

# THE WALL STREET JOURNAL.

DOW JONES | News Corp \*\*\*\*\*

WEDNESDAY, MAY 30, 2018 ~ VOL. CCLXXI NO. 125

WSJ.com

★★★★ \$4.00

DJIA 24361.45 ▼ 391.64 1.6% NASDAQ 7396.59 ▼ 0.5% STOXX 600 384.47 ▼ 1.4% 10-YR. TREAS. ▲ 1 12/32, yield 2.77% OIL \$66.73 ▼ \$1.15 GOLD \$1,298.70 ▼ \$4.60 EURO \$1.1541 YEN 108.76

## What's News

### Business & Finance

**U**pheaval in Italy drove a global retreat from risky assets, sending U.S. stocks tumbling and Treasury yields to their largest daily drop in almost two years. **A1, B15, B16**

◆ **ABC canceled** the sitcom "Roseanne" after its star sent a racist tweet about a former top Obama aide. **A1**

◆ **Shari Redstone alleged** that CBS's chief threatened to quit unless the board stripped her family of voting control. **B1**

◆ **Banks are lowering rates** and easing terms on loans to businesses, raising concerns among regulators. **B1**

◆ **Canadian Pacific** conductors and engineers went on strike late Tuesday. **B3**

◆ **Starbucks closed** thousands of cafes Tuesday afternoon for antibias training. **B2**

◆ **Canada's government** agreed to pay \$3.46 billion to acquire Kinder Morgan's Trans Mountain pipeline. **B3**

◆ **Ex-WPP chief Sorrell** has agreed to take the helm at Derriston Capital. **B7**

◆ **Bayer won** U.S. approval for its Monsanto deal after agreeing to sell some \$9 billion in assets to BASF. **B2**

◆ **Startup block.one** is on track to raise over \$4 billion in a sale of digital tokens. **B7**

◆ **JAB agreed** to buy British sandwich chain Pret A Manger from Bridgepoint. **B3**

◆ **Nasdaq and Choe blasted** an SEC proposal to limit the rebates they pay traders. **B14**

### World-Wide

◆ **The Trump administration** said it was moving forward with its threat to apply tariffs on Chinese imports and other actions to restrict Beijing's access to U.S. technology. **A1**

◆ **Pompeo plans** to meet with a top North Korean official Wednesday in New York, as the U.S. prepares for a potential summit. **A5**

◆ **Trump accused** the Russia probe in a tweet of being a partisan exercise that could unfairly aid Democrats in the midterm elections. **A4**

◆ **The White House** defended its policy of separating immigrant children from their parents, citing court rulings and laws. **A4**

◆ **Missouri Gov. Greitens** said he would resign, as he faces allegations of sexual misconduct and campaign-finance violations. **A2**

◆ **Israeli jets launched** airstrikes against targets in Gaza in response to militants firing mortar shells and rockets into Israel. **A7**

◆ **The leader of Italy's** anti-immigrant League party has emerged as a winner in the political chaos sweeping the country. **A6**

◆ **The death toll** in Puerto Rico from Hurricane Maria could exceed 4,600, a new study estimated, challenging the official figure of 64. **A3**

◆ **Libya's political factions** reached a preliminary deal to hold elections in December, after a push by France. **A7**

