such options in highly affected areas. Infected customers, of course, also pose a risk to the delivery person.

Doordash's website says delivery employees will text customers a photo of the bag at the requested drop-off location, back away to a comfortable distance (at least 6 feet away), and wait for the customer to get their food.

Drey Dailey, a 32-year-old driver from Los Angeles who delivers mostly for Grubhub, said by Friday most of his customers wanted their orders left outside.

Dr. Kuritzkes says customers can wipe packages or boxes with

she can exercise while Mr. Hoffman practices yoga.

The online Merriam-Webster dictionary defines elderly as "rather old" and especially "being past middle age" without adding an official age cutoff. But the word has become controversial in recent years, particularly among gerontologists and those concerned with ageism.

"I'm vaguely hostile to the word elderly," says Thomas Cole, 70, a gerontologist and the author of "Old Man Country: My Search for Meaning Among the Elders." "We live in an ageist culture and we have negative associations with words and images of old people."

Mr. Cole notes that the American Geriatrics Society has stopped using the word elderly. "If you submit a manuscript to them and you use elderly, they cross it out and substitute older," he adds.

A review of news releases and briefings from the Centers for Disease Control and Prevention shows that while it warned of an increased risk from the coronavirus starting at age 60, it doesn't appear to have been using the word "elderly." The CDC didn't respond to requests for comment.

Mentions of the word came later, in news reports and with repeated use by health officials and politicians.

"We're baby boomers, we just don't see ourselves in that way," says Kimba Hills, 66, an interior designer based in Santa Monica. "How did we get here?" she laughs.

A week ago, her 27-year-old son voiced the opinion that she should not go to a work assignment in Florida later this month. Ms. Hills balked at first, determined to go, but just canceled her airline reservations.

"I became concerned about being quarantined there. Who would bring me food?" asks Ms. Hills.

Instead, she and a friend decided to drive to a retreat in Palm Springs this past weekend. But on the drive there, the friend, Leslie Libman, 66, a television director, was barraged with concerned texts and calls from her son, who is 33.

"You would have thought I was dying," says Ms. Libman. "You're an older person," her son said, "and you can't go. Your immune system isn't great."

Ms. Libman says she responded that she would be better off in the desert than in Los Angeles where everyone is "losing their minds."

Randi Danforth, 66, a publications director at the University of California, Los Angeles, says her 28-year-old daughter expressed concern about the coronavirus but wants her mother to go ahead and fly to Chicago for a visit later this month. Ms. Danforth is still planning to go.

"Our children are worried about us because we happen to fall into that weird category that we don't think we're in—elderly," says Ms. Danforth. "The realm of the elder."

disinfectant wipes before handling them, or use disposable kitchen gloves. "You're unlikely to get infected that way, but I can't say it's impossible," he says.

Gregory Poland, director of the Mayo Clinic's Vaccine Research Group in Rochester, Minn., says cooked food is safer than uncooked food because heat can kill the virus. But Dr. Poland says no one has specifically studied whether the new coronavirus can be delivered through oral transmission—by eating food. He and others suspect that gastric acid in the stomach would kill it. "My own speculation is that the GI route would be very low likelihood compared to known and efficient methods of infection," he says.

The small potential risk with food itself, experts say, is if you touched uncooked food like a salad or sushi with live virus on it and then touched your face. "There may be some marginal benefit of having cooked food over having uncooked food, but I really don't think food is a major vector here," says Dr. Kuritzkes.

Some people still prefer to go to the grocery store—and sometimes you may need to as delivery windows book up further in advance. Dr. Kuritzkes says people can minimize the risks by avoiding crowded stores at busy times, and taking other precautions: "Wash your hands, don't touch your eyes, nose, or mouth when out and about, and try to stay away from people who are coughing and sneezing."

Mr. Francken, in Chicago, says if he has to go to the store, he makes sure to wipe down the grocery cart with disinfectant wipes and he wears an N95 respirator mask and disposable gloves. "I can control the touchpoints and directly interact with the merchandise I'm buying," he says.

Heather Haddon contributed to this article

LIFE & ARTS



PHOTOGRAPHS BY LUIS GARCIA FOR THE WALL STREET JOURNAL

MY RIDE | A.J. BAIME

# A First-Wave Japanese Import Shines On

A San Diego banker shows off his rare 1968 Datsun 2000, one of the first sports cars from Japan to hit U.S. shores



This 1,982cc four-cylinder engine, left, is original to the car, Mr. Davidson says. Detail of the car's interior, right. The original upholstery is vinyl. He bought the car in 2006.

*Richard J. Davidson Jr., 55, a banker living in San Diego and a volunteer at the San Diego Automotive Museum, on his 1968 Datsun 2000, as told to A.J. Baime.*

In the 1960s, the first Japanese car models were just becoming popular in America. Datsun made a two-seat convertible sports car called the Fairlady, which competed with the British and Italian roadsters like the MGB and the Fiat 124. Rumor has it that a Datsun executive had visited the U.S. and had seen "My Fair Lady" on Broadway, and that is how the car got its name.

These Datsun roadsters were among the first Japanese sports cars ever to come to the U.S. Only here, Datsun named them after their engine displacement (such as the 2000, for 2,000 cubic centimeters, rounded up from 1,982), rather than Fairlady.

Around 2005, I had a little bit of garage space and a little bit of money, and I decided to fill one with the other. I had seen a Datsun roadster from the '60s and was surprised at how good-looking it was. I was also impressed that this lightweight car had an engine of about 135 horsepower and a five-speed transmission—pretty rare in the 1960s. I bought my car in 2006 locally from a private owner. It had an older, resprayed paint job, but the parts were all there and it was in decent shape. It is nimble on back roads and I started having fun with it right away.

In 2010, I had the car repainted to its original silver-gray. I knew of the color because you could see the original paint in various parts of the car. And five



Richard J. Davidson Jr. gave his Datsun 2000 a paint job and an engine rebuild. The license plate, below, is from the 1960s.

years later, I had the engine rebuilt. So the car is pretty much stock original.

At the time I bought mine, these cars went under the radar. Most from the

to Hagerty, the nation's largest insurer of classic cars, a Datsun roadster from 1968 in excellent condition averages about \$37,900.]

There is a great community around these cars and their owners. There are websites where people pass along knowledge, and car shows that draw dozens of these vehicles—including a couple big shows in California specifically for vintage Datsun roadsters.

Ultimately Datsun stopped making these two-seat convertibles in 1970, the same model year that the company launched the Z, which quickly became a sensation. The Datsun roadsters paved the way for the Z, proving that the U.S. was indeed a viable market for Japanese sports cars.

**The 2000 was built to compete against roadsters from Italy and the U.K.**

1960s did not survive, because people did not look at these cars as collectible, so when they got old, they disappeared. Only now, in part because they are so rare, are people starting to value these cars more. The prices are coming up. [According



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## LIFE &amp; ARTS

## ART REVIEW

# A Conjurer of Strange and Terrible Beauty

Francis Bacon's troubled life was reflected in his art, even in the twilight of his career

By PETER PLAGENS

Houston

When "Figure in a Landscape" (1946) and "Study After Velasquez' Portrait of Pope Innocent X" (1953) were included in a 1955 Museum of Modern Art exhibition of European artists, the British painter Francis Bacon (1909-1992) said, "I would like my pictures to look as if a human being had passed between them, like a snail, leaving a trail of the human presence and memory trace of past events, as the snail leaves its slime." If this isn't a longing to make paintings a vehicle for existential precariousness, nothing is. But while Bacon's pictures—such as "Three Figures and a Portrait" (1975) and "Self-Portrait" (1977) in this exhibition—may set your teeth on edge, they manage to manifest a strange and terrible beauty.

The artist left his Irish home at age 16 after being caught having sex with one of his father's stablehands. He went to London, Berlin, then Paris, then back to London. Inspired in the late 1920s by a show of Picasso's drawings, Bacon was a self-taught painter. It took him a while to come into his own as an artist, but his "Three Studies for Figures at the Base of a Crucifixion" (1944), with its horrific beings that look something like fanged newts, made him famous. "Painting" (1946), depicting a bloody-faced politician delivering a speech in a slaughterhouse, cemented his reputation. For a lot of younger painters in the 1950s and '60s, Bacon's screaming popes and facially torqued businessmen made him the paragon of nonacademic, non-Pop, figurative painting.

In the fall of 1971, as Bacon's retrospective at the Grand Palais in Paris neared its opening, George Dyer, one of his longer-tenured lovers, committed suicide in their hotel room. "Francis Bacon: Late Paintings" (at the Museum of Fine Arts, Houston, through May 25) picks up the work of the Anglo-Irish reprobate at about that point. He's still graphically interested in sex between men (which, given Bacon's cannibal-Cuisinart representation of the human form, takes a bit of decoding), albeit with a "greater emptiness," as curator Alison de Lima Greene remarked at the opening.

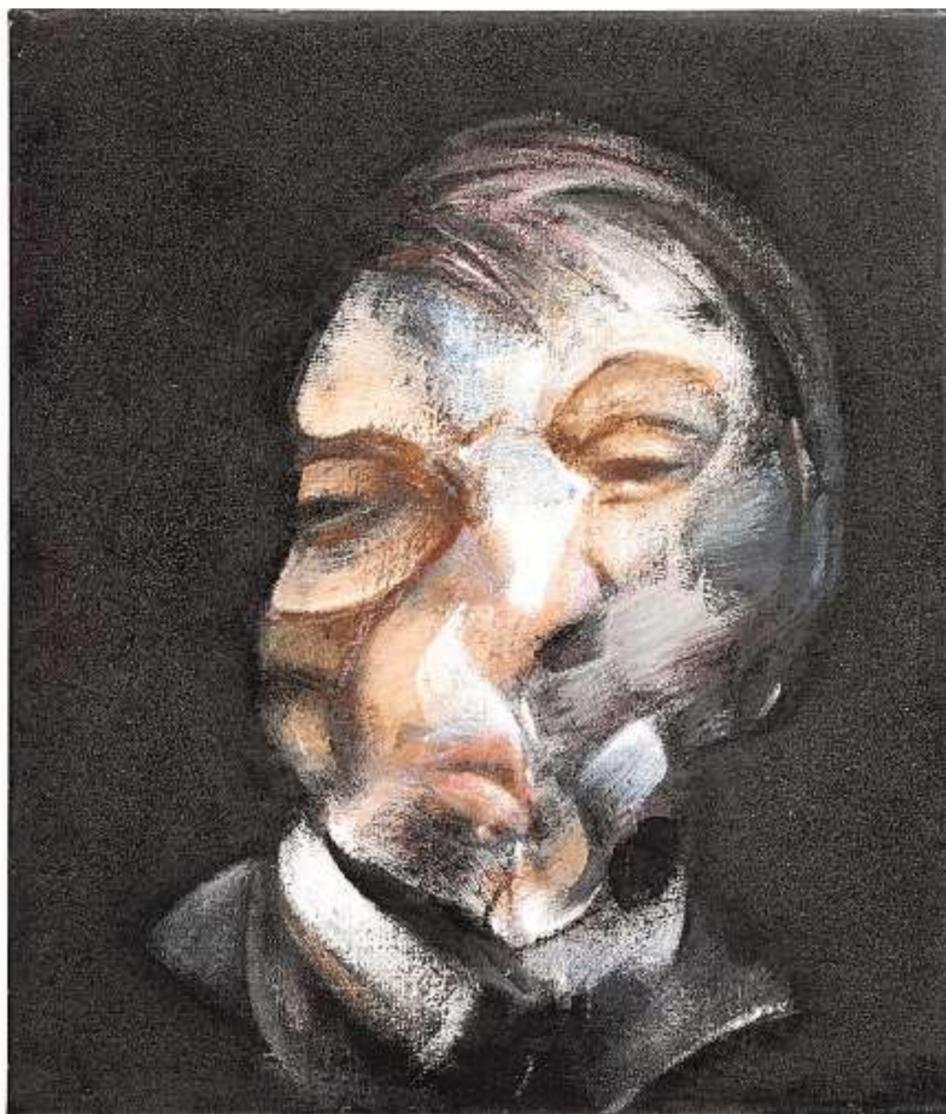
Many of the approximately 40 paintings in the exhibition are big—78 inches by 58 inches is typical—and the color is toned down from Bacon's earlier enraged red-oranges and malevolent magentas to curiously menacing beiges, sickly pinks, and powder blues. Yet there's enough acid yellow and fiery orange to indicate that Bacon, by now in his 60s, is hardly a settled personality. Nor has he changed his preference for working from the remove of photographs over using the fullness of live human models. As if to emphasize his belief—expressed in an interview with the British critic David Sylvester—that "man now realizes that he is an accident, that he is a completely futile being, that he has to play out the game without reason," Bacon makes peculiar snippets of figuration—faucets, lightbulbs—much clearer than his humans.

What makes Bacon an impor-

tant artist and this exhibition (which originated at the Centre Pompidou in Paris) both a visual knockout and a philosophical punch to the gut is that Bacon is a preternaturally talented painter. No one else has a brushstroke like Bacon's surgical swat or his drag of distanced despondency. Unpainted sections of his linen canvases effectively stand for the unfinished nature of everything. The MFAH's spatially generous installation wisely avoids overhanging and proceeds through a series of carefully calibrated gray galleries, giving viewers an aesthetically exhilarating show. Finally, as Pompidou curator Didier Ottinger told me, the exhibition was inspired by a 2016 Bacon retrospective at the Liverpool branch of the Tate Gallery. Only four years from idea to the realization of a major museum exhibition is impressive.

Bacon's pictorial pessimism isn't perfect. Occasionally some details—corny splashes of blood, sign painters' arrows, and distressed samples of commercial artists' press-down lettering—are superficially irritating enough to interrupt Bacon's depiction of his profound distress over the state of the world. If one is skeptical about Bacon's unbelief, one could say—along with critic Jed Perl, about a Bacon retrospective a decade ago at the Metropolitan Museum of Art in New York—that his paintings are merely "modernist melodramas with just the right crowd-friendly dash of old-fashioned grandiloquence."

The real question, then: Can an artist who makes such big, open, compositionally fluid, and deftly rendered paintings that he then



Francis Bacon's 'Self-Portrait' (1971), above; 'Study From the Human Body' (1983), right; 'Study for Portrait' (1981), below left; 'In Memory of George Dyer' (1971), bottom

frames in gold and presents under special glass be genuinely tortured by a Sartrean view of the human condition? Yes. Works of art are not primal screams. Even the rawest Expressionist painters, such as George Grosz or Emil Nolde, lay down paint and compose their pictures with a detachment required by the craft.

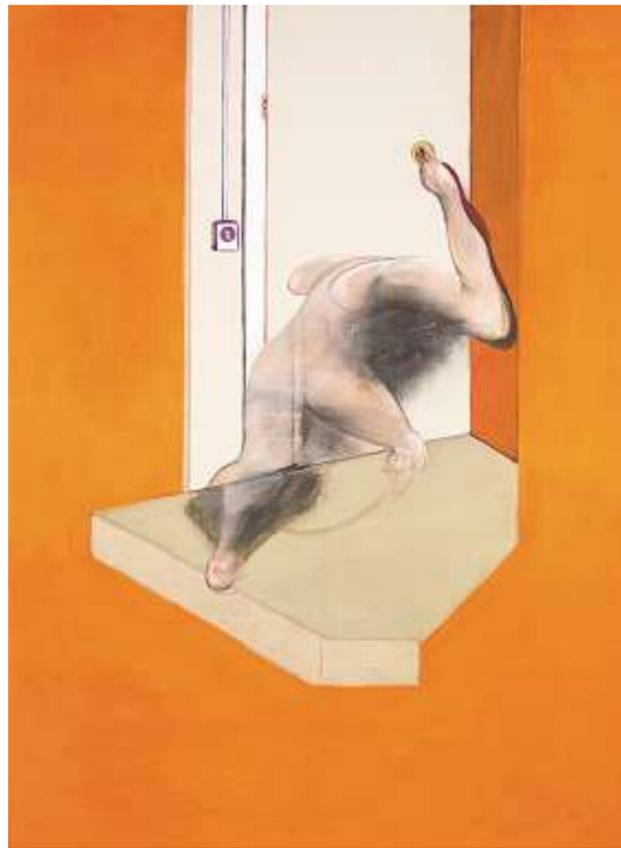
Granted, in the late paintings Bacon isn't struggling much anymore. He knows what he wants to do and he goes about doing it. Any guilt over Dyer's death has retreated to a low background thrumming. With their themes of sex, violence and death, these paintings show us tragedies, maybe even Tragedy. Nothing, however, competes with the irony of fate. Francis Bacon died in a nursing home, attended by nuns, with a crucifix hanging over his bed.

#### Francis Bacon: Late Paintings

The Museum of Fine Arts, Houston, through May 25

Mr. Plagens is an artist and writer in New York.

**Editors' note:** The Museum of Fine Arts, Houston, is currently closed due to the coronavirus.



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# SPORTS



Tom Brady, above, after Super Bowl LI. He won six rings with the New England Patriots.

JASON GAY

## Tom Brady's Big Goodbye

On the eve of free agency, a farewell from the most decorated quarterback in NFL history



Yowza. So much for "The End of Sports Talk."

Even amid the far more important news happening in the world, and a widening, critical, please-do-it "social distancing" quarantine—as I write this, my children are ripping apart the house, making tiny costumes for the cat—it's a stunner, a five-siren, a paleo-tastic jaw-dropper.

Tom Brady is leaving New England.

Honestly, it doesn't matter where he goes. With all due respect to his potential destination—and we will learn soon, where he lands—that's not the big story here.

The most decorated NFL quarterback ever—six Super Bowl rings—is leaving the only professional franchise he ever played for. Brady's leaving a championship-stuffed region for parts unknown, with no assurance of anything but something completely different.

The Grumpy Lobster Boat Captain, Bill Belichick, is standing on the dock in yellow waders, waving farewell.

The Patriots Dynasty—at least the Brady and Belichick version of it—is no longer.

What a gut punch to Boston, even if it's a city where the teen-

agers have chronic shoulder tendinitis from waving their arms at so many championship parades.

And it goes down on St. Patrick's Day, no less.

I'll say it again: Yowza.

I just told the cat. The cat was like: *Meowza*. Also: *Please take this tiny hat off my head. How long are you all planning to be home, anyway?*

On a question of tone: Can we all agree to step into a hermetically-sealed sports-only zone for a second? I wasn't sure we were going to be able to do this for a few weeks, or months, but let's try here. I don't want to come across as callous or ignorant of the critical situation—this is serious business, and we're as locked down as anyone else—but let's pretend for a minute the world is still a place where we can all get freaked out about a 42-year-old quarterback on the verge of his 21st season.

Agreed? OK.

It's odd, the way it's going down. It's pretty funny that Brady is doing the Larry David "Big Goodbye" (a super demonstrative farewell to make someone you've

ignored feel better about you as you leave) before delivering the hello to his new town. Brady's motivation may be to give the fans of New England their due respect before free agency begins Wednesday—and that's what his morning Instagram announcement was, a message of "love and gratitude" to Patriots fans—but this also turns this move into an attention-sucking two-part saga.

Don't get me wrong; sports hacks like me are grateful.

We'd spin it into a three-month 12-part miniseries if we could. The NFL charging forward with its free agency off-season might be tone-deaf, given the grim national mood, but it's something to talk about that isn't bleak talk of empty stadiums and canceled events.

Full transparency: I genuinely thought Brady would stay. He felt as permanent to the region as the Old North Church and hating New York. New England seemed to be both the sentimental and logical choice—the best fit, the closest contender, the least disruptive move, especially now, with every sports season turned sideways.

There will be a lot of forensics

done on the situation in New England, how it got here, how it eventually got to Brady splitting town. "Everything ends," is not sufficient. There will be second guessing, and plenty of rationalizing. You can already hear the Belichick cultists in overdrive: *This is an opportunity to restart with someone fresh, someone young, rebuild the Death Star bigger and better...muhuhuhahaha*. The Grumpy Lobster Boat Captain gets to do it with somebody new. He's probably got his eye on some larcrosse captain somewhere.

I don't buy the cool level-headedness. Tom Brady was Tom Brady, man. They're going to be lonesome when he goes, to paraphrase another cagey veteran.

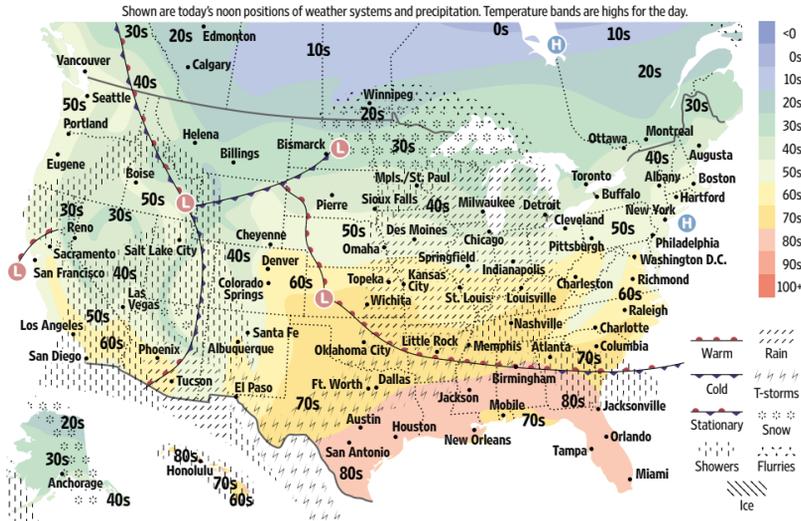
It's going to be super-weird to see Brady in another uniform. Whatever team signs him is getting a huge name with nice suits and a potentially brief future. It will shift the dynamic in whatever conference he lands.

The AFC East is up for grabs for the first time in eons. The Buffalo Bills look like your divisional favorite, as if the world needs another signal that the world is upside down.

I'm still not ready to believe it. Tom Brady is leaving New England. It won't be the same. But right now, nothing is.