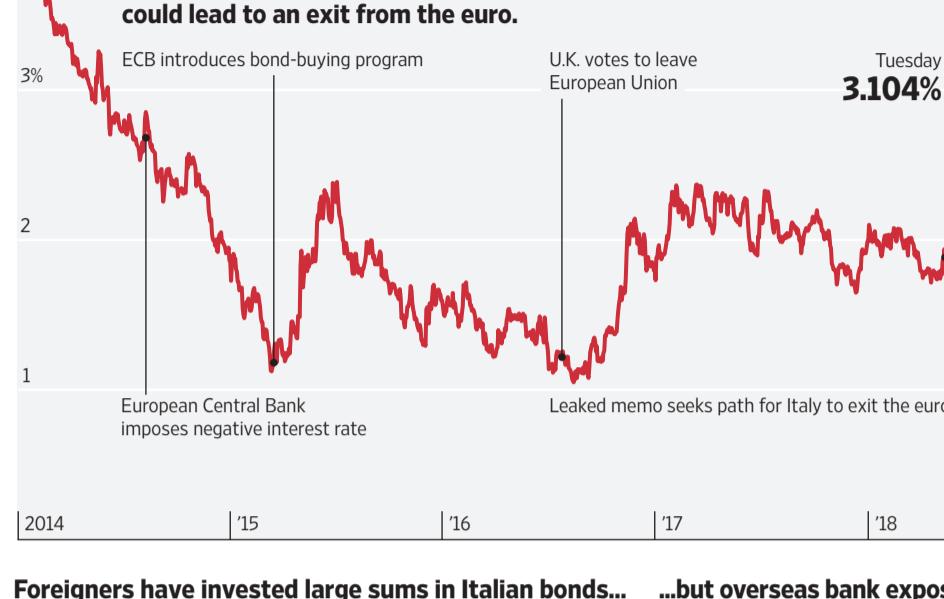
### Journal Report

The threats that keep CIOs up at night  
Cybersecurity  
R1-10

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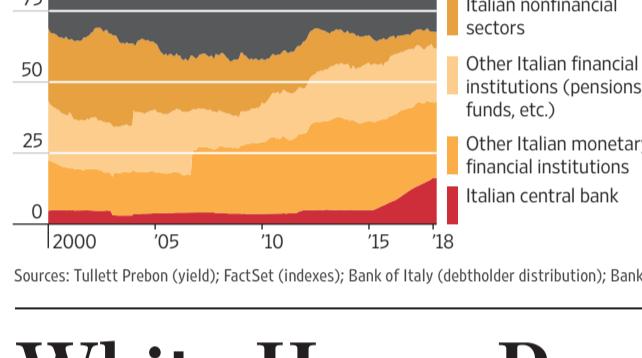
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# Italian Tumult Spurs Global Selloff



### Foreigners have invested large sums in Italian bonds...

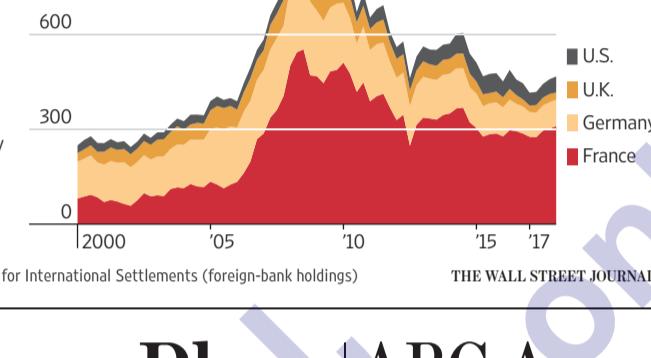
Who holds Italy's general-government debt



Sources: Tullett Prebon (yield); FactSet (indexes); Bank of Italy (debtholder distribution); Bank for International Settlements (foreign-bank holdings)

### ...but overseas bank exposure has declined in recent years.

Italian government debt held by selected foreign banks



THE WALL STREET JOURNAL.

Concerns about bank exposure to Italy rattled U.S. markets...

Past week performance

Dow Industrials -1.9%

KBW Nasdaq Bank Index -5.6

Italy FTSE MIB -8.0%

Spain IBEX 35 -6.1

Germany DAX -3.8

France CAC 40 -3.6

U.K. FTSE 100 -3.1

Dow loses nearly 400 points and Treasury yields fall sharply as investors cut risk

By JON SINDREU AND MIKE BIRD

Political upheaval in Italy drove a global retreat from risky assets on Tuesday, sending U.S. stocks tumbling and Treasury yields to their largest daily decline in almost two years.

Six years after the eurozone stepped back from the brink of a breakdown, a violent selloff in Southern European debt bled into broader financial markets, pushing investors toward the safety of the dollar and the Japanese yen, which rallied sharply.

Bank stocks led the charge lower, reflecting fears that turmoil in Italian markets could spread throughout the eurozone, infecting the bloc's banks and causing systemic issues in global markets.

The turbulence followed Please see STOCKS page A6

- ◆ Italy far-right leader gets boost.....A6
- ◆ Euro again at center of financial unrest.....B15
- ◆ Heard on the Street: Haven bonds reflect global pain... B16

# White House Renews Plan To Impose Tariffs on China

By William Mauldin  
in Washington and  
Lingling Wei in Beijing

hold while negotiators—led on the U.S. side by Treasury Secretary Steven Mnuchin—worked on a deal that would have China reduce its \$375 billion annual trade advantage by 25%, with the duties implemented.

With Commerce Secretary Wilbur Ross heading to Beijing later this week, the adminis-

tration's decision to move ahead with tariffs and other measures could give the U.S. added leverage as the trade talks with China resume.