**249-75**  
Tom Brady's record, including the postseason, as quarterback of the Patriots.

### Weather



### U.S. Forecasts

s...sunny; pc...partly cloudy; c...cloudy; sh...showers; t...storms; fr...rain; sf...snow flurries; sn...snow; li...ice

City	Today			Tomorrow		
	Hi	Lo	W	Hi	Lo	W
Anchorage	35	23	pc	35	29	c
Atlanta	75	63	sh	81	64	pc
Austin	82	66	c	80	60	t
Baltimore	57	48	pc	74	61	c
Boise	54	32	pc	57	35	pc
Boston	51	37	s	45	41	r
Burlington	44	33	s	49	41	sn
Charlotte	67	63	pc	79	66	pc
Chicago	45	41	r	63	44	r
Cleveland	54	45	r	63	59	r
Dallas	78	64	t	76	52	t
Denver	64	37	pc	41	14	r
Detroit	48	37	r	59	52	t
Honolulu	80	73	sh	81	71	r
Houston	82	69	c	84	69	t
Indianapolis	56	53	r	70	59	t
Kansas City	66	57	r	71	31	t
Las Vegas	57	44	sh	58	44	pc
Little Rock	73	63	c	74	58	t
Los Angeles	62	49	pc	59	49	pc
Miami	83	72	pc	84	72	pc
Milwaukee	43	38	r	53	36	r
Minneapolis	45	39	c	45	18	r
Nashville	75	66	c	77	65	t
New Orleans	84	70	pc	85	72	c
New York City	55	44	s	52	47	r
New York City	76	61	t	72	34	c

### International

City	Today			Tomorrow		
	Hi	Lo	W	Hi	Lo	W
Amsterdam	54	44	c	50	40	c
Athens	63	46	pc	60	43	s
Baghdad	69	49	sh	70	52	pc
Bangkok	94	80	pc	95	80	pc
Beijing	70	42	pc	66	42	s
Berlin	64	43	pc	54	38	r
Brussels	60	44	pc	56	42	r
Buenos Aires	74	61	pc	75	62	pc
Dubai	88	75	pc	89	74	pc
Dublin	46	32	c	45	36	pc
Edinburgh	46	34	r	48	30	pc

City	Today			Tomorrow		
	Hi	Lo	W	Hi	Lo	W
Frankfurt	64	44	pc	64	45	pc
Geneva	65	43	s	67	44	pc
Havana	88	64	s	89	65	s
Hong Kong	78	71	sh	78	71	pc
Jakarta	50	40	pc	50	39	c
Jerusalem	49	46	pc	51	42	c
Johannesburg	73	55	pc	79	59	pc
London	58	43	sh	49	41	sh
Madrid	68	40	s	67	45	pc
Manila	91	74	s	93	76	c
Melbourne	82	71	pc	83	60	c
Mexico City	77	53	pc	79	53	pc
Milan	68	41	s	70	44	s
Moscow	48	43	c	49	34	r
Mumbai	94	79	pc	91	77	pc
Paris	63	47	pc	65	47	pc
Rio de Janeiro	85	76	pc	89	78	pc
Riyadh	88	59	pc	87	62	pc
Rome	64	44	pc	64	44	s
San Juan	83	74	sh	82	74	sh
Seoul	61	45	s	52	36	pc
Shanghai	76	55	pc	66	46	c
Singapore	92	79	pc	92	79	pc
Sydney	77	59	s	83	64	c
Taipei City	73	63	r	72	65	r
Tokyo	61	48	s	67	53	s
Toronto	40	33	c	52	45	pc
Vancouver	51	36	s	52	37	c
Warsaw	60	43	pc	58	37	c
Zurich	66	40	s	66	41	pc

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

**FIVE OF A KIND** By Kevin Christian

Across

- "Joker" director Phillips
- Like some teddies
- Needed to be kneaded, perhaps
- Mayberry's son
- Soothing substance
- Work like a dog
- Silver-white metallic element
- Mayhem
- Value of a company's shares
- In confused haste
- Bonkers
- Previously called

Down

- High-quality
- Hard to understand
- Water down
- Sandwich purveyors
- Lord's counterpart
- "Green Book" Oscar winner
- Dictator's undoing
- Oman neighbor
- Pop star Simpson
- Cioppino bit
- Exchange blows
- Developed gradually
- Make known
- Lacking a key
- "Dancing With the Stars" judge Goodman
- Pop star Simpson
- Wimbledon winner of 1975
- Suffer the absence of
- Hendrix hairdo
- Spotify grouping
- "\_\_\_ be my pleasure"
- Like good eggs
- Premium source
- Tallinn's nation
- Key of Bon Jovi's "Livin' on a Prayer"
- Post-breakdown need
- Dolly Parton's most frequently covered song
- Pen party
- Tributary
- Subject under discussion
- Grammy-winning Amy Winehouse song
- Valuable vein
- Enthusiastically praise
- Show off one's biceps
- Director Spike

## IOC Presses Ahead to Tokyo

BY LOUISE RADNOFSKY AND JOSHUA ROBINSON

**THE INTERNATIONAL** Olympic Committee again insisted Tuesday it wasn't changing course on the Tokyo Olympics scheduled for July, even as qualification events around the world are scratched and athletes in multiple countries are reshaping training schedules around lockdowns caused by the novel coronavirus.

"The IOC remains fully committed to the Olympic Games Tokyo 2020, and with more than four months to go before the Games there is no need for any drastic decisions at this stage; and any speculation at this moment would be counter-productive," the committee said in a 1,300-word communiqué.

The approach was hashed out on Tuesday by the IOC's executive board, following a teleconference hours earlier with IOC members. At no point did the committee ever raise the possibility of delaying or canceling the Games, according to an official on the call.

"The IOC will continue to follow the guidance of this task force," the communiqué said, referring to a group it created in February to monitor the spread of coronavirus.

The committee also said repeatedly that it was, and would continue to act, as "a responsible organization" and that it was not motivated by money in keeping the Games on their initial schedule, after figures including President Trump called for them to be postponed for a year. Polls show that public opinion in Japan had also begun to turn against hosting the Games: 70% of respondents said the Games couldn't go ahead as planned, according to a Kyodo News survey this week.

"The IOC's decision will not be determined by financial interests, because thanks to its risk management policies and insurance it will in any case be able to continue its operations and accomplish its mission to organize the Olympic Games," it said.



The Games are scheduled for July.

FROM TOP: KEVIN C. COX/GETTY IMAGES; ISSEI KATO/REUTERS

**Previous Puzzle's Solution**

A	S	K	I	S	O	B	A	R	B	O	S	C	
P	I	T	A	M	A	N	U	R	A	R	C	O	
P	A	T	H	O	L	O	G	I	C	A	E	A	S
E	N	R	A	P	T	L	E	T	O	G	M	T	
A	L	I	N	E	M	E	L	O	D	R	A	M	
L	E	N	N	E	E	R	E	T	I	N	E	R	
S	E	A	T	E	A	T	S	O	D	O	R	S	
B	O	R	E	R	W	A	L	L	O	W	I	N	G
F	I	C	H	E	S	T	N	O	S	E	D	A	M
F	A	C	T	O	R	I	N	G	A	D	A	M	
O	N	A	N	E	R	O	R	U	N	I	L	O	W
C	A	R	E	B	E	N	C	A	I	N	E		
A	D	D	S	B	E	N	C	A	S	E	S		
L	I	A	O	S	K	E	E	P	E	R	M	A	I

► Solve this puzzle online and discuss it at [WSJ.com/Puzzles](http://WSJ.com/Puzzles).

## OPINION

## Questioning the Clampdown



**BUSINESS WORLD**  
By Holman W. Jenkins, Jr.

Experts now agree the virus's spread can be slowed but not contained. It will take its place among mostly seasonal respiratory infections. After a time, recurrent outbreaks will be moderated by a large number of potential carriers who have immunity from their last infection.

And then we can ask some questions. The cost to Americans of the economic shutdown is vast. What are they getting for their money? Essentially less excess demand for respiratory ventilators and other emergency care than can currently be supplied.

This demand will come largely from the elderly and chronically ill, who would be competing for these resources with the usual large number of old and ill people already suffering from acute respiratory distress as a result of routine flu and cold infections. A silver lining will be fewer cold and flu victims overall thanks to social distancing to fight Covid-19.

Some number of respiratory deaths will be avoided (really delayed since we all die) but we'll be spending a lot more than we've ever been willing to spend before to avoid flu deaths. Eighty-three percent of our economy will be suppressed to relieve pressure on the 17% represented by health care. This will have to last

months, not weeks, to modulate the rate at which a critical mass of 330 million get infected and acquire natural immunity. Will people put up with it once they realize they are still expected to get the virus? Wouldn't it make more sense to pour resources into isolating the vulnerable rather than isolating everyone? Basically aren't we really just praying that summer will naturally suppress transmission and get us off the hook of an untenable policy?

But then multiple experiments are under way. China seems to have quashed the spread beyond Hubei province and spared 99.9% of its population from infection—for now. Can China really hold off the virus from being reintroduced or re-exploding during the 18 months it may take for a vaccine to be invented and distributed?

Italy is the test case for being a day late and dollar short in voluntary social distancing—the steps people can take to reduce their risk of contracting and spreading the disease. But Italy may also be the first to emerge from the tunnel, with everyone having had their chance to get sick, and the country being able to get back to work.

Britain is wavering on what seemed a modified, limited Italian strategy. Until Tuesday, it was considering letting its health-care sector absorb as much stress as necessary to avoid a sweeping, draconian shutdown of the economy.

The U.S. may or may not be a test case of a large continen-

tal country where hot spots of contagion shock other places into buttoning up and hunkering down, curbing excess local demand for intensive-care beds. But the cost will be astronomical. Essentially we are killing other sectors indefinitely to manage the load on the health-care sector.

### Will people lose faith when they find out they are expected to get the virus anyway?

Understandably, politicians believe faith in government requires avoiding Italy-like scenes. But turned on its head here is the 50-year-old "QALY" revolution: the idea of measuring the burden of disease and benefit of health care based on "quality-adjusted life year," typically valued at \$50,000 to \$150,000. In the present instance, the cost isn't just medical intervention (e.g., ventilator use) but the cost of an economywide shutdown to limit the number of candidates for ventilation at any one time. I don't know what the figure is, but the QALY value we are placing on avoiding Italy-like deaths is surely a high multiple of any figure previously considered realistic.

America's shutdown strategy is interesting because it was not a choice that any one person or authority made. You can't blame the NBA or Tom Hanks or Congress. Donald

Trump is being pilloried for leaning against panic, urging comparisons to the flu, suggesting the stock market is overreacting. Like the bus, another reason to pillory Mr. Trump will come along in five minutes and not one of his critics will engage in soul-searching over whether he might have had a point.

Even the fuss over testing is a bit overdone. Nowhere in the world has there been enough testing to detect most coronavirus cases amid millions of seasonal colds and flu cases. This problem exists in China, Europe and the U.S. A British estimate is that 12 people have the virus for every one found by testing. In any case, testing becomes a tad mootish now if the goal is to isolate even young and healthy people.

There's a vast gap between people washing their hands, avoiding crowds, shielding the old and using good judgment, and sweeping lockdowns and curfews. Anything government spends now will be a good investment if it prepares the economy quickly to resume its growth and healthy functioning. But there are known unknowns. Elections will be held. Politicians will stake out stands in response to the applause meter, not logic. If I could take out one insurance policy on behalf of the country, it would be this: Joe Biden should immediately name Amy Klobuchar as his running mate so she can step in if the success of his campaign so far is not so rejuvenating of Mr. Biden as it now seems.

**BOOKSHELF** | By Leon Aron

## A Lust For Suffering

### The Return of the Russian Leviathan

By Sergei Medvedev  
(Polity, 286 pages, \$24.95)

The original Russian title of this dazzling collection of essays by Sergei Medvedev, a social-science professor in Moscow and one of Russia's leading political commentators, was "The Crimean Period Park" (*Park krymskogo perioda*). The echo of "Jurassic Park" was surely intended. Mr. Medvedev sees Russia's annexation of Crimea and its war on Ukraine—both of which followed the ouster of Ukraine's Russia-backed leader in 2014—as marking a new geologic era in Russian politics and foreign policy. This book is an invitation to explore the park.

A more astute, knowledgeable and eloquent guide is hard to imagine. Steeped in Russian culture and history, Mr. Medvedev is witty and sardonic in the laughter-through-tears (*smekh skvoz slyozy*) tradition of Russian literature. He draws on political sociology, linguistics and social psychology, yet his prose, even in translation, is sparkling.

Mr. Medvedev ranges widely over the many ways in which Vladimir Putin—the first was elected president in 2000 and, de facto, has been in charge ever since—has returned Russia to a corrupt, oppressive and illiberal past. The state—the "Leviathan" of the title—has been steadily extirpating all vestiges of Mikhail Gorbachev's and Boris Yeltsin's revolutions of the late 1980s and 1990s: uncensored media, fair courts, real political competition, freedom of speech, government transparency and, most of all, a civil society independent of the Kremlin.

Meanwhile, a new ruling caste of security officers-turned-racketeers surpasses the Soviet *nomenklatura* in corruption, rapacity, hauteur and the shameful display of wealth. One of the many metaphors Mr. Medvedev deploys to highlight the key features of the regime is Kutuzovskiy Prospekt, a Moscow thoroughfare where lethal car accidents are more frequent than on any other stretch of Russian asphalt. The reason is the absence of the usual dividers and safety barriers between lanes running in opposite directions. In their place is a central lane reserved for members of the *newnomenklatura*, zooming at breakneck speeds to their dachas outside the city. Someday, Mr. Medvedev hopes, the lane will be allowed to grass over. "But that will happen in a different, parallel and more humane Russia," he writes. "Until then the elite highway, which was built not for the people but for the powerful ones who live in their own world, will continue to maim and kill, turning power and oil into death in this ruthlessly accurate model of the Russian state."

According to Mr. Medvedev, a key part of what might be called the Putin restoration is a state creed in which mythology has replaced the facts of history. The Kremlin denies, distorts or whitewashes the Soviet past, most conspicuously the Molotov-Ribbentrop Pact of 1939, a nonaggression treaty between Nazi Germany and the Soviet Union that led to the carving up of Poland between them as well as the Soviet Union's annexation of the Baltic States and parts of Romania. The rehabilitation of Stalin as an "effective manager" and a military genius is by now well under way. The author compares such mythmaking to the narrative advanced by the rightists in Germany's Weimar Republic in the 1920s. There is a similar self-pity, a similar "passion for suffering," and a similar search for traitors—those who stabbed in the back the wonderful, mighty Soviet Union.

### Putin's domestic policies, says a Russian critic, are motivated by revenge, self-pity and a search for those who betrayed the wonderful U.S.S.R.

It is out of this toxic mix that the Kremlin's foreign policy arises. Mr. Medvedev dismisses "realpolitik" and "national interests" as its key engines. What drove Mr. Putin into Crimea and southeastern Ukraine—and, some years before, into Georgia—is to be found not outside Russia but within: in the "ideology that justifies imperial ambitions and the state's priority over the individual in the allegedly eternal clash between Russia and the West." Mr. Putin's "messianic" foreign policy, he says, aims at revenge and glory, making fear Russia's main export, next to oil. To explain the motives at work, one needs to turn, Mr. Medvedev observes, not to the speculations of foreign-policy "realists" like Henry Kissinger or Zbigniew Brzezinski but to Dostoyevsky's novels.

"At first," Mr. Medvedev writes, "Russia simply criticized the West for its moral degeneration" and built "a protective perimeter." But eventually it "decided to spread the borders of the empire, doing so, what's more, on the same conservative and moralistic foundations it has used to create order at home." In an astute one-sentence description of Mr. Putin's credo, Mr. Medvedev labels him an "Orthodox *Chekist* with a slim volume by Ivan Ilyin." This is a reference to Mr. Putin's suddenly found religious belief; his pride in being the successor to the first Soviet secret police, the Cheka; and his fascination with the works of Ivan Ilyin (1883-1954), whom the historian Timothy Snyder has called the philosopher of "Russian fascism."

Yet, a true Russian patriot, Mr. Medvedev never confuses Mr. Putin's regime with Russia itself. Like other restorations that follow a revolution, the current regime, he believes, is not likely to forge anything lasting beyond Mr. Putin's life-span. He borrows from Marx's description of a coup in mid-19th-century France: at once tragedy and farce, the last gasp of the Soviet imperial heritage, a chimera. Russia today is like a Russian village at night, when, as folklore has it, roosters crow three times: at midnight, then around four in the morning, and then at sunrise to celebrate the departure of the evil spirits that prowl in the night. We must wait for the "third roosters," Mr. Medvedev tells us.

We should be grateful for Mr. Medvedev's optimism—and hope that, meanwhile, the poisonous regime that he deconstructs so well in this book doesn't inflict larger catastrophes on Russia and the world.

Mr. Aron's most recent book is "Roads to the Temple: Truth, Memory, Ideas and Ideals in the Making of the Russian Revolution, 1987-1991." He is a resident scholar and the director of Russian studies at the American Enterprise Institute.

## America Wasn't Prepared for This Crisis



**POLITICS & IDEAS**  
By William A. Galston

While the Covid-19 pandemic has focused attention on presidential leadership, it has also offered a pitiless X-ray of America's public-health and emergency-preparedness systems. Put simply: We weren't as ready as we should have been, and the price will be steep. As we pull out all the stops to meet the exigencies of the moment, we should be thinking hard about lessons for the future.

Today we face a national emergency that is likely to stress our health-care institutions to their limits. A now-familiar contrast is between South Korea, which responded quickly with mass testing, and Italy, which did not. Regrettably, the U.S. response resembles Italy's.

As of March 3, Italy had 2,502 reported Covid-19 cases. By March 11, that figure stood at 12,462; by March 16, it was 27,980. On March 11, the U.S. total stood at 1,301; on March 16, it was 4,663. We're on roughly the same upward curve as Italy, about 8 to 10 days behind.

Not only has our testing regime been woefully inadequate, but U.S. politicians and health authorities were very slow to impose—or even recommend—the stringent social distancing needed to slow the virus's spread once containment efforts had failed. Inevitably, the U.S. peak infection rate will be much higher than it could have been.

absent mass testing, we cannot know for sure how far the epidemic has already progressed. But even if the U.S. has a better-case rate of infection, the health-care system will be stretched to its limit.

The Department of Health and Human Services estimates that if Covid-19 resembles the relatively mild 1957 flu pandemic, 38 million Americans will need medical care, one million will require hospitalization, and 200,000 will need intensive care. A report released Monday by Imperial College London estimates that even with successful household quarantines and social distancing, U.S. Covid-19 deaths could exceed one million.

Right now, says HHS, the U.S. has only 924,000 hospital beds and 98,000 intensive-care beds. The system could be overwhelmed, especially if hot spots emerge, as they did in Northern Italy. In these circumstances, we would face rationing or triage, which would mean denying optimal treatment to many desperately sick patients.

We also face chokepoints of crucial supplies, such as ventilators, protective gear for medical personnel, testing kits and even the chemicals needed for mass testing.

Finally, the system creates institutional roadblocks to the efficient delivery of care. Public-health labs are short of the staff and equipment needed to run large numbers of tests. Citing the lack of protective gear

and the fear of spread, many physicians are reluctant to do in-office testing.

Rural hospitals face distinctive problems. Many are short of basic equipment, but suppliers are limiting their new orders to previous levels, which are irrelevant to current needs. They lack rooms with the negative airflow needed to seal off infectious diseases and are short of ventilators as well.

### Can the 'arsenal of democracy' ramp up production of masks and testing kits?

Regulatory complexity poses additional challenges. Some hospitals, for example, are experiencing shortages of the purified air-powered respirators needed to clean the rooms of Covid-19 patients who have been treated and to handle the remains of those who have died. But because these respirators are classified as hazardous materials, airlines are prohibited from transporting them, dramatically slowing delivery.

Key public officials acknowledge that we have been caught short. Anthony Fauci, who has become the most prominent public face of the crisis, said Thursday, "The idea of anybody getting [tested] easily the way people in other countries are doing it? We're not set up for that. Do I think we should be? Yes, but we're not."

This is not an accident. Long-term trends in the public

and private sectors have interacted to produce it.

Most states cut funding for public-health services after the 2007-09 recession, and many never fully restored it. Overall, staffing is down about a quarter since 2008, and the situation is worse in many states.

This situation is only marginally better at the federal level. Adjusted for inflation, funding for the Centers for Disease Control and Prevention is down 10% from 2010, and funding for the federal Public Health Emergency Preparedness program has fallen by a third since 2002.

Private hospitals, under pressure from governments and insurers, have adopted just-in-time inventory strategies, lack deep reserves of supplies, and keep bed occupancy rates as close to 100% as possible.

We may have been flying blind a month ago, but now we know what works: mass testing and social distancing. We know what doesn't: muddled chains of command and mixed messages.

Can the nation that once served as the arsenal of democracy ramp up production of respirator masks, protective gear and testing kits fast enough to meet the scale of the crisis? Can the nation that planted victory gardens discipline itself well enough to slow the spread of Covid-19 until the health-care system catches up?

This is more than a test of our institutions; it is a test of our character. God help us if we fail.

## The Dog Days of a Pandemic Spring

By Danny Heitman

Our old and ailing terrier has improbably lived to see another spring, though he approaches the warming season more timidly these days. He once bolted from the door on March mornings to attend to his duties, but now he confronts the new grass with caution, like an astronaut slowly planting his heel on the moon. Terriers are typically a zealous bunch, so it's been a somber thing to see our aged mutt begin to doubt his footing.

I sometimes get a catch in my throat as I watch him screw up his courage to go out and baptize the flower beds as only dogs can do. I suppose what I'm grieving isn't just the natural toll of years on a family pet, but the broader way in which spring has been an occasion this year for anxiety rather than anticipation, for worry instead of wonder. In a pan-

demic, it seems, we stand to lose not only the lives of the vulnerable and the vitality of the economy, but the abiding sense of renewal that's always been spring's highest gift.

I've been thinking about this as I grab bathroom doors with paper towels, avoid handshakes, and scour countertops where open palms

### The season of new beginnings is off to a melancholy start.

have landed, a bit like a burglar erasing every trace of his presence. As a writer already too tempted to engage the world as an arid abstraction, I miss the way, only weeks ago, that I casually gripped the tangible terrain of my domestic life, its daily texture a nice nudge not to live in my head so much.

Of course I miss other

things, too, including the chance to attend the banquets, parades and festivals now canceled to limit the contagion. A committed homebody, I probably would have skipped a lot of the scrapped events anyway, but the mere prospect of assembly is, we've been vividly reminded, part of the American DNA.

Maybe that's been the most striking revelation of the coronavirus—that in a nation long lamented for its couch-potato culture and lack of civic engagement, we still have a basic desire for fellowship in physical spaces.

Meanwhile, the official directives to work or learn from home, however necessary, have sounded especially off-key this time of year, like the proclamation of a snow day as the world warms and blooms.

History may later record some surprising fringe benefits from the extra time peo-

ple around the globe have been forced to spend within their own walls. I'm perhaps not the only person in recent days to think of Blaise Pascal's famous observation that "all humanity's problems stem from an inability to sit in a quiet room alone." Perhaps there will be some windfall of wisdom in our politics and personal lives if we use this time apart from each other to think a bit more deeply about who we are and where we're going.

While this came to mind the other morning as I watched our little dog take his tentative first step into a new day, summoning his resolve to face a greening year with curiosity instead of dread. I guess that's what I should do, too.

Mr. Heitman is editor of *Phi Kappa Phi's Forum* magazine and author of "A Summer of Birds: John James Audubon at Oakley House."

## OPINION

## REVIEW &amp; OUTLOOK

## The Fiscal Stimulus Panic

We will survive the coronavirus panic as Americans adapt, as they always do. We're less confident of the Washington panic, as our politicians rush to throw money around without much thought or economic logic as they almost always do. At least the Federal Reserve stepped in Tuesday to address an immediate economic problem.

To take these one at a time, President Trump appeared to throw his support Tuesday for the Mitt Romney-Steven Mnuchin idea of giving every American a check for \$1,000. This will help those who lose their jobs or income from government shutting down retail and other operations. But Congress is also addressing this with expanded jobless insurance, food-stamp and other income transfers, and mandated sick leave that is much better targeted at genuine hardship. Some people who will get the \$1,000 won't need it.

The politicians are again selling the Keynesian illusion that this is the best way to get cash into the pocket of consumers who will spend it. That claim has failed time and again—from the George W. Bush tax rebate of 2002, to the Nancy Pelosi-Bush rebate of 2008, to the Barack Obama-Pelosi spending spree of 2009. The cash outlay will be even less effective now with so many fewer ways to spend it as much of the economy shuts down.

The checks no doubt will be popular, which probably explains GOP support in the Senate and White House. They will also blunt Democratic criticism if businesses also receive aid. But the checks won't come cheap, running at a cost of hundreds of billions of dollars for the first round. What happens if the pandemic lasts into summer? The clamor will be for another round, and then another.

The U.S. can borrow now at low rates to finance this, but even American resources aren't infinite. A \$2 trillion annual deficit implies a substantial future tax increase—maybe as soon as next year—that would retard the recovery. Americans should get a greater economic return for that amount of money.

\* \* \*

Mr. Trump has also agreed to the request of U.S. airlines for a \$50 billion rescue. At least this appears to be structured in the Treasury request as secured loans, rather than grants. Solvent companies need financing to get through the virus economic shutdown, and once healthy they should be able to pay it back.

One problem with industry-specific rescues is that the requests turn into political free-for-alls on Capitol Hill. The better way to do this is a new Fed facility we wrote about Tuesday that would allow all business comers that were solvent before the virus to apply for loans against good collateral. Mr. Mnuchin should lean on Fed Chairman Jerome Powell to do it. Speaking of the Fed, it made a useful contri-

bution Tuesday by announcing a new program to backstop the commercial paper market. This inter-company lending market is a crucial source of business financing and has been seizing up of late as companies grow uncertain of the health of their borrowers. The backstop helped to liquify that market in 2008-2009, and it can end when the viral panic does.

\* \* \*

The Fed has an obligation here because its decade of low interest rates has contributed to the corporate debt spree that is now scaring Wall Street. While American households have increased savings since the housing meltdown, corporate debt has grown by leaps and become riskier. Non-investment grade corporate debt has increased by about 2.8% annually since 2013 and now totals nearly \$3 trillion—about 30% of outstanding corporate debt.

"Growth in business debt has outpaced GDP for the past 10 years, with the most rapid growth in debt over recent years concentrated among the riskiest firms," the Fed warned last May. "Although debt-financing costs are low, the elevated level of debt could leave the business sector vulnerable to a downturn in economic activity or a tightening in financial conditions."

And here we are. High-yield bonds make up a little over half of non-investment grade debt while the remainder is "leveraged loans" to companies with high debt to earnings. A fire sale of junk-rated debt into an illiquid market could magnify asset-price declines. Corporate bond yields and the price in derivatives markets for insuring junk debt are spiking.

Since the 2008-2009 crisis, banks have strengthened their balance sheets. But financial regulation has pushed more risk to "shadow banks" like asset managers, private equity and fintech firms that are thinly capitalized and depend on credit from banks. With their balance sheets coming under stress, they are drawing down their credit lines.

All of this means the risk of corporate defaults is real in an extended economic shutdown. Defaults could cascade into the financial system, which may be why the largest U.S. banks have lost nearly half of their market value this year even though their stocks were never expensive. (With the exception of Citigroup, big bank stocks rallied Tuesday.)

When the viral panic subsides, the Fed should rethink the moral hazard of its failure to return to a normal monetary regime. Meantime, the policy goals should be providing relief to people who are suffering hardship from job loss or sickness, and providing emergency loan financing to healthy companies so they can survive the viral economic shutdown and revive the economy on the other side. A thousand bucks won't offset the damage to people if their employers go out of business.

## A Tax-Delay Boost

Lawmakers are wrangling over how best to help Americans hit by the virus shutdown, but credit to the Trump Administration for moving decisively on one helpful idea. Its decision to delay IRS filing and payment deadlines to July 15 will be a boon to struggling Americans and an economy in need of liquidity.

Treasury Secretary Steve Mnuchin on Tuesday announced the IRS will allow individuals who owe \$1 million or less in taxes an additional 90 days beyond April 15 to pay their bill. This high threshold is designed to open the relief to many "pass through" businesses that employ workers but file taxes through the individual code. The delay will also apply to corporations owing less than \$10 million in taxes. And the IRS will waive interest and penalties.

The tax agency as of March 6 had received about 68 million individual tax returns—or fewer than half of what it expects to see filed.

## Hard to believe, but the IRS delivers good news on filing returns.

Most early filers are those who knew they were due a refund, and Treasury is encouraging other Americans in that situation to file by April 15 and get their money as soon as possible.

Later filers tend to be those who know they owe the tax man, so this extension will allow tens of millions of individuals a much-needed bridge loan, even as it helps businesses struggling with cash flow. Mr. Mnuchin estimates the delay will keep as much as \$300 billion in the economy for now. Treasury may have to engage in some near-term borrowing, but the feds are in a position to easily tap that money—unlike most average Joes.

The practical virtue of the IRS move is that it allows filers in need of a financial cushion the choice of exercising a tax delay. That's in contrast to plans for government to dump dollars on individuals or industries willy-nilly. It's the model to bear in mind as Washington decides what to do next.

## Britain's Better Stimulus

The economic war Prime Minister Boris Johnson wanted to fight was for Britain's prosperity after Brexit. The war he has instead is against the damage wrought by Covid-19. His Chancellor of the Exchequer, Rishi Sunak, fired the first broadside Tuesday with a major raft of supply-side measures.

The centerpiece is a loan-guarantee program worth £330 billion, or around 15% of gross domestic product, for businesses of all sizes. Larger firms will be able to tap the central bank directly, while smaller companies will access the facility through their banks. That £330 billion is only the start. Chancellor Whatever-It-Takes (Mr. Sunak used that phrase six times in his brief prepared remarks) promises to expand the guarantees to match demand.

Mr. Sunak also is offering hospitality businesses a holiday on payment of the tax on business premises, and all small companies will be eligible for one-off grants ranging from £10,000 to £25,000. Coupled with other measures announced in last week's budget, direct support will be worth £32 billion, or 1.6% of GDP. Add to that a modest demand-side stimulus, includ-

ing a previously announced £1 billion welfare expansion and moral suasion on mortgage lenders to offer three-month repayment holidays to affected workers.

In proportion to GDP, these measures are larger than other national governments have attempted so far. Crucially, they're targeted at the supply side of the economy.

Mr. Sunak recognizes that a Keynesian demand stimulus won't work if a quarantined population can't get to the stores. The goal instead has to be to tide otherwise viable companies over a once-in-a-century health emergency without allowing a wave of business closures or defaults to trigger a financial crisis and recession.

Other governments, including the U.S. (see nearby), are likely to take a different approach. They couldn't resist in 2009, with baleful consequences for economic growth. We hope Messrs. Johnson and Sunak don't lose their supply-side nerve as the economic panic deepens.

For now Mr. Sunak is right that demand-side stimulus won't help the British economy if consumers are quarantined for a prolonged period. His supply-side alternatives provide a timelier response, with the public able to judge the results soon enough.

## LETTERS TO THE EDITOR

## Corona: U.S. vs. Europeans' Health Systems

In "Europe's Coronavirus Fate is Already Sealed" (Political Economics, March 13), Joseph Sternberg implies that Italy's apparent inability to deliver effective treatment for the severest Covid-19 cases is largely the result of its "long-term failures to invest in" its health-care system. He notes that Italy had only 2.6 acute-care hospital beds per 1,000 residents as of 2016, and suggests that this is because Italy is "significantly more dependent on direct government financing of health-care" than some other European countries. He goes on to say that voters ought to consider "how much one trusts central health planners to make wise long-term decisions that boost resilience in the face of unusual dangers." The same issue has "U.S. Hospitals Face Major Challenges" (Page One) stating that the U.S. had just 2.8 hospital beds per 1,000 people in 2016. It seems to me that our own hospitals, public and private, have done no better at long-term planning. Voters should know that, too.

Perhaps we should consider which policy makers we, the voters, can better influence: elected officials or company CEOs.

VERA RUSHMER  
Ocean City, N.J.

Mr. Sternberg tries to make a case that Italy is suffering dramatically with the coronavirus due to its government-financed health-care system. The U.S. has millions of uninsured who will likely not seek health care if they are ill and who may contribute to spreading the coronavirus without being tested. Hypertension and diabetes aren't well controlled without insurance and they increase death rates in those with coronavirus. Japan, Germany and Australia aver-

age 5.4 beds per 1,000. We in the U.S. need to look at ourselves and improve our health-care delivery for all of our citizens.

CATHY WAYAND  
Tucson, Ariz.

Mr. Sternberg correctly concludes that Europe's penchant for socialized medicine is partly to blame for its coronavirus failures in that it deters investment in health-care capital, including human capital, but the U.S. also doesn't fare well by that same standard. The U.S. has considerably fewer doctors per capita than Europe and the chart in the column shows that the U.S. lags in hospital beds as well.

The reason is simple: although on its face a private system, the U.S. system is also run by government regulators. The U.S. regulatory system needs an overhaul. Most important, we need more doctors. You can't run a hospital without doctors. The bottleneck is the shortage of doctors.

DAVID PETERSON  
Orlando, Fla.

Mr. Sternberg points out that Germany has 6.06 acute-care hospital beds per thousand people. He argues that because the government spends much less on health care there than Italy that this is cause and effect. Germany has a system built on the same basis as our ObamaCare: mandatory insurance for all with government help for those who need it. As part of that government "meddling," Mr. Sternberg's word, rules are in place to mandate the parameters of the otherwise private system. Lo and behold it works.

DOUG SCHMIDT  
Longmont, Colo.

## Tupperware Misses On Planned Obsolescence

The market for food containers may have evolved over 74 years, but Tupperware remains the superior product in the field for its durability, longevity and value when cost per use is calculated over the life of the container ("Tupperware Loses Its Grip on Consumers," Business News, March 9). Tupperware sets the highest standard in quality that no other container on the market can meet, and it is guaranteed for life.

The market opened for Rubbermaid, Glad and Ziploc containers because they fill a different purpose: No Tupperware owner wants to risk losing track of the containers at a potluck gathering or when giving food to another family in times of need.

Tupperware would be wise to negotiate product placement with media partners such as Rachael Ray and Martha Stewart. Consumers readily spend their dollars on high-end kitchens, appliances, and carefully select tools and ingredients for the meals they prepare. Why not food storage? Tupperware is an important tool in the well-equipped kitchen. People will invest in the product when its value is demonstrated to them.

Tupperware marketing also needs to remove barriers to accessing the product. Home parties cannot be the primary means of promotion in 2020.

CAROLYN GIERKE  
Lancaster, N.Y.

## Fight the Virus by Washing the Office Dishes

Dereliction of duty in the corporate kitchen is a timeless phenomenon ("Sure, Leave Your Mug in the Office Sink. No One Minds," Page One, March 11). Forty years ago, as a neophyte manager, I confronted the same communal myth that there's a kitchen-dishes fairy who magically brought order to the chaos that everyone felt entitled to leave. Being a callow manager, I thought it would be precedent-setting for the manager to do the dishes, until I realized it was entirely unrequited and unappreciated.

So I instituted a draconian policy

## Disasters Usually Bring Us Together; This One Isolates

Regarding your editorial "America's Self-Shutdown" (March 13): When we were attacked on 9/11 the country came together and agreed that we would not let fear of the terrorists cause us to stay home and abandon our way of living. We would continue to fly on airplanes, and go to ballgames, malls, concerts and other gatherings that make America what it is.

Today we have decided that fear will govern our behavior and we will abandon our way of life for some undetermined time at some undetermined cost to avoid some unknown (as yet) risk to public health.

TIM KELLY  
Naples, Fla.

In most disasters in our country, we see people turning out in droves to help others. This coronavirus scare is different. It's isolating. People are fighting over toilet paper. We are strong when we pull together. We are fearful and suffer when we are divided and isolated. Once we get through this, we should keep that lesson in our hearts and minds.

TRUDY NYE  
Madison, Ala.

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of rotating departmental kitchen duty, and I did so with an uncharacteristically stern manner, which seemed to be the only recourse. Voilà, the dishes were washed and the kitchen cleaned, each and every week.

The fact that I tied it to annual performance reviews—and bonuses—may have had something to do with the program's success but, as they say, who knows?

PHILIP E. MELLA  
Woodland Park, Colo.

I have seen the Europeans handle this issue well. They took away the cupboard next to the sink in the break room and installed a dishwasher. At the end of the day, the cleaning staff would make sure that the sink was cleared of dishes, and turn on the dishwasher. The company ordered company-logo mugs for guests and placed them in the cabinet that previously held disposable cups. Problems solved.

GRETCHEN MURRAY  
Santa Barbara, Calif.

I don't understand the fury about dirty dishes at work. In this age of coronavirus, I think it would be a wonderful opportunity to wash my hands many times a day on company time.

Stay calm, co-workers, and wash your hands (and dishes).

STAN VAN TIEM  
Franklin, Tenn.

## Pepper ... And Salt

THE WALL STREET JOURNAL



"Siri, can you give me a favorable reference?"

## OPINION

## American Hospitals Can Avoid Italy's Fate

By Luciana Borio  
And Scott Gottlieb

China locked down Hubei province in late January in a last-ditch attempt to slow the novel coronavirus epidemic. But hospital admissions for Covid-19 continued to rise for another four weeks. At the epidemic's peak, nearly 20,000 patients were hospitalized, more than 10,000 in severe or critical condition.

There are lessons here for the U.S. A rapidly escalating outbreak in a large American city would severely burden an area's health system. Americans are doing things to try to avert this outcome: working from

## Deploy telemedicine to determine who needs emergency care, waive licensing rules and more.

home, cutting down on social interactions. That will slow down chains of spread. But if two more large cities suffer rapid epidemic spread at the same time, the health system will be overwhelmed. There are steps American hospitals and policy makers can take now to increase capacity to deal with a crisis.

In Italy and China, death rates spiked when health-care systems became exhausted. Trying to keep the peak number of infections below that point of saturation is the top priority. The federal government needs to double down on communicating the risks and telling Americans to stay home and limit social gatherings. The power to limit the

spread of this epidemic ultimately rests with every individual.

But the government also needs to help hospitals expand their capacity. New York state has about 57,000 hospital beds, 3,200 of them in intensive-care units. An outbreak in New York City proportionate to Wuhan's epidemic could exhaust the entire state's capacity.

America has some 900,000 hospital beds, but about 70% of them are occupied at any given time. Critical-care beds are even scarcer. The U.S. has about 64,000 medical ICU beds, with another 50,000 designated for surgical or neurological patients. Repurposing surgical and neurological ICU beds is difficult because most are occupied with patients who are very ill. Patients admitted to ICU beds are in critical condition and require that high level of care.

Ventilators are another pain point. In the U.S., there are fewer than 100,000 ventilators, including those in the strategic national stockpile, that can be used to care for seriously ill patients with the coronavirus. But like the ICU beds, most are already in use.

First, hospitals need to be freed up from having to care for patients with mild cases of Covid-19. Hospitals should be a last resort only for those most seriously stricken. This will also lower the risk of infection for health-care workers and patients with other serious ailments. That became a major problem in Italy when hospitals were overrun with mildly symptomatic patients who skipped seeing a primary-care doctor.

The Centers for Disease Control and Prevention can develop web tools and apps to help figure out who needs more-advanced care. Patients who don't require emergency care



A hospital emergency department in Brescia, Italy, March 16.

should be tested as outpatients and isolated at home. Public-health authorities can create satellite testing clinics away from hospitals, including drive-through options. Tests are still in limited supply, so no one who is feeling well should seek one.

Next, the country needs more medical providers who are capable of caring for Covid-19 patients. Older doctors and nurses may be encouraged to stop seeing them given the amplified risks of age. The federal government can allow physicians to practice medicine in states where they aren't licensed. A temporary honoring of licenses across state borders will be especially important for telemedicine, as patients and providers may be in different regions. State governments should also waive restrictions that require physicians to be on-site for physician assistants to practice.

The CDC can develop new strategies to reduce the duration of quarantine for exposed health-care work-

ers. Once testing is more widespread, they can be monitored for symptoms and screened on successive days. Isolation is necessary only for those who develop the infection.

Third, hospitals need to be unburdened from routine medical care. Elective procedures should be postponed wherever possible. A rapid expansion of telemedicine would promote social distancing and free up resources to care for Covid-19 patients.

State and local governments also need to establish centers that offer skilled nursing for patients so that more can be discharged from the hospital sooner. These facilities must care only for Covid-19 patients, who may still be contagious. Post-acute-care facilities affiliated with hospitals may be suited for this role. Canceling elective procedures should also free up beds in rehabilitation facilities that can be deployed for Covid-19 discharges.

Hospitals must make more space

for taking care of patients. Implementing disaster plans that hospitals should have in place could boost capacity by as much as 20%. The focus should be creating beds capable of delivering mechanical ventilation. New York Gov. Andrew Cuomo estimated Tuesday that the state could need as many as 55,000 to 110,000 hospital beds and 18,600 to 37,200 ICU beds at the projected peak of infections. The state currently has only 53,000 hospital beds and 3,000 ICU beds.

But the only way to increase bed capacity so quickly in cities with rapid epidemic spread is to bring in the military to build field hospitals. Mr. Cuomo has called for this step. That planning should be under way now at least in New York and Seattle, the two cities that appear to be the closest to a large epidemic.

Italy is experiencing a tragedy that may dwarf Wuhan in death and disease. The Italian health-care system has largely collapsed through a surge in critical cases, with about 10% needing intensive care. The biggest risk for the U.S. may be that multiple cities have been seeded at once. Italy and China proved that the only way to save lives is to make sure the medical system can keep pace with the need for critical care. There is still a window to prepare.

*Dr. Borio is a vice president at In-Q-Tel and was director for medical and biodefense preparedness policy at the National Security Council, 2017-19. Dr. Gottlieb is a resident fellow at the American Enterprise Institute and a partner at New Enterprise Associates. He was commissioner of the Food and Drug Administration, 2017-19.*

## How to Treat the Financial Symptoms of Covid-19

By John H. Cochrane

The coronavirus pandemic is in danger of sparking a financial crisis. Stock-market plunges and volatility are reminiscent of September 2008. Strains are showing in credit and money markets.

What's going on? Economic fundamentals are good. This is not 2008, when risky mortgage investments blew up. Yes, it is likely that large parts of the economy will have to shut down for a few months. But once the virus is contained, the economy should turn right back on again, as it does after long holidays.

But an economy can't turn on and off like a light switch. Shut-down businesses must still pay debts, rents, payrolls and taxes. People who lose income have to pay rent, mortgages and consumer debt, on top of food and daily expenses. Our economy runs on a river of debt, and the debt clock keeps ticking when the economy shuts down.

Had everyone kept a few months of cash around, things would be fine. But many did not. Now we are seeing the beginnings of a scramble for cash, as people and businesses try to sell assets or borrow. But who is buying? And who is lending? Banks can't make new loans to companies and people with no income.

Money troubles spread like a virus. When a business cannot pay, its creditors, employees, investors and banks are in trouble. And if people worry that banks and other institutions are going to fail, they run to get money out—and we have a crisis.

If a wave of businesses fail, those businesses aren't around to turn back on again. People who are fired need to find new jobs. Bankrupt businesses need to reorganize and find new owners, managers and employees. Businesses that can reopen must find suppliers. And everyone needs credit. All this takes time and resources and drags down the economy.

A pandemic can turn quickly to a financial crash and a long recession, not a V-shaped pause. That's the scenario spooking markets, and it should spook all of us.

What to do? Clearly the central goal of policy should be to keep businesses alive so they are ready to turn back on again. They must be able to keep rather than fire employees, to call them back quickly, and to help those employees pay bills and keep their health insurance. Now is not the time to carve up businesses in bankruptcy court.

Federal money is on its way. On Tuesday the administration proposed a nearly \$1 trillion stimulus. But the economy needs a wiser deployment

of limited resources than just a cash dump. First, not even the U.S. government has infinite resources. Its unique ability to borrow even when nobody else can borrow, and to promise eventual repayment by taxation, is a treasured but finite resource. When a crisis comes in which even the Treasury can't borrow, we are in for a true catastrophe.

## Federal spending is needed but not enough. Making loans is better than writing checks. Avoid coercion.

Second, this isn't the last virus. What we do now sets the precedent for what we will do in deadlier pandemics to come. Overall, our society will transfer savings from those who have it to those who need it, via markets, Treasury debt, taxation or force. But we must do it in a way that allows savers to reappear in the next crisis, to buy Treasury bonds, forbear loans and provide liquidity.

Lending is better than transfers. Since loans must be paid back, larger amounts can go where needed. Small Business Administration loans are a good start. But most business and

most employment is large business. Large firms are often even more cash-poor and in hock to nervous creditors, and they are harder to replace or revive if they fail. Lend with the head, not the heart. "People" might seem more worthy than "corporations," but we need corporations to hire people when it's over.

Forbearance is important. Banks and creditors should not immediately shut down a nonpayer. But they have to be allowed to forbear by their regulators, their own creditors, and their own fiduciary responsibility, and to borrow or pass forbearance up the line.

The Fed can make sure large markets stay liquid. But it shouldn't mistake price drops for illiquidity. Those who need to sell in a crunch must be able to sell quickly but get a low price, so that those who kept some cash handy will do so next time.

These are micro interventions, not macro. Lowering the fed-funds rate doesn't help much if natural caution or regulations forbid lending to cash-strapped businesses. Stimulus will do no good. You can't shop, or travel, when stores and airlines are closed.

People need help too, and our politicians have figured that out. Once again, loans are better than gifts. Rather than give each of us \$1,000, allow us to borrow a fraction of last

year's income from the Internal Revenue Service and repay when we file our taxes. That provides more money to those who need it, and helps those even with large debts not to default. Allow penalty-free withdrawals from retirement accounts. Social-program rules must be stretched. If people have to lose a job to get help, we tempt the employer to needlessly fire them, and they and the employer are not ready to start up again fast.