The White House said Tuesday that it would announce by June 15 a final list of \$50 billion in imports from China that would be subject to tariffs of 25%, with the duties imple-

Please see TRADE page A4

◆ U.S.-North Korea summit plan advances.....A5



ASHRAF AMRA/APA IMAGES/ZUMA PRESS

# ABC Axes 'Roseanne' After Offensive Tweet

By JOE FLINT AND BEN FRITZ

Walt Disney Co.'s ABC canceled the sitcom "Roseanne" on Tuesday after its star sent a racist tweet about a top aide of former President Barack Obama, a stunning end for a hit show that had quickly become the centerpiece of the network's prime-time schedule.

The decision to pull the plug came hours after actress Roseanne Barr tweeted "Muslim brotherhood & planet of the apes had a baby = vj." That was a reference to Valerie Jarrett, who served in the Obama administration. Ms. Jarrett is black and was born in Iran.

For ABC, losing the show, which had returned after a two-decade hiatus to huge success, leaves a significant hole in its schedule. Developing hit TV shows is getting harder by the year, as viewership and audience attention fragments across streaming platforms like Netflix Inc. and Amazon.com Inc., and myriad cable channels.

ABC recently touted "Roseanne" as its first No. 1 new comedy in several years. The show spoke to a middle-American audience television executives are often accused of ignoring in their programming.

The about-face came just as ABC is negotiating with advertisers to secure commitments



for the coming TV season. Some ad-time buyers said advertisers likely would have complained or boycotted the show if ABC and Disney hadn't acted swiftly to cancel it.

ABC Entertainment President Channing Dungey said in a statement, "Roseanne's Twitter statement is abhorrent, repugnant and inconsistent with our values, and we have decided to cancel her show."

Disney Chairman and Chief Executive Robert Iger weighed in on Twitter, saying, "There was only one thing to do here, and that was the right thing."

Ms. Barr apologized for the tweet about Ms. Jarrett, saying she was "truly sorry for making a bad joke about her politics and her looks. I should have known better. Forgive me

Please see BARR page A2

## Charity Foundations Reward the Insiders

Law on self-dealing has ample exemptions

By ANDREA FULLER

A mutual-fund manager earned nearly \$5 million over eight years from a lucrative side gig. He was trustee of his business partner's private charitable foundation.

Another charitable foundation, set up by a carpet merchant, has millions of dollars in loans outstanding to the man's carpet company. A third paid out more to companies owned by the foundation president's family than it gave to charity in a recent year.

All these transactions were lawful, the foundations said in their tax filings.

A half-century ago, Congress, troubled by tales of foundation self-dealing, enacted a law to prevent insiders from taking advantage of

their positions. The law prohibits most business between private foundations and their insiders—meaning their officers, directors and substantial donors. It says foundations may not engage in property deals, loans or the exchange of other goods and services with insiders.

Some foundations have grown adept at relying on a bevy of complex exemptions to their advantage. More than 1,800 foundations checked boxes on their fiscal 2016 tax filings indicating that they engaged in business activities with insiders but weren't violating the self-dealing law, The Wall Street Journal found in a review of thousands of filings.

The law permits foundations to employ insiders for certain services provided

Please see LAW page A8

## No Pressure To Wash if You Just Watch

Pressure-washing videos gain steam; 'sense of catharsis'

By ELLEN BYRON

Richard Van Remmen keeps his white lawn chairs outdoors all winter so they collect as much mold, algae, pollen, pine sap and dirt as possible. Come spring, he clamps a small camera to the wand of his pressure washer and records himself spraying the grime away.

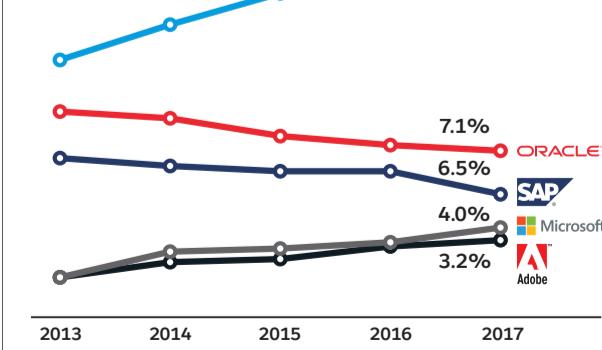
"When you're watching, it's like you're doing the pressure washing, but you're not," says Mr. Van Remmen, a tax-preparation professional in Rock Hill, S.C., who posts his cleaning footage online. One of his videos has been watched more than a million times.