Beware the temptation to rob Peter to pay Paul. For example, if companies are forced to pay sick leave, that might be the cost that sends them over the edge, or leads them to fire rather than furlough employees. Unpopular or large firms don't necessarily have deep pockets.

Changing micro rules and regulations is much harder than macro stimulus. Thousands of rules need to bend to help thousands of businesses and millions of people. It would all be easier if there were a pandemic economic and financial plan in place. Sadly, 12 years of stress tests and economic crisis planning never considered the possibility of a pandemic. Let us get a better economic plan in place for the next one.

*Mr. Cochrane is a senior fellow at the Hoover Institution and an adjunct scholar at the Cato Institute.*

## Twitter Suppresses Speech by Calling It 'Manipulated Media'

By Brendan Carr

Did Joe Biden endorse President Trump at a recent campaign event? "We can only reelect Donald Trump," he said. But everyone understood that Mr. Biden either mixed up his words or was making an entirely different point.

Everyone but the people who run Twitter. The social-media platform recently rolled out a new policy aimed at "manipulated media." Its first target: a 13-second clip tweeted by Dan Scavino, White House director of social media, featuring Mr. Biden's words. The Biden campaign quickly denounced the video as "disinformation" and pressured both Twitter and Facebook to take it

down. Twitter slapped the manipulated-media label on it. Facebook put a "partly false" screen over it. The debate that followed helped earn the clip millions of views.

Something similar happened when Mike Bloomberg's campaign tweeted a humorous video that inserted the sound of crickets chirping after he landed a one-liner during a debate. Former Obama staffer Ben Rhodes called it "pure disinformation." The Washington Post "fact checker" awarded it "four Pinocchios." Imagine going after President Lyndon B. Johnson's 1964 "Daisy Girl" ad because viewers might think the child actually died in a nuclear strike.

Today's media and political gatekeepers aren't concerned that people

will find these clips misleading; they are rightly concerned that they will be effective. Political satire works because it challenges those in power while using humor to draw people into the discussion. Internet speech, viral videos and memes threaten those seeking to control the political narrative. By bypassing self-appointed gatekeepers, an outsider can now carry a message directly to the public. The media must often play catch-up—covering the messages and story lines that are already resonating with people.

This explains efforts to equate political speech with the entirely separate categories of doctored deep fakes, illegal content and deceptive cheap fakes. These attempts to cur-

tail lawful political speech confuse the public, making it harder to identify and build consensus around media that has truly been doctored or

## Imagine going after LBJ's 'Daisy Girl' ad lest viewers think the girl actually died in a nuclear strike.

manipulated. Many of the latter sort of videos are on their way—whether aimed at influencing elections or otherwise swaying public debate.

Twitter erodes its credibility when it labels the actual words spo-

ken by a politician as manipulated media. Facebook has largely resisted calls to police campaign ads, but its record hasn't been perfect. It allows users to judge for themselves the veracity of President Trump's campaign ads, but it authorizes political actors to censor posts from Donald Trump Jr. or anyone else who isn't a political candidate. Facebook also recently caved in to political pressure and took down a Trump ad that ran afoul of a separate company policy relating to speech about the U.S. census. What a mess.

Limiting political speech tilts the playing field toward incumbent politicians with large followings and media darlings with easy access to interviews. The answer to all this is obvious: Social-media companies should get out of the speech-police business. It opens them up to political pressure and accusations of arbitrariness and bias.

Short of that, online platforms should give users the power to opt out of the political gamesmanship. If you don't want anyone to fact check the political speech in your feed, you should be allowed to opt for a filter-free experience. Empowering users to make this choice for themselves allows for more speech and more control. Giving users this option would enhance faith in the procedures that online platforms implement to identify truly doctored deep fakes. And it would end debates about whether crickets actually took the stage at the Democratic debate and chirped in unison.

*Mr. Carr is a commissioner of the Federal Communications Commission.*

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## Notable &amp; Quotable: New York

Jason Riley writing for the Journal's website, March 17:

When my wife and I quit Brooklyn 15 years ago to start a family . . . our destination was sprawling Westchester County [N.Y.] . . .

We know a couple with a son in the eighth grade who came downstairs for breakfast two weeks ago and said the last thing any parent wants to hear right now: "Mom, I feel warm." The next day, he was still running a temperature and had developed a sore throat and bad cough. The pediatrician said to take him to the emergency room, where he was admitted and tested positive, as have more than 40 other people so far at his school. The following day, the county sent three people in hazmat

suits to their home, where the rest of the family was also tested and later cleared. But no one may leave the house, and they had to sign an affidavit promising to stay indoors. The son, meanwhile, was put in his bedroom and given exclusive use of a bathroom.

"He's in total isolation," the mother told me. "We leave a tray of food outside his door and then walk away. Someone said to me, 'I can't believe you haven't hugged your sick child in two weeks.' But we can't be within 6 feet of him. And the rest of us are using paper plates and plastic utensils, since we were told that washing and reusing dishes wasn't ideal." . . . The good news is that her son is on the mend. She'll be hugging him real soon.



## Keeping pace with the people pushing the world of sport forward



When your company is guided by the ethos “Forever Faster,” the last thing your workspace should do is hold your team back. So, when world-leading sports brand PUMA teamed up with WeWork to create a custom headquarters in Boston, the space needed to reflect this principle. The result was two floors

of workspace designed to help propel PUMA’s culture and work forward. The custom design was completed in record time, just eight months. From speedy turnarounds to unrivaled experiences, WeWork delivers on what our members value most.

“



We couldn’t have upgraded our space at the speed we did without WeWork. I’m proud to have collaborated with them to design a space for our team that makes people excited to come to work.

Adam Petrick  
Global Director of Marketing, PUMA

”

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# BUSINESS & FINANCE

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## JPMorgan Probed on Treasuries

### Government expands campaign against spoofing beyond derivatives

By DAVE MICHAELS

WASHINGTON—Authorities are investigating whether traders at JPMorgan Chase & Co. manipulated the market for Treasury securities and futures contracts, according to regulatory disclosures and people familiar with the matter.

The investigation shows that federal prosecutors and regulators continue to expand a campaign against an illicit practice known as spoofing, which has mainly focused on wily trading in derivatives. A move to scrutinize whether similar practices have affected the \$17 trillion market for Treasury securities would open a new, and potentially more complicated, front in the war on spoofing.

The bank disclosed in a Feb. 25 regulatory filing that it is dealing with “related requests concerning similar trading-

practices issues in markets for other financial instruments, such as U.S. Treasuries.” According to people familiar with the matter, the investigation also is probing the bank’s trading in futures. It couldn’t be learned which time period authorities are focusing their investigation on.

The Justice Department’s Fraud Section and regulators at the Commodity Futures Trading Commission are involved, the people said. A spokeswoman for JPMorgan declined to comment. A spokesman for

the Justice Department declined to comment.

Regulators and other authorities cracked down on spoofing after Congress specifically outlawed the feinting strategy in 2010. Citigroup Inc. paid \$25 million in 2017 to settle regulatory claims that five traders spoofed Treasury futures. The same year, the Bank of Tokyo-Mitsubishi UFJ, Ltd. paid \$600,000 to resolve CFTC claims over similar misconduct.

Prosecutors’ record against individual traders is mixed,

however. The Justice Department has prevailed in one trial that alleged spoofing violations, but lost two others.

Spoofers typically send large orders to futures exchanges intended to change the appearance of supply and demand. If prices move in response, the spoofers may succeed at their goal—getting a smaller order filled. They then cancel the larger order as quickly as possible. The 2010 law forbade the practice of sending misleading orders that traders don’t in-

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## Stocks Advance In Volatile Trading

U.S. stocks clawed back some of the ground they lost during Monday’s punishing selloff as the Federal Reserve and White House moved to soften the economic blow of the coronavirus pandemic.

By Karen Langley, Frances Yoon and Avantika Chilkoti

Even with Tuesday’s gains, major indexes remain down at least 25% from their February highs, before fears of the pandemic’s effects on the economy began rippling through the markets.

The S&P 500 climbed 143.06 points, or 6%, to 2529.19, and the Nasdaq Composite advanced 430.19 points, or 6.2%, to 7334.78. The Dow Jones Industrial Average rose 1,048.86 points, or 5.2%, to 21237.38, after dipping below the 20,000 mark at one point in the morning.

On Monday, the blue-chip gauge recorded its second-worst percentage drop ever, behind only the Black Monday crash of 1987, amid fears the pandemic was disrupting supply chains and sidelining workers after infecting tens of thousands of people.

The gains Tuesday solidified after the Federal Reserve said it would launch a lending facility to support short-term commercial-debt markets. The move is aimed at reassuring companies that they will have access to short-term funds, which could help banks to lend longer-term.

“The story of the day is the Fed responding to the funding tightness in the credit markets and restarting their commercial-paper facility,” said David Joy, chief market strategist at Ameriprise Financial. “That really has seemed to alleviate a lot of the pressure in the markets, both in the funding markets, short-term credit, as well as equities.”

The latest move by the Fed came after it slashed its benchmark interest rate to near zero on Sunday and announced purchases of Treasuries and mortgage-backed securities.

The Trump administration also said it supports a plan to send checks directly to Americans as part of a \$1 trillion stimulus package, giving hope to investors watching for government action to help ease the economic repercussions of the pandemic. The total size of the proposal exceeds the \$787 billion stimulus package passed in 2009 during the financial crisis.

“The reason why we’re seeing volatility is because we do need the double-barrel shotgun here,” said Diane Jaffee, senior portfolio manager at TCW for the relative value equities team. “We need not just monetary policy but we need fiscal response.”

“No one’s sure that this is going to get through,” she said of the fiscal-relief plan. “But at least the numbers are along the right lines.”

The yield on the 10-year U.S. Treasury note rose to 0.994% from 0.722% Monday, its biggest one-day gain since Sep-

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## Lack of Blood Samples Stalls Virus-Drug Work

By JOSEPH WALKER

To cure the sick, drug researchers first need the blood of the healthy.

Scientists trying to develop treatments for the new coronavirus have struggled to get a hold of recovered patients’ blood samples, which contain the building blocks needed to create new medicines.

More than 180,000 people globally have been infected by the new coronavirus, but blood samples from recovered patients have been in short supply, say pharmaceutical executives, academic researchers and U.S. public health officials.

“It’s treated like gold,” says Rick Bright, director of the Biomedical Advanced Research and Development Authority, a federal agency that is helping fund coronavirus drug-discovery efforts. “There are limited specimens and limited volume.”

Drugmakers including Vir Biotechnology Inc. and AbCellera Biologics Inc., as well as academic research groups, are racing to develop antibody therapeutics for the coronavirus. The challenges researchers face in obtaining samples illustrate the hurdles involved in rapidly developing drugs for a new, poorly understood virus.

Vir, based in San Francisco, began seeking the samples early this year, but had no luck getting any from China, which researchers say is understand-

able given the upheaval there from the virus. The company then expanded its search to other nations and just recently obtained a blood sample, more than two months after the outbreak began.

“We couldn’t get anything out of China. That was a bottleneck for a while,” says Vir Chief Executive George Scangos. “It’s been more slow than we would’ve liked.”

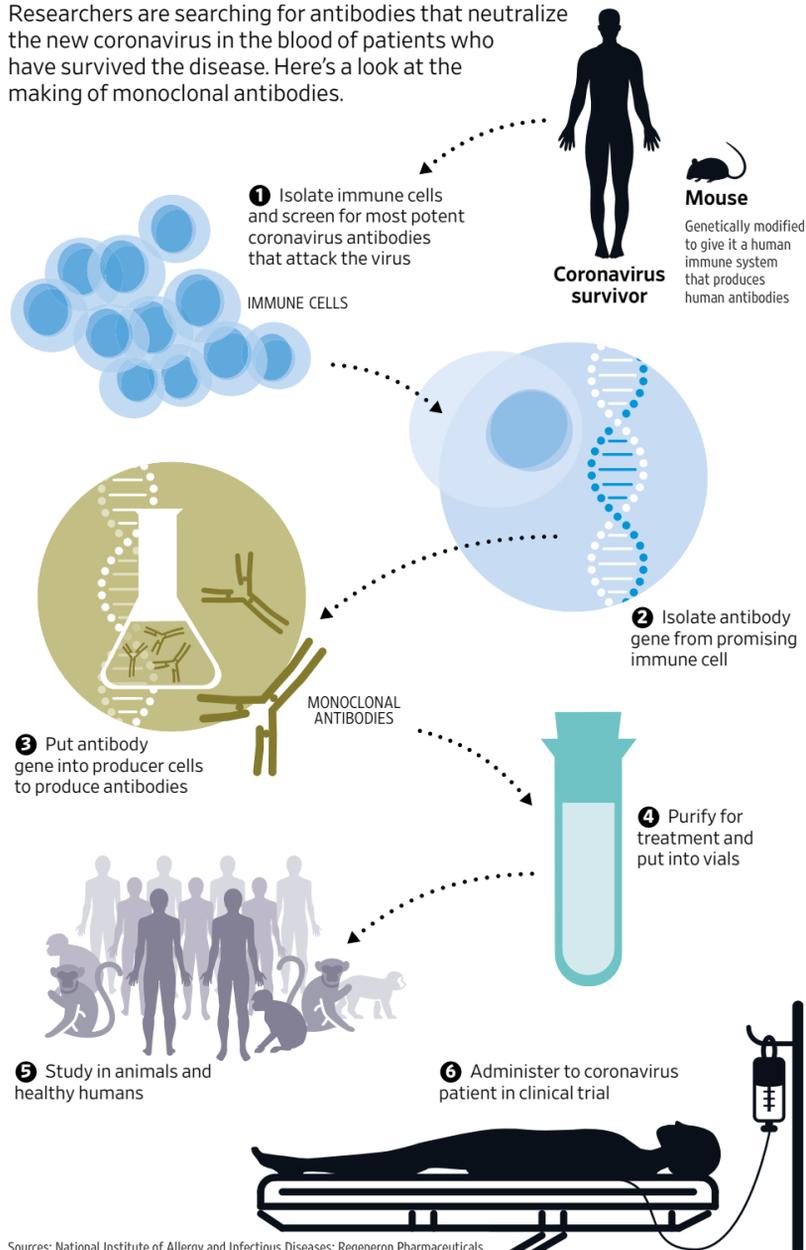
To find a treatment as quickly as possible, researchers considered an antibody approach to be among the most promising. Developing a traditional chemical-based drug from scratch typically takes years. An antibody drug could be developed far more quickly because the cure for the new coronavirus likely already exists in the blood of survivors.

An antibody could potentially be ready for use in humans in as few as six months, drug researchers say, though that is likely a best-case scenario.

Yet several factors have limited quick access to the blood samples, researchers and public health officials say. It is complex to transport the samples across international borders during a pandemic. Health-care systems are overwhelmed by caring for patients and, most of all, arithmetic: It could take four to eight weeks for patients to fully recover to the point where the antibodies can be

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Researchers are searching for antibodies that neutralize the new coronavirus in the blood of patients who have survived the disease. Here’s a look at the making of monoclonal antibodies.



Sources: National Institute of Allergy and Infectious Diseases; Regeneron Pharmaceuticals

## Card Issuers Rankle Many by Denying Trip Refunds

By ANNAMARIA ANDRIOTIS

Customers are flooding credit-card companies with requests for refunds on trips they no longer want to take as the coronavirus spreads. Many are finding they are still on the hook for at least some of the costs.

Card issuers are scrambling to respond, with many tweaking refund policies along the way. Customers say they have had to wait hours on the phone to talk to customer-service representatives.

Card issuers have been lenient with refunding customers who can no longer travel because they have personally contracted coronavirus. But many

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were booked to fly to destinations where the companies have all but canceled flights; they are generally offering more limited flexibility to others.

The travel issues are hitting rewards credit cards, where many customers could absorb the financial hit of paying for a canceled trip. But the cards, many of which charge high annual fees, often boast about superior customer service and travel-related perks, and banks are in tight competition for these wealthier customers.

Some rewards cards have long touted their travel insurance, which helps cardholders get refunds when they need to cancel trips. Card issuers and

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The coronavirus has led to travel cancellations and largely empty flights.

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### STREETWISE | By James Mackintosh

## History Says Rough Market Could Get Worse



The past few weeks may have felt like a market apocalypse, but the lesson of past downturns is that this could get a whole lot worse. Think about the fall in terms of the number of years of gains given back, and this would be the briefest period of loss of any recession since the 1960s. This bear market is

already deep and was quick to take hold, but hasn’t gone on for long. A recession now looks inevitable.

The worst case from past precedents would be a repeat of 2009, 1974, 1920 or the Great Depression, in all of which investors gave back more than a decade of stock price appreciation, counting dividends and inflation. The S&P 500 would have to halve again from here to get

back to where it stood 10 years ago.

Caution is warranted in applying the lessons from the past. There are parallels to the global financial crisis, the Arab oil embargo or World War I. But the comparisons are very far from perfect, even though the war coincided with Spanish influenza, a devastating pandemic.

The S&P has lost 29.5% from last month’s peak so far,

one of the fastest falls into a bear market in history. But stocks soared in the previous 12 months, so that hasn’t done much damage to long-term investors. The fall took prices only back to where they stood amid the recession fears of December 2018.

The question is whether we should think in terms of time, or in terms of money. In terms of money, this is already a bear market. Please turn to page B13

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## Quest for Virus Drug Is Hindered

Recent advances in using antibody drugs against a different virus, Ebola, have raised hopes that the approach could be viable against the novel coronavirus.

Since the 1990s, dozens of antibody drugs have come on the U.S. market to treat cancer, multiple sclerosis and asthma. The immune system manufactures antibodies that latch onto virus cells, prevent them from replicating and eventually clear the virus. With many viruses, antibodies remain in the blood afterward and provide protection against re-infection.

Getting antibodies for drug discovery requires yeoman's work even in the best of times. "It's almost like a military operation to move one sample," says James Crowe, who is director of the Vanderbilt Vaccine Center.

Several employees at Dr. Crowe's lab in Nashville, Tenn., work full-time acquiring samples. Their duties include getting patients' written informed consent, arranging for their blood to be drawn and coordinating the safe and secure shipment of the samples.

To find a novel coronavirus drug, scientists believe they can analyze the survivors' blood, identify and clone the most powerful antibodies against the virus and manufacture them as drugs.

AbCellera, a privately held biotech in Vancouver, began searching for a donor in January, says Ester Falconer, head of research and development. "We reached out to every source we could think of," says Dr. Falconer. "There was not one relationship or stone that we left unturned."

AbCellera received its first sample on Feb. 25. Less than two weeks later, the company identified 500 antibodies against the virus, says Dr. Falconer. Last week, AbCellera partnered with Eli Lilly & Co. to determine the most effective antibody to co-develop as a drug. They hope to start clinical trials in four months, says Dr. Falconer.

Dr. Crowe's Nashville lab has collected multiple samples after receiving its first on Jan. 26, from what is believed to be the first U.S. infected patient. But the samples may have been collected too early to contain functional antibodies against the virus, he says.

Dr. Crowe's lab received two patient samples on Saturday from patients infected about eight weeks ago and who appeared to have mounted an effective immune response to the virus, he says. "That is encouraging."

Yet researchers may need to evaluate samples from five to 10 patients before they find an antibody potent enough to be

## Where to Go if You Want to Help

People who have fully recovered from a confirmed novel coronavirus infection and are interested in donating blood may contact the National Institute of Allergy and Infectious Diseases at 1-866-833-5433 (TTY 1-866-411-1010) or vaccines@nih.gov. They can visit [www.niaid.nih.gov/about/vrc](http://www.niaid.nih.gov/about/vrc) to learn more.

You may contact the Vanderbilt Vaccine Center at [info@vvccenter.org](mailto:info@vvccenter.org) for information on participating in novel coronavirus drug research.

This approach was used by researchers at the National Institutes of Health and Vir to develop a drug for Ebola that proved effective in clinical trials last year.

While searching for a blood donor, Vir has been studying samples from patients who recovered from a previous coronavirus, SARS-CoV, identified in 2003. Researchers say the SARS virus has a 79% similarity with the new coronavirus. Antibodies against the SARS virus could also be effective against the new coronavirus and future variants, says Dr. Scangos.

## Card Issuers Deny Trip Refunds

Many consumers rarely consider it, instead often comparing cards based on sign-up bonus points or access to airport lounges.

In recent years, large issuers including Citigroup Inc. and Discover Financial Services have removed this benefit. Roughly 20% of credit cards offered trip-cancellation insurance last year, compared with 36% in 2015, according to consumer-finance website WalletHub.com's review of general-purpose cards originated by large issuers.

Most policies have limitations. For example, they often allow refunds if customers are so sick they can't travel, or because of severe weather. But they often don't cover flight changes made by airlines or other travel operators.

Card issuers including JPMorgan Chase & Co. and American Express Co. in many cases are telling cardholders they don't qualify because the policies generally don't cover pandemics or epidemics, cus-



Sick customers have been given more leniency than those who canceled trips to avoid virus danger. The Seattle-Tacoma airport.

tomers said.

People who are infected with the virus or are placed under quarantine by a physician often can get reimbursed, customers said. Those who are grounding themselves often aren't covered, customers said.

After his university canceled a class trip to Sweden, graduate student Oscar Pearson of California said he called JPMorgan and asked for the travel insurance on his Sapphire Reserve card to reimburse the roughly \$750 he had spent on airfare. The bank told him the card's benefit didn't cover the coronavirus, he said.

Mr. Pearson, 26 years old, said he explained the trip was canceled because of the virus and that the university had made that decision. He already had reached out to the online

travel site where he booked the flight. It offered him a partial credit that involved a rebooking fee, which he didn't take.

His university recently told students it would reimburse them if they can't get refunded any other way.

Some frustrated consumers are filing so-called merchant disputes, a process typically reserved for fraudulent purchases.

Kristal May of Salt Lake City canceled a trip to Seattle after her employer recommended against traveling. When she contacted the hotel, it declined to refund her booking of roughly \$540.

Ms. May had charged the hotel stay on her AmEx Platinum card, so she called AmEx to ask about getting refunded through the card's travel insurance. She said AmEx referred her to its

insurance provider, which told her coronavirus wasn't covered unless she already had the virus and was under quarantine.

She submitted a merchant dispute, though she said an AmEx agent told her she could expect to be denied.

Ms. May, 36, said she signed up for the Platinum card in January after hearing positive reviews about its customer service from friends. "I expected this to be a no-brainer," she said.

Some card issuers have been more flexible about returning points.

In early February, Leandro Petracca, 33, of San Francisco booked a two-week trip to Italy, Austria, Hungary and Morocco. He and his husband were aware of the coronavirus and decided they would be safer traveling to Europe than Asia. He charged more than \$10,000 of hotels, airfare and train rides on his Sapphire Reserve card and redeemed 300,000 points for the trip.

About three weeks ago, Mr. Petracca called JPMorgan to ask for help canceling his trip. He said the bank transferred him to a third-party insurance company, which told him coronavirus wasn't covered.

After some wrangling with JPMorgan, the bank returned the 300,000 points, Mr. Petracca said. He also contacted the airlines and hotels, which refunded him for most of his purchases. He remains on the hook for \$1,200.

## BUSINESS & FINANCE

### Private Jets Pick Up Business as Illness Cripples Commercial Travel



BAYNE STANLEY/ZUMA PRESS

Some business executives and wealthy travelers are turning to private jets as the fast-spreading coronavirus prompts commercial airlines to slash service.

JetSuite Inc., a Dallas charter-flight operator with a dozen jets, had several families hire its jets to pick up their children from college as schools shut down, a new request for the company. Another operator, Magellan Jets LLC, said families are using its planes—which cost at least \$5,000 an hour—to transport elderly individuals without exposing them to

the risks of commercial travel.

"The whole industry is getting additional inquiries," said JetSuite President Stephanie Chung. Her firm has had a 10% increase in inquiries for private flights in recent weeks, she said, along with increased requests from corporate travel departments whose own jets are booked up.

Commercial airlines have been crippled by the rapid plunge in bookings as the novel coronavirus has spread and governments have imposed travel restrictions. U.S. airlines are talking to the

government about getting up to \$50 billion in financial assistance, The Wall Street Journal reported.

United Airlines Holdings Inc. plans to cut its flying in half for April and May; Delta Air Lines Inc. and American Airlines Group Inc. are also planning major cuts.

Private jets or charter flights mostly abide by the same regulations as commercial flights, meaning they are also currently barred from trips to most of Europe or China. They would also be subject to similar domestic restrictions, should the U.S. govern-

ment impose them.

"We have had people ask us, 'If I go on vacation and we contract the virus while abroad, will you come pick us up?'" Mrs. Chung said. "The rules are the rules. So the answer is no."

Average flight hours on private jets increased about 14% globally in January and February, but international travel on private jets dropped 25% in the second half of February, according to Jet Support Services Inc., which provides maintenance for such jets.

—Thomas Gryta

a drug, says Amy Jenkins, program manager of the Biological Technologies Office at the Defense Department's research arm, known as Darpa, that is funding antibody research at Dr. Crowe's lab and AbCellera.

Patients respond differently to the virus, and one person's antibodies may not be effective in the broader population.

Researchers at Regeneron Pharmaceuticals Inc., based in Tarrytown, N.Y., have collected samples from recovered coronavirus patients, the com-

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## BUSINESS NEWS

# FedEx to Reduce Capacity as Virus Disrupts Economy

By PAUL ZIOBRO

FedEx Corp. said it would reduce its delivery capacity and retire aircraft, unveiling new cost-cutting measures after the coronavirus pandemic disrupted global trade patterns and economic activity.

The delivery giant also pulled its earnings guidance—the first time in its 50-year history that the company has withdrawn its outlook. It joins several dozen companies in retracting their forecasts.

“The Covid-19 pandemic is having a significant impact around the world,” FedEx Chief Executive Fred Smith said in Tuesday’s earnings release. He said the company is anticipating increased demand for overseas shipments but is unsure what the global impact is from tens of millions of households taking measures to reduce the spread and the resulting downdraft in economic growth. “We will continue to support efforts to combat the pandemic,” he said.

Amazon.com Inc. said this week it plans to hire an extra 100,000 employees in the U.S. as millions of people turn to online deliveries at an unprecedented pace. The e-commerce giant, which no longer uses FedEx, also said it was taking steps to prioritize shipments of medical supplies and household staples.

FedEx is also seeing demand pick up in some areas as a result of the coronavirus, executives said. Flights out of Asia are filling up as factories and stores across the globe need parts and inventory. In the U.S., the ground business has been bolstered by more people who are avoiding stores and shopping online.

But FedEx executives say the world is changing quickly. “What we do not know is how the pandemic evolves and what happens to demand,”

FedEx Chief Operating Officer Raj Subramaniam said on Tuesday’s earnings call. “The first two weeks of March have been good but there’s no way to project forward what the next few weeks hold for us.”

FedEx’s fiscal third-quarter earnings fell by more than half to \$315 million from \$739 million last year. Excluding items like integration expenses and realignment costs, per-share earnings were \$1.41 in the latest period, down from \$3.03 last year.

The sharp declines represented the impact from the pandemic, as well as other business challenges hitting FedEx, like increased costs from expanding its Ground delivery service and the loss of Amazon last year as a customer.

Mr. Smith said the global economy is already being hurt by trade wars and tariffs but that the pandemic is going to cause further problems.

“You add the coronavirus on top of that and world GDP growth this year is going to be extremely small,” he said.

Total revenue rose 3% to \$17.5 billion, as double-digit growth in FedEx’s Ground division, which is bolstered by more people shopping online during the holiday season and beyond, offset shrinking revenue in its Express division.

The company’s revenue topped analysts’ consensus from FactSet, while adjusted earnings met analysts’ expectations.

FedEx shares, up 1% to \$96 in aftermarket trading, have taken a beating during the coronavirus pandemic. Through Tuesday’s close, shares are down more than 42% from their high for the year, including its largest daily decline on Monday since the 1987 stock market crash.

—Allison Prang contributed to this article.



Broadcasters were left with holes in their programming schedules after several sports leagues suspended play due to the coronavirus.

# No Games for Sports Media

Broadcasters fill void with reruns, analysis and coverage of virus’s impact on athletics

By BENJAMIN MULLIN

Major sports broadcasters and digital publishers are scrambling to find alternatives to fill the void left by the sudden disappearance of live games due to the coronavirus, opting for a mix of reruns, analysis and coverage of the virus’s impact on sports leagues.

Bereft of games from the National Basketball Association, Major League Soccer and the NCAA, Walt Disney Co.’s ESPN is considering a variety of options, including repackaging archived games and pushing up the release date for original content to fill the air, Burke Magnus, the network’s programming chief, said in a question-and-answer session with its public-relations de-

partment Tuesday.

Fox Corp.’s Fox Sports, meanwhile, is running classic games and other programming, such as a documentary on National Football League great Tom Brady, according to a spokesman. The network has also aired live events from the World Wrestling Entertainment Inc. and the Professional Bowling Association.

Sports-oriented digital publishers such as the Athletic, Action Network and Barstool Sports have come up with new ways to fill their websites with stories and analysis without their customary diet of regular games and postseason tournaments.

The sports media got a bit of a reprieve Tuesday, with two major stories breaking: Mr. Brady, the quarterback for the New England Patriots, told fans on Instagram that he was leaving the team after two decades in Boston, and Brooklyn Nets star Kevin Durant said that he tested positive for the coronavirus.

The news that Mr. Durant was among four Brooklyn Nets players testing positive was broken by the Athletic. Adam Hansmann, the co-founder and chief operating officer of the San Francisco-based publisher, said the Athletic decided to turn its reporters loose on covering the effects of the coronavirus across the U.S.

The website, which charges users \$5 a month to read sports coverage, has seen a slight slowdown in web traffic since some major sports leagues suspended play last week, Mr. Hansmann said, but is still preparing to follow through on its plans to hire additional writers and expand to additional international markets by the end of the year. The company, which raised \$50 million earlier this year, has enough capital to weather the suspension of sporting events, he said.

A person familiar with Fox Sports said much of the network’s marquee programming for the early part of the year

has already run, including the Super Bowl, much of the NFL season, the Daytona 500 and the Tyson Fury vs. Deontay Wilder pay-per-view boxing match. The network’s strongest programming begins in the fall, with NFL games, NCAA football and the World Series.

Fox Corp. and Wall Street Journal parent News Corp share common ownership.

ESPN’s Mr. Magnus said the network is considering running sporting events that fall out of the mainstream, as it has for its ESPN8 “The Ocho” promotion, a nod to the fictional TV network that aired competitive dodgeball in the movie “Dodgeball: A True Underdog Story.” ESPN has aired the World Cornhole Championship and cherry-pit spitting competitions, among other sports, for “The Ocho” in the past.

ESPN is also trying to license rights to archived games, Mr. Magnus said, which will require negotiations with various sports leagues.

# Costco Acquires Lampert’s ‘Final Mile’ Logistics Firm

By COLIN KELLAHER AND SUZANNE KAPNER

Costco Wholesale Corp. said it acquired logistics company Innoval Solutions from Transform Holdco LLC, the operator of Sears and Kmart stores, for \$1 billion.

The deal is Costco’s largest acquisition since it merged with Price Club in 1993, and continues a broader effort by Sears’ owner to shed assets.

Transform Holdco, the company controlled by financier Edward Lampert that acquired hundreds of Sears and Kmart stores out of bankruptcy, said it would use proceeds from the sale to repay all of its non-real-estate debt.

Costco said Innoval employs more than 1,500 people and operates 11 distribution centers and more than 100 final-mile cross-dock centers. The Issaquah, Wash., warehouse-club operator said Innoval provides final-mile delivery and installation for large and bulky products, such as appliances, furniture and mattresses.

Transform Holdco, which has already closed many stores, said it plans to further streamline its retail operations and focus on stores with a strong record of success or meaningful real-estate value.



Appliances at Costco. Innoval delivers and installs bulky purchases.

It has been opening smaller stores and last year bought the Sears Hometown Stores, a chain that sells mainly appliances, tools and other hard-goods.

Mr. Lampert has divested other assets, including the DieHard battery brand, which he sold to Advance Auto Parts Inc. in December. Innoval was considered the crown jewel of the businesses that Mr. Lampert bought out of bank-

ruptcy, according to people familiar with the situation. He also owns Sears Home Services, which provides service and repairs for appliances; Sears Parts Direct, which sells replacement parts; Sears Home Improvement, which offers remodeling services; and other businesses.

Costco, which has been a customer of Innoval since 2015, said it funded the deal with its existing cash balances.

# Broadcaster Tegna Gets New Bid

By KIMBERLY CHIN

Private-equity firm Najafi Cos. and faith-based broadcaster Trinity Broadcasting Network have offered to buy Tegna Inc. for a cash consideration of \$20 a share, adding its bid to a crowded playing field of potential suitors.

The deal values the broadcaster at roughly \$4.4 billion and would bring Tegna’s 62 television stations and four radio stations in 51 markets together with Trinity Broadcasting’s 32 global networks in more than 175 countries. Phoenix-based Najafi focuses on

media, technology, consumer and sports companies.

Tegna’s shares climbed 15% to \$17.29 in Tuesday’s after-hours trading.

The bid comes just a week after media mogul Byron Allen made an all-cash, \$20-a-share bid for the broadcaster.

Private-equity firm Apollo Global Management Inc. has also set its sights on Tegna, offering the company an all-cash \$20-a-share bid earlier this month.

Another contender is rival broadcaster Gray Television Inc., which made a \$20-a-share offer for the Tysons, Va.,

broadcaster, though its offer was a mix of mostly cash and some stock.

Tegna, which is one of the biggest broadcasters in the industry, has been in the crosshairs of activist investor Standard General LP, which owns about 9.7% of the company, according to a securities filing. In January, the hedge fund nominated four candidates to the company’s board, setting up a proxy fight. Standard General nominated a fifth director candidate last month and has previously said Tegna should entertain the Gray and Apollo offers.

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## TECHNOLOGY

WSJ.com/Tech

# Teens' Smartphone Use Is Mapped

Effort is under way to track media consumption as well as behavioral patterns

By YOREE KOH

Smartphones have radically changed the way teens consume information. What hasn't kept pace, researchers say, is the way we study how they consume it.

More than a decade after the inaugural iPhone, we still don't know much about how screen use affects adolescent well-being, despite studies that have attributed to social media many woes affecting teens today, including depression and anxiety.

Stanford University researchers are looking to change that with the Human Screenome Project, an effort to create a detailed digital map showing what people actually do with their devices. The researchers are tracking "everything that people see and do on their screens," said Thomas Robinson, professor of pediatrics at Stanford School of Medicine and one of the researchers leading the project, who is focused on the adolescents portion of it.

Dr. Robinson and his colleagues say that our media consumption isn't clean cut. We are multitasking, jumping between apps, websites and videos with incredible speed. Therefore, context is key to how we interpret media and how it affects our moods.

To get a window into what teens are seeing and doing, and in what order, the Stanford researchers are installing software on participants' phones and taking screenshots of their usage every five seconds. This kind of granular detail has been rare in past studies on screen time, which relied on self-reporting or broad categories.

One of the early findings from the Screenome Project shows how fragmented media consumption has become: Peo-



The Screenome project has collected more than 30 million screenshots from more than 600 people.

## Self-Reporting on Screen Time Leads To Flawed Results

A recent spate of academic research seems to bolster the case that existing methods for studying teens' phone use need to evolve.

One study, presented at a conference last year, reviewed 226 studies from the past 12 years that examined how social-media exposure affects psychological well-being, including anxiety, depression and loneliness.

It found almost no systematic relationship between the two.

Jeff Hancock, founder of the Stanford University Social Media Lab and leader of the study, said more than 77% of the 226 studies relied on self-reported answers to questions about how people spent time on social media.

Candice Odgers, a professor of psychology at the University of California, Irvine, analyzed 40 studies that examined the ties between social-media use and depression and anxiety in adolescents.

The main takeaway from her review, she said, was that the association between the two was inconsistent and that the links are "much smaller than the other stuff that we know relates to depression and

anxiety."

"The phone really is this mirror," Ms. Odgers said. "It's picking up on the positives and negatives that are present in offline life."

Self-reporting can lead to low-quality data because people's memories tend to be poor, says Thomas Robinson, professor of pediatrics at Stanford School of Medicine.

In a pilot project last summer, Dr. Robinson asked college students to self-report their phone use for a day, then compared those answers to their actual use based on Apple's Screen Time App records.

The self-reported answers were off by an average of 2.2 hours.

policy as well as health and social outcomes.

For instance, if media-consumption patterns associated with alcohol or tobacco use are established, researchers could run experiments where

they limit exposure to such content on their smartphones to see how that affects their offline behavior, Dr. Robinson said.

The project has received funding from Stanford and Penn State internal grants. The researchers are also seeking additional funding from foundations, the National Institute of Health and have grant proposals pending.

The project comes at a time when children will likely be spending more time on screens as school closures due to the new coronavirus outbreak force many to online learning, and may seek more socialization online amid a prolonged quarantine.

"Even if I know someone is spending four hours on a screen that doesn't tell me much. They could be watching pornography, learning a new skill, or doing a whole bunch of other things."

Some academics have raised privacy concerns about the Human Screenome Project, saying it would be hard to devise a privacy policy that covers all the people who show up in photos and text messages in the participants' phones. Dr. Robinson said the project's privacy policy has undergone rigorous reviews by multiple ethics committees and has in some cases required consent forms from parents and teens. He said it is akin to giving researchers permission to peer over participants' shoulders to look at their screens.

One reason why researchers continue to use self-report methods is convenience. It's easier to ask research participants to fill out a questionnaire instead of vigorously observing them for the length of the research period.

"For all of its flaws, it gives us a unique window into people's emotions, thoughts and motivations," said Chris Barry, a professor of psychology at Washington State University, because it can ask participants why they might have chosen to use social media, for example.

# Facebook Employees Get Boost Of \$1,000

By DEEPA SEETHARAMAN

Facebook Inc. will give all of its full-time employees an additional \$1,000 in their next paychecks and the same "exceeds expectations" performance review for the first half of the year.

By giving all of its roughly 45,000 full-time staffers the same review, Facebook is ensuring that all of those employees receive their biannual bonuses. A Facebook spokeswoman confirmed the moves, which were announced in an internal memo.

The employee moves are among several announced by the social-media giant in response to the coronavirus pandemic.

Most employees of Facebook and other tech companies have already started working from home. Facebook is also sending its contractors, including content moderators, home with pay, according to a news release Monday night.

Facebook also said it is planning to provide \$100 million in cash and advertising credits to small businesses to help them deal with difficult financial conditions.

Facebook, which has more than two billion users worldwide, said it would provide support for up to 30,000 eligible firms in more than 30 countries where it operates.

The funding is meant to help recipients to retain their workforces, assist with operating costs and connect with customers, it said, noting that details on what it takes to qualify will come at a later date.

The majority of it will be doled out as grants, and applicants don't need to be Facebook advertisers or have a presence on the platform, according to a Facebook spokeswoman.

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An Amazon warehouse in New Jersey. The company aims to quickly restock and ship key products.

# Amazon to Focus on Medical Supplies, Household Staples

By JON EMONT

Amazon.com Inc. said it is taking steps to prioritize shipments of medical supplies, household staples and other high-demand products in the wake of surging demand due to the coronavirus pandemic.

Independent sellers on Amazon's site will be unable to ship products other than such high-demand items to company warehouses until April 5. Amazon is taking similar steps with vendors who supply items for it to resell directly. The changes will allow Amazon to "more quickly receive, restock and ship these products to customers," according to a notice the company posted for sellers Tuesday.

Some key products such as household staples and medical supplies are out of stock on its site as orders have surged, the notice said. The company didn't specify which goods would be prioritized or how long it would take for the decision to affect consumer orders on items such as clothing or toys.

People around the world are turning to online platforms as governments impose new restrictions on movement

and prescribe social-distancing measures to limit the spread of the virus. An Amazon spokesperson said the company is seeing increased online shopping, resulting in some products being out of stock.

"We are temporarily prioritizing household staples, medical supplies and other high-demand products coming into our fulfillment centers so we can more quickly receive, restock, and ship these products to customers," the spokesperson said.

Some third-party sellers said this would hurt their business, as they would not be able to rely on Amazon's logistics network to store new batches of goods and ship to customers for three weeks. The measure could potentially curtail their sales on the platform and lead to shortages of products for customers, some said.

"This makes things nerve-racking," said Michael Micheli, a partner at Alpha Rock Capital, which sells around 10 brands on Amazon. He said he didn't know where to store shipments of goods—shoe and car accessories—that will be ready to ship from

China later this week.

Amazon's decision comes at a tough time for a number of sellers. Many struggled to replenish their stocks on the platform when Chinese factories shut down in response to the outbreak. Some of those factories have since reopened as the number of infections in the country has decreased. Now, sellers say they will struggle to take advantage and send their new batches of products to Amazon's warehouses.

Independent merchants can sell on Amazon without relying on the company's fulfillment centers, but that means making arrangements to stock their goods in other warehouses and independently arranging delivery for customers.

Amazon said that products that are already on their way to its warehouses will be accepted.

On Monday, the company announced it plans to hire an additional 100,000 employees in the U.S. to meet "the surge in demand from people relying on Amazon's service during this stressful time."

—Dana Mattioli contributed to this article.

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## BUSINESS NEWS

# Mining Companies Restrict Operations

Some stop production or cut projects amid fallout from pandemic; stocks are hit hard

By ALISTAIR MACDONALD

Four of the world's largest miners said they are closing production or slowing project construction, as fallout from the coronavirus pandemic reaches beyond the sector's share prices to some of its most isolated mines.

As with other sectors, investors have dumped mining shares amid expectations the pandemic will substantially diminish global growth and demand for resources. But the mining industry is unique in that its main assets and people are typically in very remote areas, presenting the sector with challenges.

**Anglo American PLC** and America's two largest miners, **Newmont Corp.** and **Freeport-McMoRan Inc.**, said on Monday they were suspending projects or stopping some mining in Peru after the country announced a national quarantine to curb coronavirus's spread.

Brazil's **Vale SA** said late Monday it will close a nickel mine in a secluded part of northwest Canada for four weeks, in order to prevent workers it flies in from potentially spreading the virus into local communities.

**Rio Tinto PLC** and **Lundin Mining Corp.** have also restricted new projects, and miners world-wide are curbing travel, asking workers to take stringent tests before they travel to far-flung mines and preparing medical isolation units at such sites.

"This is the new dynamic, miners closing down production as coronavirus spreads," said Myles Allsop, a mining analyst at UBS.

Factories and businesses are closing around the world as Covid-19 continues its spread from China. Fiat Chrysler Automobiles NV and Peugeot maker PSA Group are stopping almost



Anglo American shares are down 40% this year with demand seen as likely to fall. A company-owned iron-ore mine in South Africa.

all car production in Europe, while Volkswagen AG has shut factories in Italy and Spain.

The effects on miners have taken longer to sink in, and even now the industry continues to churn out resources. Analysts say that will begin to change as government restrictions and concerns for employee safety lead to more mine closures, and as companies adjust production to the likely falloff in demand.

"The onset of Covid-19 has introduced a global macro challenge the likes of which we have not seen in my lifetime," Iván Arriagada, the chief executive of Chilean miner **Antofagasta PLC** said while delivering

full-year results Tuesday. "These are unprecedented times."

The spread of coronavirus has hit miners' stocks and bonds hard. Anglo American's shares are down 40% this year, **Glencore PLC** has fallen 41% and U.S. copper miner **Freeport-McMoRan** has lost over half its market value.

The cost of insuring these companies' bonds against default has also risen. On Tuesday, investors were paying more than \$485,989 a year to insure \$10 million of Glencore's debt against default for five years using credit default swaps, according to IHS Markit. At the start of the year,

the same insurance for Glencore cost \$127,000. For Anglo American, the cost reached \$307,150, up from \$84,000.

Antofagasta said it has now secured extra warehouse space for its copper in case of canceled sales. It has also stocked up on supplies like spare machine parts and sulfuric acid. The company, with one of its mines located 4,000 feet above sea level in the Andes mountains, has also severely restricted access to its sites and is trying to make mines work autonomously from each other to reduce the number of people who have to fly in and out.

Canada's **Agnico Eagle Mines Ltd.** has two mines on

the cusp of the Arctic Circle, around 930 miles north of the nearest city, Saskatoon. Before flying into one of those mines, employees are screened for illness by medical personnel before they begin their trip. The company has placed portable sinks at the pickup locations and is spraying aircraft with disinfectant. Boarding passes are no longer used so as to limit opportunities for the virus to spread.

At all of its sites, the gold miner has also suspended visits from nonessential visitors and contractors.

**Kinross Gold** operates in northeast Russia what is known in the industry as the

world's most remote mine. Measures taken there include setting up medical isolation units and asking employees to gather only in smaller groups, with the result that the company has extended the hours that its cafeteria operates, a spokesman said. While the mine's workforce typically operates in shifts of several weeks on and several weeks off, these shifts are now being extended to limit the number of people traveling in and out.

Mines are used to dealing with medical emergencies, given the often dangerous nature of their business, and will have medical facilities and

## 41%

Stock-price decline for Glencore this year

evacuation plans already in place. In recent years, for instance, some miners in West Africa have stocked equipment like hazmat suits and developed isolation wards to cope with any potential outbreaks of the Ebola virus.