Online videos of pressure

Please see WASH page A8

# Salesforce. #1 CRM.

Ranked #1 for CRM Applications based on IDC 2017 Market Share Revenue Worldwide.



Source: IDC, Worldwide Semiannual Software Tracker, April 2018.

salesforce

salesforce.com/number1CRM

CRM Applications market includes the following IDC-defined functional markets: Sales, Customer Service, Contact Center, and Marketing Applications. © 2018 salesforce.com, Inc. All rights reserved. salesforce.com is a registered trademark of salesforce.com, Inc., as are other names and marks.

## U.S. NEWS

# Missouri Governor to Resign Amid Multiple Probes

BY SHAYNDI RAICE

Missouri Gov. Eric Greitens said that he would resign as state lawmakers weighed his impeachment amid allegations of sexual misconduct and campaign-finance violations.

The governor said he would step down at 5 p.m. on Friday. Lt. Gov. Mike Parson, a Republican, will take over.

Missouri's GOP-controlled House leadership applauded the governor's decision, saying he "has put the best interest of Missourians first today by choosing to resign."

The resignation ends a months-long scandal that revealed detailed and tawdry sexual encounters between the governor and a woman with whom he was having an affair. Mr. Greitens has admitted the affair but said that it was consensual and that he didn't break any laws.

Mr. Greitens, who was elected governor in 2016, touted his status as a noncareer politician and said he would challenge special interests and fight corruption. A

campaign fund and secretive donations to the pro-Greitens nonprofit called A New Missouri.

The panel's probe comes during a special legislative session to weigh impeachment.

The governor said he would step down at 5 p.m. on Friday. Lt. Gov. Mike Parson, a Republi-

cian, will take over.

Missouri's GOP-controlled



Missouri Gov. Eric Greitens was seen as a rising star in the GOP.

House leadership applauded the governor's decision, saying he "has put the best interest of Missourians first today by choosing to resign."

Democrat-turned-Republican, Mr. Greitens spent his time in office challenging unions, attacking a higher minimum wage for cities and cutting back on regulations. But his political efforts were quickly derailed by the allegations trailing him for months.

He has been fighting

charges since the beginning of the year over an affair he had with a hairdresser before he was elected governor.

In January, after the affair came to light, Mr. Greitens and his wife, Sheena, released a statement saying the couple dealt with the affair privately and honestly. His wife said she

had forgiven him and asked others to forgive him as well.

The attempts to keep the affair separate from Mr. Greitens' political future had limited success.

Mr. Greitens was indicted in February for a felony invasion of privacy charge after allegedly taking a nude photo of the hairdresser without her permission and transmitting it on an electronic device.

A House committee investigating misconduct by the governor released a report after the indictment that detailed sexual encounters between the woman and Mr. Greitens.

No photo was ever found and the case was later dropped when a judge permitted the defense to call St. Louis Circuit Attorney Kimberly Gardner as a witness in the trial she was prosecuting.

A special prosecutor was appointed to look into the matter but hasn't yet determined whether to refile the charges.

The St. Louis Circuit attorney filed another felony

charge against Mr. Greitens in April for allegedly misusing a charity donor list during his gubernatorial run.

On Tuesday, Ms. Gardner said that she had reached a "fair and just resolution" of the charges against the governor. She said she would provide details on Wednesday.

A House special committee report in April alleged the governor lied in campaign filings and violated campaign-finance laws when he used the charity's donor list to raise money for his campaign.

Mr. Greitens founded the charity, called The Mission Continues, to help veterans acclimate to civilian life. Mr. Greitens was deployed overseas four times in the mid-2000s.

A graduate of Duke University and a Rhodes Scholar, Mr. Greitens wrote two best-selling books on lessons learned from his experiences.

In 2013, Time magazine named him one of the world's 100 most influential people.

## Explosion in Nebraska Grain Elevator Injures at Least Two People



SCARY SIGHT: Residents in the vicinity of a grain elevator were evacuated over concerns it would collapse after a blast on Tuesday.

## BARR

Continued from Page One

- my joke was in bad taste."

Ms. Barr also said she is leaving Twitter. She was unavailable for further comment.

Streaming service Hulu removed "Roseanne" from its service. And Ms. Barr was also dropped by ICM Partners, her talent agency.

It was all part of a strange journey for Ms. Barr, who once was a pariah to conservatives for her intentionally awful singing of the national anthem at a San Diego Padres baseball game in 1990.