If miners do curtail production, this should support the price of commodities, said Mr. Allsop of UBS. The price of coal held up as other commodities fell at the height of the outbreak in China, as the country's coal mines had closed down. Much will depend on what measures countries put in place to cope with the virus. If Chile, for instance, imposes strict quarantines as neighboring Peru has done, then that would affect 40% of the world's copper supply, Mr. Allsop said.

Edward Sterck, an analyst at BMO, said that while companies will likely curtail mine production somewhat, he doesn't expect the cutback to last too long. He notes that the rebounds in production in other recent periods of sharp price falls, such as in 2016 and 2009, were swift.

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## THE PROPERTY REPORT

## Coronavirus Upends Senior Housing

Shares drop as investors fear contagion will discourage residency

By ESTHER FUNG

The coronavirus has been sending shares of elder-care facilities into a tailspin over concern that any additional contagion in senior-care buildings could hurt operations and lead to occupancy declines.

In the Seattle area, 11 elder-care facilities have reported that Covid-19 has turned up among residents or workers. Analysts and investors are concerned that potential new residents could delay their entry into some of these facilities.

Shares of health-care real estate investment trusts have fallen 50% since Feb. 24, according to FactSet, with the slide accelerating in March. This performance makes health-care REITs the third-worst-performing real-estate sector after hotel and mall REITs.

These companies include holdings of medical-office buildings, nursing facilities and senior-housing buildings, and those that focus on elder-care have experienced sharper falls.

Shares of health-care REITs have fallen 43% in March. Stock prices for **Welltower** and **Ventas Inc.**, which own senior-housing portfolios, have each fallen more than 45% since the start of March.

Shares of skilled-nursing-facilities owner **Sabra Health Care REIT Inc.** fell 62% since the start of the month.

Sabra, which owns a Washington state facility where a resident who tested positive for Covid-19 died and at least five have tested positive, is following the proper procedures, Chief Executive Rick Matros said. It is also working closely with the Centers for Disease



The facilities say they have taken precautions, including restricting visitors, increasing temperature screening and isolating residents who have the flu.

Control and Prevention, he said.

"In most cases, the families understand that, however concerned they are (about the virus), they are better off with mum or whoever it is getting care 24/7 than they could provide on their own," he said.

The senior-housing sector was already coming under pressure from overbuilding from Chicago to New England that created an emerging supply glut in major markets.

Last year, returns from senior-housing portfolios were around negative 7%, when the S&P 500 stock index returned

29%. "At the beginning of the year, we thought that finally, by the end of 2020, demand and supply would be at equilibrium," said Michael Souers, an analyst at S&P Credit Ratings.

Now, the coronavirus outbreak looks like another setback. Current estimates suggest that the mortality rate for seniors for Covid-19 is around 10% to 15%, about four to seven times higher than the rate from the flu, said Lukas Hartwich, an analyst at Green Street Advisors.

"There is an indeterminate

probability the Covid-19 outbreak could reduce demand for senior housing and skilled nursing by as much as 5%-15%," said Mr. Hartwich. "It could also greatly impact the pipeline of future residents who are currently 70-80 years old."

These facilities say they are taking the necessary precautions. They have been restricting visitors, increasing temperature screening, and isolating residents who have the flu, effectively creating a moat around them.

Welltower Inc., the largest owner of senior-housing facili-

ties in the U.S., also said that occupancy has held steady. While it has no confirmed cases of Covid-19, the firm said it is prepared for the eventuality.

"I expect Covid-19, like the flu, to occur in our buildings," said Thomas DeRosa, chairman and chief executive officer of Welltower. "We are in the position to help someone who is in quarantine."

Not everyone is convinced that is enough.

"The senior-housing industry is well-prepared; they have handled a few bad flu outbreaks in the past, but we ha-

ven't seen anything like this in terms of contagion," said Beth Burnham Mace, chief economist at National Investment Center for Seniors Housing & Care.

In the fourth quarter, the occupancy rate of seniors housing across 31 major markets reached 88%, up slightly from 87.8% a year earlier. Now occupancy levels look poised to fall. Typically the adult children of an incoming resident would take a look at a facility, and there have been fewer property tours, Ms. Mace said.

—Peter Grant  
contributed to this article.

## Houston's Commercial Real Estate Set for Shock Waves From Pandemic

By PETER GRANT

The Houston office market is poised to become the next commercial real estate victim of the economic shock waves from the coronavirus crisis.

So far, most of the fallout in the commercial property world has been in lodging, malls and the other property types that have been hit the hardest by the evaporation of travelers and shoppers. Office-building landlords are relatively insulated because their tenants sign long-term leases.

But Houston is dependent on the fortunes of the oil-and-gas industry, which has been sent into a tailspin by weakened oil demand combined with the failure of the Organization of the Petroleum Exporting Countries and Russia to agree on production cuts. Owners, brokers and others in its office market are bracing themselves for layoffs, bankruptcies and downsizings that will translate into lower rents, higher vacancies and foreclosures.

"This coronavirus has really been a kick in the stomach," said Bruce Rutherford, who heads the Houston-based global energy practice for JLL, the Chicago-based commercial real estate services giant.

Houston's energy sector could lose 8,000 to 10,000 jobs in the wake of the current turmoil, Patrick Jankowski, head of research of the Greater Houston Partnership, said Monday. "That could even nudge up to 12,000," he said.

Some of the world's largest real-estate investors own property in the Houston office market, which includes more than 213 million square feet. Major players that could feel the pain include Toronto-based Brookfield Asset Management Inc., Invesco, Metropolitan Life Insurance Co., Nuveen Real Estate and Hines, Houston's largest homegrown commercial real-estate firm.

Houston's problems also are closely watched along with other property markets because of broader concern that upheaval in the real-estate world may intensify the growing storm in the broader financial system. With some



Beacon bought a stake in the Bank of America Tower in December.

\$3.6 trillion commercial real estate debt outstanding, a rise in defaults could further unhinge banks and other financial firms.

Defaults in the Houston office market already are rising. Last week, data service Trepp LLC reported that a \$69.7 mil-

### Defaults in the Houston office market already are climbing.

lion loan backed by a 471,000-square-foot Pinnacle West-chase office building in the Houston area was transferred to a special servicer because it was facing "imminent default."

A representative of the building's owner, Interventure Advisors, couldn't be reached for comment.

Still, participants in the Houston market feel that it is positioned better to survive hard times now than in previous downturns. The city's economy, which has weathered many an oil bust, has diversified in recent years adding tens of thousands of jobs in health care, global trade and other nonenergy related businesses.

Also, in past recessions, more buildings than today were owned by smaller investors and highly leveraged firms that didn't have the capital to weather a lengthy disbursement. "Most of the Houston buildings today are much more institutional with much more conservative capital

structures," said Mark Taylor, senior managing director of **CBRE Group Inc.** "That's a big difference."

When the coronavirus crisis hit, Houston's office market was just beginning to recover from the sharp decline in energy prices of 2014, which was triggered in part by an oil glut. The availability rate, which includes vacancy and sublease space, was beginning to decline after rising from 12% in 2013 to about 23% in 2018, according to CBRE. It was 22.4% at the end of the fourth quarter.

Hopes that the recovery would continue were dashed when repercussions from the coronavirus crisis sent oil prices into a nosedive. "People are laying down rigs left and right and cutting capital budgets," said Mr. Rutherford of JLL. "The first to feel this are engineering and services companies. And they are heavy office users in Houston."

This could be bad news for developers who have made big bets on Houston in recent years. For example, a venture of Hines and Ivanhoe Cambridge is developing Texas Tower, a 47-story skyscraper on the former site of the Houston Chronicle. Scheduled to be completed in late 2021, it is about 40% leased. A spokesman for Hines declined to comment.

In December, Beacon Capital Partners purchased a 90% stake in Houston's Bank of America Tower for \$373 million. A spokeswoman for Beacon said in an email that the building will soon be 94% leased and is "as defensive an asset as you can possibly own today."

Some oil-patch cities are in worse shape than Houston because their economies haven't diversified as much in recent years. For example, downtown Calgary is entering this crisis with about 11.5 million square feet of empty office space, according to CBRE, the equivalent of more than four Empire State Buildings.

Unlike Houston, Calgary wasn't seeing signs of a recovery. "It's just bad," said Greg Kwong, CBRE's regional managing director in Calgary.

## Malls in Urban Areas Start to See Big Toll Amid Store Closings

By ESTHER FUNG

Malls in dense, urban locations in recent years have generally been more profitable than those in sparsely populated areas, because foot traffic is typically stronger. But with the coronavirus spreading at a faster rate in metropolitan areas, many of these malls are poised to take a big hit.

Some tenants, likely to be hurt by falling foot traffic and by orders from the authorities to close, may struggle to pay their rent.

Over the weekend, one of the biggest malls in the country, King of Prussia mall in the Philadelphia area, closed its doors on orders from local authorities. The most expensive mall ever built in the U.S., American Dream, which was scheduled to open numerous stores on March 19, said it was closing the New Jersey retail and entertainment complex from Monday until the end of March.

Others, such as Kings Plaza in Brooklyn, N.Y., are seeing some tenants such as Charlotte Russe and Aldo shutter their stores early.

"That is closed, and that is closed," said Manirul Islam, a vendor of a candy kiosk in Kings Plaza, pointing to Metro PCS and Hollister, on Sunday evening. Signs were up on at least 10 stores informing customers of shortened hours by Sunday evening.

Some mall employees are worried about being let go, said Mr. Islam, who added his sales have plunged 90% in recent weeks. It might be preferable, he said, to have the mall shutter so tenants can avoid having to pay high rents while business suffers.

The landlord, **Macerich Co.**, declined to comment.

National retailers such as **Apple Inc.** and **Nike Inc.**, who are big drivers of foot traffic, already announced temporary store closures for at least two weeks, placing signs on thousands of stores to remind customers they can make purchases online. These retailers are likely to survive even if stores remain closed for a few months, but smaller enter-

prises and food operators might not have the same credit facilities and would need relief from their lenders and landlords.

Other national retailers on Tuesday announced store closures or shortened hours. **Nordstrom Inc.**, **Foot Locker Inc.**, **Williams Sonoma Inc.** and **J.Crew Group Inc.** are among the chains temporarily closing stores, while **Kohl's Corp.** and **J.C. Penney Co.** said they would reduce hours.

"People will go back to the malls" when the pandemic is over, said Thomas Dobrowski, vice chairman at NK Capital Markets. "But rents may have to be reset materially to keep the lights on."

Tenants have been in touch with their real-estate brokers and landlords for possible relief measures. They can seek insurance payouts on the grounds of business interruption, though that typically protects tenants only against damages to their premises, said Corey Bialow, chief executive of Bialow Real Estate, which represents retail tenants. "Landlords and tenants each have to take a hit financially," said Mr. Bialow.

Generally, bigger mall owners have more tools to cope with the turmoil. **Simon Property Group**, the country's largest mall landlord, said Monday it has secured an amendment to an existing \$4 billion credit facility to \$6 billion.

Macerich, which owns 47 properties, announced Monday a cut in dividends to \$0.50 a share and switched to a 20% cash, 80% stock payout. In 2019, the Santa Monica, Calif.-based landlord distributed \$0.75 in quarterly dividends.

These moves would help the company conserve cash for improvements to its properties, as well as with repayments for mall mortgages, analysts said.

For malls in the U.S. struggling, the virus could speed up their demise and hurt their lenders and real-estate debt-holders.

So-called B- and C-malls that have lost one or more anchor department stores and where the space has remained vacant, are especially vulnerable, analysts said.

NEW HIGHS AND LOWS

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.

Tuesday, March 17, 2020

Stock 52-Wk % High/Low Chg Stock 52-Wk % High/Low Chg Stock 52-Wk % High/Low Chg

Table with columns: Stock, 52-Wk % High/Low Chg, Stock, 52-Wk % High/Low Chg, Stock, 52-Wk % High/Low Chg. Includes 'Highs' and 'Lows' sections.

Table with columns: Stock, 52-Wk % High/Low Chg, Stock, 52-Wk % High/Low Chg, Stock, 52-Wk % High/Low Chg. Continuation of stock price data.

Table with columns: Stock, 52-Wk % High/Low Chg, Stock, 52-Wk % High/Low Chg, Stock, 52-Wk % High/Low Chg. Continuation of stock price data.

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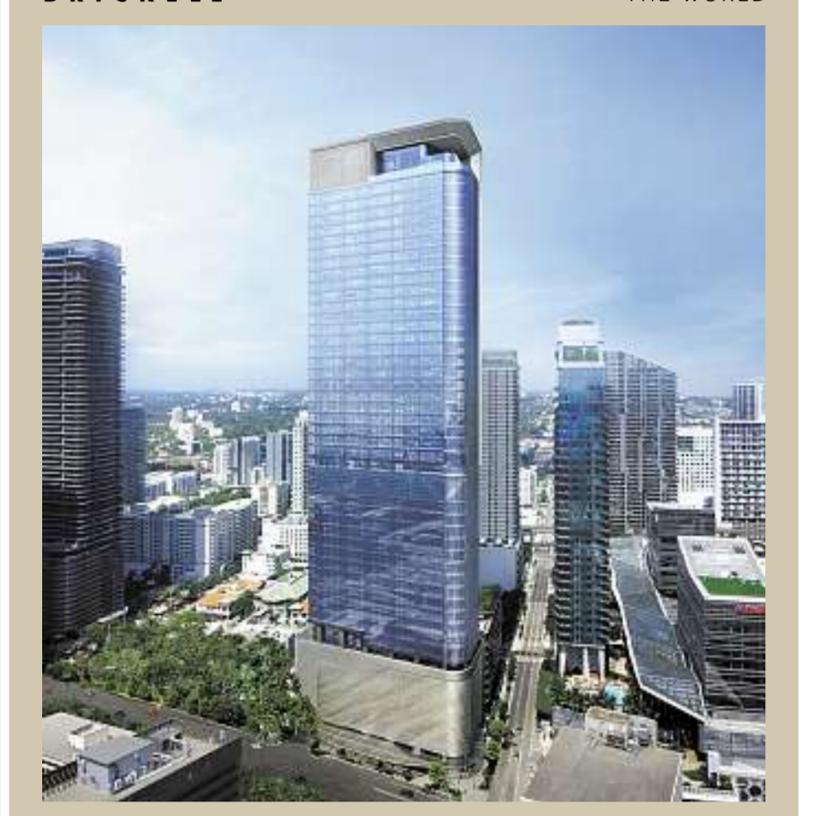
Lowes real estate listings. Four properties for sale: 1. East Montgomery, AL (28.32± AC PARCEL), 2. Albuquerque, NM (13.10± ACRES), 3. Henderson, TX (2.92± AC HIGH VISIBILITY OUTPARCEL), 4. Henderson, TX (1.15± AC HIGH VISIBILITY OUTPARCEL).

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Continued on Page B7



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.

Footnotes
\* New 52-week high.
# New 52-week low.
dd Indicates loss in the most recent four quarters.

Underlined quotations are those stocks with large changes in volume compared with the issue's average trading volume.

Boldfaced quotations highlight those issues whose price changed by 5% or more if their previous closing price was \$2 or higher.

Table of stock prices with columns for Stock, Sym, Close, Chg, Net, and multiple columns of stock data.

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 of stock prices for Tuesday, March 17, 2020, with columns for Stock, Sym, Close, Chg, Net, and multiple columns of stock data.

Table of stock prices for Tuesday, March 17, 2020, with columns for Stock, Sym, Close, Chg, Net, and multiple columns of stock data.

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MARKETS DIGEST

EQUITIES

Dow Jones Industrial Average

21237.38 ▲1048.86, or 5.20%
High, low, open and close for each trading day of the past three months.



S&P 500 Index

2529.19 ▲143.06, or 6.00%
High, low, open and close for each trading day of the past three months.



Nasdaq Composite Index

7334.78 ▲430.19, or 6.23%
High, low, open and close for each trading day of the past three months.



Major U.S. Stock-Market Indexes

Table with columns for Index Name, High, Low, Close, Net chg, % chg, 52-Week High/Low, % chg, YTD, and 3-yr. ann. Includes Dow Jones, Nasdaq Stock Market, S&P, and Other Indexes.

Late Trading

Most-active and biggest movers among NYSE, NYSE Arca, NYSE Amer. and Nasdaq issues from 4 p.m. to 6:30 p.m. ET as reported by electronic trading services...

Most-active issues in late trading

Table listing companies like SPDR S&P 500, VanEck Vectors Gold Miner, and others with their volume, price change, and after-hours activity.

Percentage gainers...

Table listing companies like WPX Energy, New York Mortgage Tr, and others with their percentage gains.

Trading Diary

Volume, Advancers, Decliners

Table showing trading volume, number of advancers, decliners, and issues traded for NYSE and NYSE Arca.

International Stock Indexes

Table listing international stock indexes by region/country, including World, Americas, EMEA, Asia-Pacific, and others.

Percentage Gainers...

Table listing companies like Blue Apron CI A, Capital Bancorp, and others with their percentage gains.

Most Active Stocks

Table listing companies like SPDR S&P 500, Chesapeake Energy, and others with their trading volume and price change.

Percentage Losers

Table listing companies like Direxion Jr Gold Bear 3X, DBV Technologies ADR, and others with their percentage losses.

Volume Movers

Table listing companies like WisdomTree Eur Qlty Div, DiamondPeak Holdings, and others with their trading volume.

CREDIT MARKETS

Consumer Rates and Returns to Investor

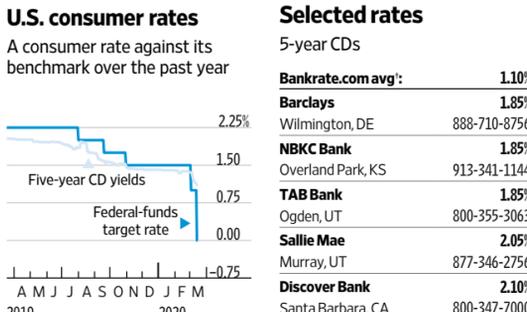
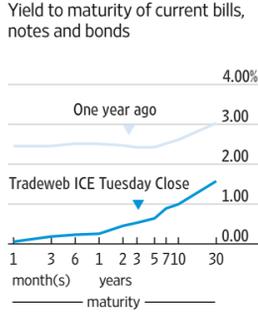
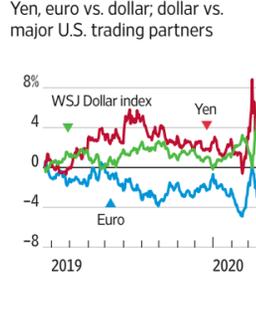


Table showing interest rates for various products like Federal-funds rate target, Prime rate, and others.

Treasury yield curve



Forex Rate



Corporate Borrowing Rates and Yields

Table showing corporate borrowing rates and yields for various companies and indices.

CURRENCIES & COMMODITIES

Currencies

Table showing U.S.-dollar foreign-exchange rates for various countries and currencies.

Commodities

Table showing commodity prices for DJ Commodity, TR/CC CRB Index, Crude oil, and others.

# COMMODITIES

WSJ.com/commodities

## Futures Contracts

Metal & Petroleum Futures						
	Open	Contract High	Low	Settle	Chg	Open interest
<b>Copper-High (CXM)</b> -25,000 lbs., \$ per lb.						
March	2.4170	2.4170	▼ 2.3090	<b>2.3155</b>	-0.0830	2,068
May	2.3860	2.4255	▼ 2.3020	<b>2.3135</b>	-0.0790	120,487
<b>Gold (CXM)</b> -100 troy oz., \$ per troy oz.						
March	1469.30	1537.70	1469.30	<b>1524.90</b>	39.00	64
April	1512.80	1554.30	1465.60	<b>1525.80</b>	39.30	243,721
June	1505.80	1556.40	1468.60	<b>1528.10</b>	39.50	216,247
Aug	1515.30	1555.70	1473.60	<b>1530.40</b>	39.60	44,517
Oct	1511.40	1556.20	1479.00	<b>1532.40</b>	40.00	12,101
Dec	1504.50	1561.50	1475.90	<b>1534.10</b>	40.30	35,866
<b>Palladium (NYM)</b> -50 troy oz., \$ per troy oz.						
April	1593.60	1593.60	1593.60	<b>1538.10</b>	-4.50	4
June	1460.00	1652.00	1369.90	<b>1509.60</b>	-4.50	8,822
Sept	1496.60	1552.00	1378.20	<b>1501.40</b>	-5.40	788
Dec	1350.00	1550.00	▼ 1350.00	<b>1488.30</b>	-5.20	431
<b>Platinum (NYM)</b> -50 troy oz., \$ per troy oz.						
April	666.00	718.40	600.00	<b>661.80</b>	7.60	38,394
July	663.40	718.60	600.10	<b>662.10</b>	6.60	29,996
<b>Silver (CXM)</b> -5,000 troy oz., \$ per troy oz.						
March	12.550	12.940	12.415	<b>12.469</b>	-0.303	375
May	12.860	13.230	12.110	<b>12.495</b>	-0.321	110,443
<b>Crude Oil, Light Sweet (NYM)</b> -1,000 bbls., \$ per bbl.						
April	28.69	30.30	▼ 26.63	<b>26.95</b>	-1.75	138,291
May	28.99	30.61	▼ 27.06	<b>27.33</b>	-1.67	472,470
June	29.58	31.11	▼ 27.76	<b>28.05</b>	-1.50	270,048
July	30.36	31.73	▼ 28.64	<b>28.96</b>	-1.26	151,260
Sept	31.92	33.07	▼ 30.32	<b>30.71</b>	-0.89	133,378
Dec	33.72	35.01	▼ 32.46	<b>32.93</b>	-0.66	226,359
<b>NY Harbor ULSL (NYM)</b> -42,000 gal., \$ per gal.						
April	1.0401	1.0840	1.0309	<b>1.0357</b>	-0.109	61,827
May	1.0414	1.0876	1.0350	<b>1.0398</b>	-0.116	84,675
<b>Gasoline-NY RBOB (NYM)</b> -42,000 gal., \$ per gal.						
April	1.7102	1.7818	1.6878	<b>1.7114</b>	0.215	67,374
May	1.7214	1.7908	1.6996	<b>1.7190</b>	0.173	89,168
<b>Natural Gas (NYM)</b> -10,000 MMBtu., \$ per MMBtu.						
April	1.797	1.820	1.711	<b>1.729</b>	-0.06	161,697
May	1.831	1.860	1.752	<b>1.769</b>	-0.04	334,910
June	1.904	1.927	1.837	<b>1.852</b>	-0.05	92,218
July	2.004	2.023	1.945	<b>1.960</b>	-0.01	111,330
Sept	2.063	2.090	2.026	<b>2.036</b>	-0.05	113,144
Oct	2.115	2.144	2.083	<b>2.093</b>	-0.03	109,955

Agriculture Futures						
	Open	Contract High	Low	Settle	Chg	Open interest
<b>Corn (CBT)</b> -5,000 bu., cents per bu.						
May	359.75	360.50	▼ 342.75	<b>344.00</b>	-10.75	537,944
July	358.75	360.50	▼ 348.75	<b>350.00</b>	-8.50	362,374
<b>Oats (CBT)</b> -5,000 bu., cents per bu.						
May	257.00	259.25	251.50	<b>253.50</b>	-6.00	2,818
July	259.50	261.25	254.00	<b>255.50</b>	-6.25	825
<b>Soybeans (CBT)</b> -5,000 bu., cents per bu.						
May	823.75	832.50	822.00	<b>824.25</b>	2.50	305,818
July	833.00	840.75	830.25	<b>831.00</b>	5.00	180,222
<b>Soybean Meal (CBT)</b> -100 tons, \$ per ton						
May	296.50	299.50	295.60	<b>298.30</b>	2.00	180,648
July	297.70	299.60	▼ 296.20	<b>296.50</b>	-1.00	87,877
<b>Soybean Oil (CBT)</b> -60,000 lbs., cents per lb.						
May	25.01	25.90	24.97	<b>25.24</b>	.25	174,722
July	25.36	26.22	25.32	<b>25.59</b>	.25	108,285
<b>Rough Rice (CBT)</b> -2,000 cwt., \$ per cwt.						
May	1361.50	1406.50	▲ 1358.00	<b>1395.00</b>	33.50	8,185
July	1352.00	1385.50	▼ 1348.50	<b>1376.00</b>	33.50	839
<b>Wheat (CBT)</b> -5,000 bu., cents per bu.						
May	496.25	506.50	494.50	<b>499.25</b>	1.25	170,338
July	498.25	507.00	496.00	<b>500.00</b>	5.00	105,947
<b>Wheat (KC)</b> -5,000 bu., cents per bu.						
May	422.75	438.75	420.25	<b>432.25</b>	8.50	127,653
July	430.00	444.75	427.50	<b>438.00</b>	7.00	70,891
<b>Cattle-Feeder (CME)</b> -50,000 lbs., cents per lb.						
March	109.675	115.250	109.675	<b>113.550</b>	5.050	2,531
May	111.025	116.725	110.525	<b>111.850</b>	1.875	14,746
<b>Cattle-Live (CME)</b> -40,000 lbs., cents per lb.						
April	94.050	96.350	94.000	<b>96.350</b>	4.500	58,324
June	87.300	89.750	87.050	<b>89.750</b>	4.500	125,718
<b>Hogs-Lean (CME)</b> -40,000 lbs., cents per lb.						
April	55.500	58.475	55.500	<b>58.475</b>	4.500	47,717
June	67.475	71.300	67.275	<b>70.425</b>	3.625	81,839
<b>Lumber (CME)</b> -110,000 bd ft., \$ per 1,000 bd ft.						
May	318.50	318.50	▼ 305.30	<b>310.00</b>	-15.00	1,650
July	323.00	328.20	▼ 314.80	<b>319.10</b>	-12.80	611
<b>Milk (CME)</b> -200,000 lbs., cents per lb.						
March	16.34	16.36	16.32	<b>16.33</b>	-0.03	2,915
April	15.86	16.05	15.85	<b>15.99</b>	-0.01	2,920
<b>Cocoa (ICE-US)</b> -10 metric tons, \$ per ton						
May	2,315	2,325	▼ 2,249	<b>2,318</b>	-13	85,755
July	2,327	2,327	▼ 2,260	<b>2,313</b>	-17	54,575
<b>Coffee (ICE-US)</b> -37,500 lbs., cents per lb.						
March	104.40	104.40	102.80	<b>102.90</b>	-1.00	169

Interest Rate Futures						
	Open	Contract High	Low	Settle	Chg	Open interest
<b>Ultra Treasury Bonds (CBT)</b> -100,000,000; pts 32nds of 100%						
June	224.000	224.200	204.140	<b>211.060</b>	-12.000	1,129,144
<b>Treasury Bonds (CBT)</b> -100,000; pts 32nds of 100%						
March	181-010	181-080	172-220	<b>175-000</b>	-7-11.0	4,754
June	181-100	181-190	171-010	<b>173-200</b>	-7-14.0	1,179,890
<b>Treasury Notes (CBT)</b> -100,000; pts 32nds of 100%						
March	140-000	140-005	135-130	<b>136-020</b>	-2-00.0	9,340
June	138-025	138-040	135-030	<b>135-285</b>	-2-02.5	3,689,076
<b>5 Yr. Treasury Notes (CBT)</b> -100,000; pts 32nds of 100%						
March	124-012	124-050	123-022	<b>123-125</b>	-24.5	24,380
June	124-270	124-287	123-147	<b>123-307</b>	-7-2.4	4,364,561
<b>2 Yr. Treasury Notes (CBT)</b> -200,000; pts 32nds of 100%						
March	109-259	109-285	109-200	<b>109-211</b>	-7.3	52,888
June	110-040	110-045	109-245	<b>109-270</b>	-9.0	3,230,785
<b>30 Day Federal Funds (CBT)</b> -55,000,000,100-day; avg						
March	99.350	99.360	99.300	<b>99.3275</b>	-0.175	252,407
April	99.850	99.900	99.870	<b>99.880</b>	-0.150	361,000
<b>10 Yr. Del. Int. Rate Swaps (CBT)</b> -100,000; pts 32nds of 100%						
June	104-165	104-285	102-010	<b>103-040</b>	-1-18.0	69,658
<b>Eurodollar (CME)</b> -1,000,000; pts of 100%						
April	99.3850	99.5350	99.2200	<b>99.2450</b>	-1-425	301,302
June	99.6150	99.6600	99.5050	<b>99.5300</b>	-0-850	1,716,574
Sept	99.6800	99.7100	99.5800	<b>99.6150</b>	-0-600	1,391,160
Dec	99.6350	99.6550	99.5200	<b>99.5700</b>	-0-600	1,135,591
<b>Currency Futures</b>						
<b>Japanese Yen (CME)</b> -¥12,500,000; \$ per 100¥						
April	9453	9464	9301	<b>9296</b>	-0.153	927
June	9511	9511	9316	<b>9317</b>	-0.163	126,236
<b>Canadian Dollar (CME)</b> -CAD100,000; \$ per CAD						
March	7144	7160	▼ 7076	<b>7097</b>	-0.051	58,548

Index Futures						
	Open	Contract High	Low	Settle	Chg	Open interest
<b>Mini DJ Industrial Average (CBT)</b> -\$5 x index						
March	21380	21380	▼ 19872	<b>20966</b>	567	48,134
June	20252	21248	▼ 19736	<b>20860</b>	599	39,352
<b>S&amp;P 500 Index (CME)</b> -\$250 x index						
March	2614.00	2703.00	2490.00	<b>2495.50</b>	79.30	109,967
June	2420.80	2542.75	▼ 2372.60	<b>2485.50</b>	80.20	5,590
<b>Mini S&amp;P 500 (CME)</b> -\$50 x index						
March	2417.25	2542.50	2365.00	<b>2495.50</b>	79.25	2,204,572
June	2407.00	2542.75	▼ 2352.00	<b>2485.50</b>	80.25	2,156,542
<b>Mini S&amp;P Midcap 400 (CME)</b> -\$100 x index						
March	1345.80	1414.00	1297.90	<b>1405.70</b>	108.50	34,504
June	1330.90	1408.10	1288.10	<b>1399.20</b>	111.10	59,957
<b>Mini Nasdaq 100 (CME)</b> -\$20 x index						
March	7053.00	7522.25	6948.75	<b>7405.25</b>	347.75	156,771
June	7036.25	7537.00	6931.25	<b>7392.25</b>	351.75	124,182
<b>Mini Russell 2000 (CME)</b> -\$50 x index						
March	1032.00	1107.50	1006.40	<b>1090.60</b>	58.20	262,100
June	1027.30	1102.10	999.90	<b>1085.60</b>	59.10	357,687
Sept	1105.00	1136.00	1133.50	<b>1080.60</b>	42.20	12
<b>Mini Russell 1000 (CME)</b> -\$50 x index						
March	1346.40	1391.10	▼ 1294.00	<b>1385.60</b>	79.20	5,048
June	1362.00	1371.00	1325.00	<b>1382.10</b>	76.70	7,743
<b>U.S. Dollar Index (ICE-US)</b> -\$1,000 x index						
Sept	98.23	100.08	▲ 98.11	<b>99.80</b>	1.65	22,973
Sept	98.53	99.96	▲ 98.49	<b>99.72</b>	1.54	518

Source

## BANKING &amp; FINANCE

## Market Recession Suggested

Money managers talk of two-week shutdown in call with new Bank of England governor

By JUSTIN BAER

Executives from some of the biggest asset managers told the Bank of England's new governor on Monday that financial markets should close for two weeks as the world confronts the coronavirus pandemic, people familiar with the matter said.

Speaking on a conference call with Bank of England Gov. Andrew Bailey, several executives raised the possibility of a shutdown during a wide-ranging discussion on the state of the markets and the financial-services industry. A majority of those on the call, though, said they didn't think shuttering the markets would help address the deepening crisis, the people said.

Mr. Bailey, who began his term as governor on Monday, held the call with senior executives from some of the world's biggest asset managers, including Vanguard Group, BlackRock Inc., JPMorgan Chase & Co. and Bank of New York Mellon Corp., people familiar with the matter said.

It couldn't be learned which asset manager executives



Gov. Andrew Bailey this week.

wanted to close the markets and which didn't.

Steven Mnuchin, the U.S. Treasury secretary, said Tuesday that the White House plans to keep financial markets open, though "we may get to a point where we shorten the hours." He said he had discussed the markets with bank executives and officials at the New York Stock Exchange, and "everybody wants to keep it open."

The NYSE and other U.S. stock markets closed in 2012 as the East Coast contended with superstorm Sandy, and in the aftermath of the September 2001 terrorist attacks.

On the call with Mr. Bailey, the executives delivered a grim assessment of the credit markets and urged the central bank to take additional steps to support the banking system

as it confronts the fallout from the pandemic.

Many riskier securities, including junk bonds and emerging-market debts, were now near impossible to trade, they said. They recommended steps that would make it easier for companies and other issuers to refinance their debts.

U.S. stocks fell sharply on Monday, with the Dow Jones Industrial Average posting its second-worst day in the benchmark's history. Trading was halted for 15 minutes shortly after the opening bell, marking the third time in six sessions that a selloff had triggered the marketwide circuit-breaker. On Tuesday, the benchmark stock indexes regained some of those declines.

The yield on the 10-year U.S. Treasury note rose to 0.870%, from 0.722% Monday. The U.S. government bond market has been unusually volatile in recent days, reflecting investors' growing anxiety as well as the liquidity constraints surfacing in various corners of the market amid the broader rout.

Spreads on corporate bonds, or the extra yield investors demand over Treasury, has been increasing at an unprecedented speed, Morgan Stanley analysts said.

On Monday's call with the asset management executives, Mr. Bailey acknowledged the

need for central banks to address the markets' liquidity needs and the challenges posed by traders working from home as governments seek to contain the virus's spread, people familiar with the matter said.

Working outside their trading floors had further diminished the banks' appetite for taking on risk, the executives said.

The Federal Reserve said Sunday it had adjusted a program with other central banks, including the Bank of England, to make U.S. dollars available overseas at near-zero interest rates.

On Monday, the Fed unleashed a series of additional moves to stabilize markets, slashing the benchmark interest rate to near zero and agreeing to buy \$700 billion in Treasury and mortgage-backed securities. And on Tuesday, the Fed said it would establish a lending facility to help support short-term commercial debt.

On Monday's conference call, the executives told Mr. Bailey that most mutual funds weren't yet facing a stampede of outflows from either big institutional clients or individual investors, and the continuing stability of those assets under management was critical to their industry's health.

—Andrew Restuccia contributed to this article.

Spreads on three-month cross-currency basis swaps on each currency vs. the dollar



Notes: As of 1 p.m. ET March 17. More deeply negative spreads indicate a higher cost for borrowing dollars using euros and yen. Source: Refinitiv

## Dollar Surges as Investors Shelter From Disruption

By CAITLIN OSTROFF AND JOE WALLACE

The U.S. dollar surged against major currencies as stress in the market for dollar funding outside the U.S. worsened before the Federal Reserve stepped in on Tuesday to boost support for the short-term money market.

The dollar rose against most currencies Tuesday, an unusual flight that is normally only seen in the most stressful market periods. It climbed more than 1% against the euro and British pound. It advanced similarly against the yen and the Swiss franc, currencies that tend to strengthen—not weaken—in times of market turmoil. The dollar has only risen more than 1% against those currencies three times over the past six years, according to Dow Jones Market Data.

Such breakdowns in normal trading patterns reflect an intensification of concerns about how the financial system, which in good times knits banks and companies seamlessly across borders, is weathering the economic impact of the coronavirus pandemic.

"You can see a scramble for short-term dollar liquidity," said Kit Juckes, a strategist at Société Générale. Mr. Juckes drew a parallel with the way people rushed to buy off-the-shelf medicines ahead of potential quarantines: "There isn't a shortage but there are clearly some people who need dollars right now and the system will take some time to cope."

The Fed said Sunday that it had adjusted a program with five other central banks to make U.S. dollars available overseas at near-zero interest rates using so-called swap lines. The move didn't ease pressure in the offshore market.

The spread on three-month euro-dollar basis swaps, a contract that enables traders to hedge risk when they lend in one currency and borrow in another, had expanded early Tuesday to minus 1.10 percentage points, its widest level since at least 2012. That indicated that the cost of borrowing dollars had jumped for banks and investors. A measure of yen-dollar swaps was similarly wide.

After the Fed said Tuesday that it would establish a lending facility to support commercial-paper markets, the spread on three-month euro-dollar basis swaps eased to minus 0.36 percentage points. The Fed's latest move is geared to helping companies raise cash by issuing short-term loans, and preventing funding strains from accelerating economic damage following the coronavirus outbreak.

A version of the funding facility was last used during the 2008 financial crisis. "The Fed is effectively backstopping this market," said Gennadiy Goldberg, a senior U.S. rates strategist at TD Securities.

A negative spread measures the cost of borrowing dollars using euros or yen as collateral. Analysts said a rush to secure dollars could continue as the coronavirus pandemic throws business operations into disarray, prompting companies to draw down credit lines in preparation for an extended period of disruption.

The swap lines, which the Fed used aggressively in the 2008-09 financial crisis to

make sure banks in different jurisdictions didn't run short of dollars, were made permanent in a 2013 agreement with the European Central Bank, Bank of Japan, Bank of England, Bank of Canada and Swiss National Bank. They have rarely been tapped since the end of the acute phase of the eurozone debt crisis in 2013.

To encourage overseas banks to finance themselves in dollars using these swap lines, the Fed said the interest rate would be cut by a quarter of a percentage point. The maximum length of time for which banks could borrow using the lines has also been extended from one week to 84 days.

A key question is whether these new terms help banks overcome the stigma attached to sourcing funds using a crisis-era tool.

That appeared to be the case in Japan on Tuesday, when banks borrowed \$32.3 billion from the Bank of Japan in the first tender using these retooled swap lines. Almost all of those funds, or \$30.3 billion, were lent at the longest 84-day maturity. The European Central Bank is due to conduct a dollar-funding tender Wednesday.

Because the cost of borrowing dollars using yen increased after the Bank of Japan tender, the Fed may need to take further action to soothe offshore funding markets, said Sam Lynton-Brown, a strategist at BNP Paribas. "The measure of success of these policies is not how much is withdrawn but

The yen and Swiss franc, usually strong in times of market turmoil, lost ground.

the market impact of those withdrawals," he said.

While these sweetened conditions will give overseas banks better access to U.S. dollars, it won't help companies who usually raise cash by issuing short-term debt in the commercial-paper market. Before the Fed's announcement Tuesday, that corner of the financial system had frozen, said Athanasios Vamvakidis, head of foreign-exchange strategy at Bank of America Global Research.

"There is demand for dollar liquidity everywhere. The swap lines are addressing the demand for the banking sector. Many companies were not using the banking sector for their liquidity," Mr. Vamvakidis said.

The Bank of England set up additional swap lines with the ECB in preparation for any market disturbance caused by Brexit. It has been drawing on this and other tools in the present turmoil, including cutting rates for its three-month dollar swap line facilities, to try to steady markets, the Bank of England said Sunday.

If the cost of borrowing dollars remains elevated, it could prompt Japanese banks to sell some of the large holdings of U.S. fixed-income assets they have accumulated over the past decade, said Dom White, chief economist at Absolute Strategy Research. Japanese banks use cross-currency swaps to help fund these trades.

—Anna Isaac and Pat Minzeski contributed to this article.



Bonds due in 2027 backing casino giant Wynn Resorts are down more than 25 cents this year to 77 cents on the dollar.

## New Risk Added to Corporate Bonds

By SEBASTIAN PELLEJERO

Investors are racing to find winners and losers in the corporate-bond market as the coronavirus wreaks havoc on the markets.

They are demanding far greater returns for holding corporate debt, particularly for companies dependent on tourism or travel. The spread, or extra yield that investors demand over Treasury bonds to hold corporate debt, has been increasing at unprecedented speed, according to Morgan Stanley analysts.

But there are pockets of winners, too, including debt for health-care and technology companies.

The spread on investment-grade corporate bonds rose 0.72 percentage point last week and 1.23 percentage points this year, to 2.16%, according to Bloomberg Barclays data. Investors view bond spreads as an important indicator of the economy's health.

"Recession risks are now clearly elevated, and we expect

that there will be a hit to U.S. growth," said Anwiti Bahuguna, head of multiasset strategy at Columbia Threadneedle Investments. "If the spread of the coronavirus disrupts demand for a prolonged period beyond the next two months, the impact on growth will be more significant."

Some investors view the higher spreads as a chance to jump into corporate bonds for bigger returns, even if the potential risk is bigger, too. They believe spreads have been too tight in recent years, with investors not demanding enough.

"There's more risk priced in, but we're seeing the market at much more attractive spreads," said Oleg Melentyev, strategist at Bank of America Corp., who now sees the corporate-bond market pricing a 90% chance of recession.

Some sectors are struggling more than others. The coronavirus is hampering tourism and travel world-wide. **Royal Caribbean Cruises Ltd.** bonds due in 2022 are down more than 30 cents on the dollar this year, to

around 73 cents, according to MarketAxess.

At the same time, oil prices are plunging, a decline sparked by a feud between Saudi Arabia and Russia.

Some energy companies are faring better than others. Bonds due in 2022 backing **Pioneer Natural Resources Co.**, which extracts crude from the ground and sells it to refiners, are down around 9 cents on the dollar this year, to 96.397.

**Whiting Petroleum Corp.** bonds due in 2021 are down more than 94 cents this year, to 23.5 cents. **Apache Corp.** bonds due in 2028 are down more than 33 cents to 71 cents.

Overall, speculative-grade bond spreads over Treasuries are up 3.91 percentage points this year as of Friday, to 7.27%. More than 55% of speculative-grade corporate bonds trading below 80 cents on the dollar are tied to the energy sector, according to CreditSights. Telecommunications is second, followed by gambling. Satellite operator **Intelsat**

SA speculative-grade bonds due in 2023 have fallen more than 16 cents on the dollar this year as of Tuesday, to 70 cents. Bonds due in 2027 backing casino giants **Penn National Gaming Inc.** and **Wynn Resorts Ltd.** are down more than 25 cents over the same period, to 75.75 and 77 cents, respectively.

Sectors that have remained relatively resilient include health care and technology, with both industries providing crucial services to Americans dealing with the coronavirus pandemic. Bonds due in 2025 backing the pharmaceutical maker **Novartis International AG** are barely changed this year at 99.226. **International Business Machines Corp.** bonds due in due in 2022 are also roughly flat, at 101.693.

Investors sold government debt Tuesday as stocks climbed amid proposals for fiscal spending to relieve economic pressure from the coronavirus. The yield on the benchmark 10-year Treasury was up 0.272 percentage point at Tuesday's close, to 0.994%.

## Relief Planned if Trading Shifts to Homes

By PAUL KIERNAN

WASHINGTON—Regulators are preparing for the likelihood that trillions of dollars of financial-market activity may soon move from high-tech exchanges and corporate offices to homes across America.

The web of financial regulations set up after the 2008 financial crisis sought to leave banks better prepared to weather a downturn and bring transparency to derivatives markets. But one thing lawmakers and regulators didn't anticipate was social distancing in response to a pandemic.

The Commodity Futures Trading Commission is preparing a blitz of short-term regu-

latory relief that officials hope will allow derivatives markets to continue operating smoothly even if participants are ordered to work from home, according to CFTC officials familiar with the plans.

The first set of no-action letters—in which regulators inform market participants that they won't enforce certain rules—is expected Tuesday.

In it, the CFTC plans to allow trading venues, banks, brokers and other parties to skip certain record-keeping requirements until June 30 if they work from home. Under normal circumstances traders must have systems in place to record phone calls in which trades are executed, as well as

timestamps for derivatives transactions. Because they are unlikely to have access to recorded phone lines and other systems in their homes, the CFTC will allow traders to keep manual records of transactions.

Other measures include extending certain filing deadlines. Derivatives brokers will have 120 days after their firms' fiscal year ends to file annual compliance reports, rather than the usual 90, officials say.

The CFTC is also considering allowing a 30-day extension to annual compliance-report deadlines for swap-execution facilities, in which many swaps are traded, and possibly for designated contract markets, in which futures

and options change hands.

The CFTC also plans to spare a national bank, which officials didn't name, from having to register as a major swap participant as a result of its increased hedging activity.

Finally, brokers who normally work the floors of trading venues won't have to file separate registration paperwork to do their jobs off-site, according to the terms of a no-action letter expected to be issued Tuesday. Dozens of market participants, faced with the prospect of lockdowns in financial hubs such as New York, have notified the CFTC that they have activated business-continuity plans, and officials expect more to follow.

MARKETS

# Utilities Make the Biggest Comeback

By GUNJAN BANERJI

Utilities stocks recorded their largest one-day percentage gain since 2008, rebounding from painful losses Monday, when the segment recorded its biggest fall ever. The sector jumped 13.1% Tuesday, far outperforming the broader index's 6% rise. It was the best-performing of the S&P 500's 11 groups.

Investors often turn to utilities shares during market turmoil because the companies provide services like electricity and water, which people need regardless of what's going on in the broader economy.

They are drawn to steady returns from the companies' dividend payments. The dividend yield on the sector has climbed to the highest level of the year, FactSet data show, hovering at 3.9% as of Monday, well above the yield on the S&P 500. At the start of the year, the dividend yield on the sector was about 3%.

Meanwhile, Treasury yields have plumbed fresh lows in recent weeks as investors have sought the relative safety of government bonds.

That has left many investors hungry for returns at a time when stocks have erased much of their recent gains and the likelihood of a recession has risen.

Utilities stocks have still suffered alongside other shares during one of the most tumultuous periods in the stock market's history. The sector fell Monday to its lowest level since June 2018.

With Tuesday's gains, the group has fallen 11.5% this year, outperforming the S&P 500's 21.7% fall, FactSet data show.

# JPMorgan Probed on Treasuries

Continued from page B1

Prosecutors and regulators have relied on detecting such trading patterns in data they obtain from futures-exchange owner CME Group Inc. Trading in Treasury securities has similarly moved to electronic venues—one owned by CME—although trading remains more dispersed than in futures, said James Angel, a finance professor at Georgetown University.

Unlike futures, which the CFTC oversees, no single regulator monitors trading in Treasury securities, which is considered the world's deepest and most-liquid bond market. Almost 75% of the \$623 billion in average daily volume in February was traded electronically, according to Greenwich Associates research.

A move to examine trading practices in Treasury securities would be a big step in a market that has historically had little transparency, said Kevin McPartland, head of market structure and technology research at Greenwich.

"The CFTC has oversight of the futures market, full stop," Mr. McPartland said, "whereas the government has always taken a light touch to the markets for trading its own debt."

The CFTC's spoofing law doesn't apply to trading in Treasury securities, which is covered by different antifraud laws enforced by the Justice Department and Securities and Exchange Commission. While the CFTC has brought enforcement cases against banks over spoofing in Treasury futures, only the DOJ and SEC can police the trading of Treasury bonds, bills and notes.

Some traders say it is likely harder to manipulate secondary-market prices in U.S. Treasuries, because order sizes on the electronic networks, which serve banks and the largest proprietary trading firms, are larger than in stocks and futures.

"It is going to be a lot harder for the government to catch spoofers in the cash Treasury market than in the futures market," Mr. Angel said.

# Investors Bet on Decline in Volatility

Tactic can backfire when stocks fall as sharply as they have in recent weeks

By GUNJAN BANERJI

The Cboe Volatility Index, or VIX, closed at its highest level in history Monday when U.S. shares recorded the steepest decline since the Black Monday stock-market crash of 1987. Some investors are already betting on its rapid fall.

The volatility gauge tends to rise when markets fall and investors

reach for stock protection through options.

The VIX climbed to 82.69 Monday, topping its high of about 80 in 2008. After the financial crisis, trading derivatives tied to the VIX took off as people sought to profit from its swings. The gauge fell 8% to 76 on Tuesday.

Many are wagering its recent jump won't be long-lived. Betting on its fall through what is known as the short volatility trade has been particularly popular in recent years. This can be a risky tactic that backfires when stocks slide as sharply as they have in recent weeks as the coronavirus has raised the risk of a recession.

As stock markets rebounded Tuesday, some of the most popular contracts were tied to VIX falling to 27 or 14, Trade Alert data show, closer to levels hit earlier this year when major indexes hit records.

Still, turbulence in markets has been high, triggering diverging views on the gauge's path. Analysts at Credit Suisse Group AG said another steep selloff similar to Monday's could push the VIX above 100. The S&P 500 fell 12% that day, one of the worst sessions ever.

Some options traders have already been positioning for that, scooping up contracts tied to the

VIX jumping as high as 100 or even 130, Trade Alert data show. Those are among the smaller positions outstanding but were some of Monday's most popular trades, according to Trade Alert.

Cboe Global Markets Inc., which oversees VIX options trading, has added new strike prices during the recent market tumult. Cboe added options with a strike of 100 on March 2 and more strikes were added the following week, a spokeswoman for the exchange said.

"While this is surely possible, we believe it is highly improbable," wrote Jonathan Golub, an analyst at Credit Suisse.

Cboe Volatility Index



# Oil-Price Battle Chokes Servicers

By RYAN DEZEMBER

Shares of companies that help energy producers get oil and gas out of the ground have become collateral damage in the global oil-price war.

Firms that own drilling rigs, manufacture oil-field tools and manage the fleets of pumper trucks that blast open shale wells are caught in the three-way battle for market share between Saudi Arabia, Russia and the North American oil industry. The coronavirus pandemic's startling destruction of oil demand doesn't help.

Plunging oil prices portend a steep decline in drilling activity and dim prospects for oil-patch contractors and equipment suppliers. Investors, who have suffered years of losses with oil-field-service stocks, are in full flight.

Global oil-field-service giants Halliburton Co., Schlumberger NV and Baker Hughes Co. have each lost more than half of their stock-market value since the start of the year. Ditto for drilling-rig owners Helmerich & Payne Inc., Patterson-UTI Energy Inc. and Transocean Ltd.

The PHLX Oil Service index, which tracks shares of 15 big service firms, has fallen to the lowest level since it was launched in 1997. It is down 69% this year, compared with the broader S&P 500's 22% decline.

"With the dramatic moves in oil prices, the near-term outlook for oil field service companies has become incredibly uncertain," Raymond James analysts wrote in a note to cli-

Index performance



Source: FactSet

ents on Friday. The analysts removed Oil States International Inc. from their list of top stock recommendations. Shares of the Houston company, which makes and rents drilling equipment, lost 51% last week and are down 88% this year.

"Companies like Oil States are highly levered to commodity prices, and rapid changes like the ones seen in recent sessions can lead to customers cutting activity faster than Oil States can rationalize its cost footprint," the analysts wrote.

The cuts came fast and furious. Apache Corp. said it would pull all of its rigs out of the Permian Basin in West Texas and curtail activity in Egypt and the North Sea.

Ovintiv, formerly Encana Corp., said it would cut loose 10 rigs immediately and six more



Oil around \$30 probably means \$100 billion less spending by exploration and production companies this year.

in May. Bonanza Creek Energy Inc. will release the last rig it has running once the crew finishes its current job in Colorado.

Evercore ISI analysts tallied \$2.5 billion of oil-field sales that evaporated in a 24-hour span last week when producers announced austerity measures like those in response to Saudi Arabia's promise to flood the market with cheap crude and punish Russia for not going along with the kingdom's plan to fix prices higher.

The main U.S. crude benchmark ended Friday at \$31.73 a

barrel, well off February's \$50 range, which was already pushing straining producers. Prices have kept falling, ending Tuesday at \$26.95.

Oil prices around \$30 probably mean \$100 billion less spending by exploration and production companies this year, according to Rystad Energy SA. The industry consulting firm estimates that as much as two-thirds of the cuts will come from American shale producers.

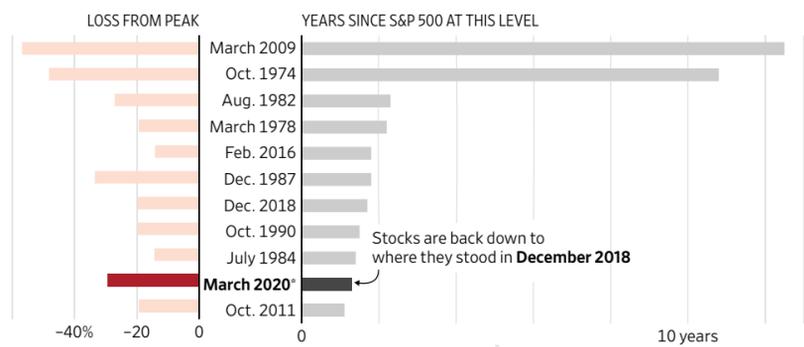
Service companies have been squeezed since oil prices plunged in late 2014, when the Saudi-led Organization of the

Petroleum Exporting Countries took aim at the shale industry and turned on the taps. "The North American service industry was already at extremely low pricing levels for most product lines, and there's not much more to give," said Evercore's James West.

Nearly 200 companies have filed for bankruptcy protection since 2015, according to law firm Haynes & Boone LLP. Goldman Sachs Group Inc. analysts predict that between consolidation and bankruptcy, the number of service companies could shrink by 30% or more.

## Years of Solitude

Big falls in the past have wiped out many more years of gains, but this time stocks have fallen faster than in most previous short-lived drops.



Note: Including most years lost by falls since 1962. Sources: Refinitiv (loss); Refinitiv, Prof. Robert Shiller (years)

# Markets Could Get Much Worse

Continued from page B1 ready a severe loss. But easy come, easy go, and last year was a stonker for stocks. In terms of time, giving up just under 15 months' of gains isn't even as bad as the 2016 correction, which took prices back to where they stood in 2014.

The similarities to the worst cases of the past are both worrisome and reassuring.

Start with the bad news. Stocks had risen a lot, for a long time, fueled in large part by cheap money from the Federal Reserve and heavy corporate borrowing. If that sounds like 2008 or 1929, it should. The crucial differences this time are that the banks are in much better shape and the central banks

are alert to the need to protect the financial system.

Stocks this time also ignored a weak economy and geopolitical troubles. They did the same during the bull run from the aftermath of the panic of 1907 until they fell back to the same level in 1920. The 1974 oil crisis had an opposite move in the oil price to the recent fall. But it provided the supply shock that this time is resulting instead from the coronavirus-induced shutdown of business.

There is one positive precedent from the past. When stocks crashed in October 1987 they also reversed a massive rally, and only fell back to where they stood in February 1986, before recovering to end the year up (though still far below their peak). Unfortunately, 1987 was a crash created by the market, not a fall induced by genuine problems in the economy. The troubles today are all about real difficulties for companies.

Instead, the best hope is that governments apply fiscal measures to shield business

and investors from some of the costs of the shutdown of big parts of the economy until the worst of the virus passes or a vaccine is developed.

Announcements of government support for business have been coming thick and fast, and the White House is discussing an economic rescue plan even bigger than the Obama stimulus of 2009. But many of the largest efforts, including those in France, Germany and the U.K., mainly involve cheap loans to tide companies through, not the cold hard cash that those near the edge need. There is a lot more talk of support, as with the Group of Seven statement on Monday, than actual money.

I expect governments will step up and provide more support to business, not just loans, as escalating corporate layoffs and bankruptcy warnings overcome political differences. But it would be easy for stocks to get a lot worse and give back a lot more of their decade-plus bull run before the money arrives.

# Stocks Rise In Turbulent Trading

Continued from page B1

tember 2008. The U.S. government-bond market has been unusually volatile in recent days, reflecting investors' growing anxiety as well as the liquidity constraints surfacing in various corners of the market amid the broader rout.

All 11 sectors of the S&P 500 rose Tuesday, led by groups that are seen as relatively safer. Utilities gained 13%, and consumer staples added 8.4%. Among individual companies, shares of Clorox Co. gained \$23.19, or 13%, to \$197.88. The maker of cleaning and other products has been one of the S&P 500's top performers over the past month.

Some economists have said U.S. households, businesses and investors should brace for a sharp downturn in the first

half of 2020 and hope for a rebound during the last six months of the year. Others have said the fallout from the rapidly moving health crisis is hard to predict.

"We have no idea whatsoever how this is going to turn out, economically, socially," said Peter Dixon, an economist at Commerzbank.

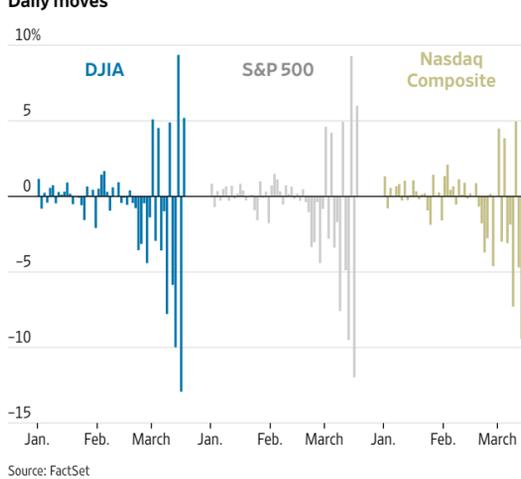
U.S. dollar surged against major currencies Tuesday as its availability outside the U.S. appeared constrained. The WSJ Dollar Index rallied 1.4%.

Brent crude futures, the global oil benchmark, dropped 4.4% to \$28.73 a barrel.

The focus for many investors is now on any fresh data on the pandemic's spread and damage, as well as policy measures that are likely to be taken to counter the economic fallout, said Esty Dwek, head of global market strategy at Natixis Investment Managers.

"The markets just don't know how negative an economic scenario they need to price in," said Ms. Dwek. "For some people, an economic recession is a foregone conclusion, and how deep the recession will be is the question."

Daily moves



Source: FactSet

# HEARD ON THE STREET

FINANCIAL ANALYSIS & COMMENTARY

## Oil May Drive Past Rebound Signal

Historical sign of recovery is likely to be overpowered by virus and Russian-Saudi dispute

How low can it go? In recent years, the oil price has stabilized soon after dipping below the cash costs faced by the most expensive producers. This time the signal isn't so clear.

Brent oil futures fell below \$30 a barrel Monday, well under the \$37 mark at which the price of crude is no longer sufficient to cover the operating expenses and production taxes of higher-cost producers, according to research and brokerage firm Bernstein.

Producers with lower cash costs are still likely to lose money on paper. Once a well is online, however, or a big project is far enough along toward completion, companies will keep pumping. It is when prices fall below the direct cash costs of raising another barrel that many will consider shutting production. Prices rebounded within one quarter after breaching this threshold in 2008, 2015 and 2016, according to Bernstein.

This time, there is much more to consider. While prior shocks were caused by too much supply or insufficient demand, the current situation combines both. Saudi Arabia and Russia, respectively, low- and moderate-cost producers, began a ruinous war for market share just as global demand faced its most rapid collapse ever from the coronavirus pandemic.

The only modern example that compares is the 1997 Asian debt crisis that crimped demand just as the Organization of the Petroleum Exporting Countries raised production. Prices fell to around \$10 a barrel and didn't recover until six quarters after they dropped below the marginal cash cost.

This time looks worse on both the supply and demand side. There

is also a fresh twist. Neither Moscow nor Riyadh look likely to back down soon, but the newly crowned top producer in the world, the U.S., has no oil minister calling the shots. Operators of America's prolific shale fields can't possibly drill a well profitably at these prices, and won't. Those wells already producing will continue to pump even if their owners enter bankruptcy, as they did in 2016, but shale has a precipitous decline rate. Drilling activity already was muted in late 2019, so it may only be a matter of months before U.S. output begins a rapid drop.

Squeezing shale producers who have enjoyed the higher prices supported by recent OPEC+ production cuts appears to be part of Russia's plan. Its leaders also value market share and power and have memories of the part low oil prices played in the collapse of the Soviet Union in the late 1980s.

Russia plans to add an additional 500,000 barrels a day to supply from April, and the Saudis about two million. Others could follow suit. Inventories will build and likely continue to depress prices after the war for market share ends.

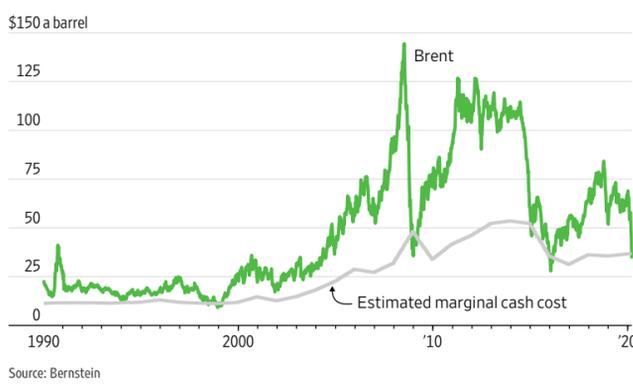
It will take a while to work through that supply. The pandemic is unpredictable but has already hit trade, travel and the wider economy hard. A prolonged price war and global recession could lead to a daily surplus of as much as 10 million barrels for a few months, generating a total glut of around 1 billion barrels by the summer, according to research firm IHS Markit. Low prices could buoy the eventual economic recovery, but for energy producers it will be brutal.

High-cost producers are likely to



Russia plans to add an additional 500,000 barrels a day to supply from April. A Russian oil field.

Price rebounded quickly after touching marginal cash cost in recent times, but recovery took longer in 1998.



Source: Bernstein

be squeezed hard. As margins are squashed, costs can be trimmed and wells coming online can add some cash flow, but it is balance sheets that are crucial: low gearing (defined as net debt as a percentage of total capital) will help; and

producers with more discretionary than committed capital expenditures will have greater scope to conserve cash. In the extreme, dividends could be issued in script or suspended.

Integrated majors are leaner af-

ter the 2014-2016 price rout so they will need to be creative. U.S. shale producers are expected to struggle given their high levels of debt, though Washington is considering some relief. Russian officials have said they have sufficient foreign exchange reserves for a decade of prices under \$30 a barrel.

At its full-year results Monday, the Saudi Arabian Oil Company also assured investors it could withstand sustained \$30 oil prices. It has plentiful low cost reserves and low gearing (though acquiring SABIC will raise it) but it is the national balance sheet that is most important. Riyadh captains Aramco, relies on its income and spends more than it earns, but the kingdom can hold out, for a while.

It is a hostile environment for all oil producers. Politics is trumping economic signals, and all are watching Russia and Saudi Arabia. Investors looking for an oil-price inflection point likely still have quite a wait. — Rochelle Toplensky



Volkswagen has shifted into cash-conservation mode

## VW Is Better Built For a Crash Than Most

The severity of the Covid-19 pandemic in Europe is a huge test for Volkswagen, the local market leader. In reality, though, it is one of the more fortunate ones.

In a press conference Tuesday to discuss its 2019 financial results, the world's largest car maker by sales said it was "almost impossible to make a reliable forecast" for the current year and didn't give formal financial guidance. But Chief Financial Officer Frank Witter did give investors a rough read on the current quarter: The all-important operating margin will likely fall by at least half from its 8.1% level in the same period last year.

Volkswagen had already been hit by the coronavirus crisis in China, where it is also the market leader. In January and February, its global sales were down roughly 15% compared with the same period of 2019 as the country closed for business. Now China is slowly ramping back up and consumers are returning to showrooms, but Europe is moving into lockdown to fight the virus.

Car makers hemorrhage money when their production lines aren't running. As it moves to shutter its European factories, Volkswagen—one of the world's largest private-sector employers, with roughly 671,000 staff—has shifted into cash-conservation mode.

Chief Executive Herbert Diess

insisted that its big investments in electric vehicles wouldn't be delayed. But other plans, such as acquisitions in the pipeline, might be. The company's heavy-truck unit Traton, which owns roughly 17% of U.S. peer Navistar International, made a \$2.9 billion bid for the remaining shares in late January. Navistar stock is now 35% below Traton's bid, suggesting that investors don't expect the deal to go ahead on existing terms.

Mercifully, Volkswagen is starting from a position of strength, having been given a big kick in the pants more than four years ago by the diesel-emission fraud. Last year, a 22% increase in operating profit, lower diesel-related fines and legal bills and a big reduction in inventories all pushed its net cash flow up to €10.8 billion (\$12.04 billion), from an outflow of €300 million in 2018. Even after more than €31 billion in provisions for "dieselgate" since 2015, Volkswagen ended 2019 with €21.3 of net cash or close equivalents, excluding its banking activities.

In the evolving European shutdown, that cash will be all-important

The company was wounded early in the unfolding coronavirus crisis. Much remains uncertain, but it could also be easier than most to recover.

—Stephen Wilmot

## OVERHEARD

Adjusting to social distancing is a major challenge for all of society. This is especially true for sports gamblers, who are seemingly left with nothing to bet on until the world begins to return to normal.

The U.S. likes to gamble on sports, legally or otherwise, and it doesn't seem likely there will be many options in the immediate future.

Online sports book Bovada has a solution to the boredom: It is allowing patrons to wager on the weather.

Gamblers can bet on Tuesday whether or not the high temperature for Wednesday in a host of North American cities will exceed the casino's projection. If you have a strong point of view that Houston will top 81 degrees on Wednesday, today might be the day to start a hot streak.

The thrill of competition might not exactly translate to intently watching the sundial at midday, so Bovada allows betting on overnight-low temperatures as well. Gamblers can sleep through the "game" or wake up in the middle of the night to check their favorite weather app. The offering is careful to respect local customs: Canadian city betting lines are quoted in Celsius.

This new pastime might seem silly, but it certainly beats putting your money at risk in the stock market these days.



## Apple Shuts Stores, But Wall Street Stays Too Optimistic

Kudos to Apple Inc. for finally sending the right message about the seriousness of the coronavirus pandemic. It is a message that Wall Street still doesn't seem to have fully received, though.

The iPhone maker announced the closure of all of its retail stores outside of China over the weekend. The company had closed its Chinese stores early last month in response to the spreading virus there, though all of those have since reopened. In a post on the company's website, Chief Executive Tim Cook said the latest closures will last at least through March 27 and noted that all hourly employees will continue to be paid "in alignment with business as usual operations."

Apple's share price skidded 13% Monday, in line with the broader market's crash. The company's stores account for a fairly small portion of its overall sales.

Apple stopped breaking out its retail results at the end of its 2014 fiscal year, when retail's share of overall revenue had declined to 12% compared with 19% in fiscal 2008, the first full year of the iPhone. The contribution from its stores is likely even less now as an increasing share of the company's business comes from services.

But many of Apple's products flow through stores it doesn't own, such as those operated by wireless carriers and big-box retailers—Best Buy, for example. So the company will likely share in the pain felt by the broader retail category as more shoppers stay home during the pandemic. Many of those stores also could be closed involuntarily as local communities deal with the outbreak.

Closures over the near term don't address the much more important question of longer-term demand in a global economy,

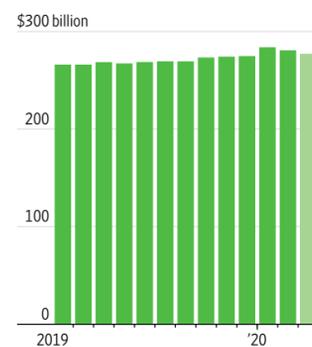
which is about to take a very serious hit. In a note over the weekend, Citigroup's technology hardware team said the new coronavirus "will materially impact the tech supply chain and end demand which we view as actual demand declines and the shortfalls will not be recouped later in the year."

So Wall Street still seems too optimistic about Apple. According to FactSet, analysts have slashed their revenue estimates for Apple's March quarter by more than 8% since the end of January. But revenue estimates for the full fiscal year ending in September have come down less than 3% in that time.

Many have cited the six-week closure of Apple's China stores as a good sign that the effects of the outbreak will be short-lived. But simply reopening stores doesn't mean business jumps back to normal. Apple in particular needs a large base of customers able to afford its products. That base is likely to be much smaller for a long while.

—Dan Gallagher

Consensus revenue estimates for Apple's 2020 fiscal year



Source: FactSet