After the hot start for "Roseanne," viewership began to decline. While some loss was expected after the initial curiosity wore off, ABC executives were worried that Ms. Barr's real-life persona and the backlash it generated was going to overwhelm the show, which received many positive reviews, people familiar with the situation said.

Efforts by ABC executives to get Ms. Barr to curb her tweeting were unsuccessful. At times she said she would stop or say that someone else from her family would take over, but then she would resume and before long there would be more controversy, the people said.

By the time Ms. Barr sent her tweet about Ms. Jarrett—in a thread related to claims President Donald Trump has made that federal informants infiltrated his campaign in 2016—executives at ABC had reached the breaking point.

There was little debate inside ABC and Disney about how to proceed, the people said. Ms. Dungey, Ben Sherwood, president of the Disney/ABC Television Group, and Mr. Iger all were adamant about canceling the show, the people said.

Under Mr. Iger, Disney has

emphasized the value of its family-friendly brand name and of the other brands under its umbrella, including Marvel, Pixar, ESPN and ABC, over the short-term profits from any particular film or television show.

When talent with whom Disney works threatens to undermine its image, it has moved fast. That happened last year, for example, when Disney ended its partnership with YouTube's biggest star, PewDiePie, in response to questions from The Wall Street Journal about videos he made featuring anti-Semitic jokes and Nazi imagery.

Disney has also run into controversies involving left-leaning talent, including at its ESPN sports operation. The network chose not to suspend host Jemele Hill last fall after she tweeted that Mr. Trump was a "white supremacist," a remark that triggered an uproar among the president's supporters but garnered support from others, including prominent black athletes. She was later suspended over a comment related to National Football League players' national-anthem protests that the network deemed detri-

mental to its sponsors, the Journal reported.

In the case of "Roseanne," the rebooted show delivered strong ratings early on. The first episode averaged around 18 million viewers, according to Nielsen, and even got a plug from Mr. Trump.

Just two weeks ago, ABC showcased "Roseanne" heavily at its annual programming presentation to advertisers in New York. Ms. Barr appeared on stage to rousing applause. There were even jokes that Mr.

**Ms. Barr has used social media to take aim at President Trump's opponents.**

Sherwood was the one responsible for her reckless tweeting.

Behind the scenes, though, there were growing concerns that Ms. Barr's social media presence could hurt the sitcom, the people familiar with the situation say.

Ms. Barr has used social media to take aim at President Trump's opponents and defend

his policies as well as to offer support at times for conspiracy theories. For example, she tweeted erroneously that a survivor of the school shooting in Parkland, Fla., had given a Nazi salute in a speech. She later apologized.

Her support of Mr. Trump was a topic on her show as well as in her real life. Some thought she gave a much-needed face to his backers. Others accused her of having distorted values.

There were discussions with Ms. Barr before the show's cancellation was announced. A person with knowledge of the talks said she was contrite and apologetic.

ABC didn't say how it would replace "Roseanne." The show generated \$45 million in ad revenue this season, according to consulting firm Kantar Media.

Without the show in its lineup, ABC's package for advertisers will be less compelling and that could affect ongoing negotiations for the coming season. Ads on the show sold for a premium compared to other ABC programming, ad-time buyers say.

—Alexandra Bruell

contributed to this article.



ABC canceled Roseanne Barr's hit sitcom 'Roseanne' following an offensive tweet sent by the actress.

## SUPREME COURT

### Warrant Required to Search Cars at Homes

The Supreme Court said police need a warrant to search vehicles parked at private homes, the second time this month the justices rejected government arguments for expanding the "automobile exception" to Fourth Amendment rules against unreasonable searches.

The Supreme Court long has recognized that privacy interests are heightened within the home, with precedents that limit police intrusions not only into structures, but also the immediately surrounding property, known as the curtilage. Tuesday's decision, by an 8-to-1 vote, confirmed that carports and driveways may constitute part of the curtilage—and that within it the leeway police have to search vehicles in the public streets is sharply curtailed.

The ruling follows a unanimous finding this month that Fourth Amendment protections extend to rental cars driven by people not listed on the rental agreement.

—Jess Bravin

## MARYLAND

### Body of Man Killed in Flash Flood Found

Searchers found the body of a man swept away by rushing waters while trying to help a woman who had escaped through a window with her cat.

The body of 39-year-old Eddie Hermon, the only person reported missing in the flash flooding that hit Ellicott City, was located Tuesday in the Patapsco River.

"To have died helping somebody else is incredible," said Nicholas Johnson, owner of a store near the spot where Mr. Hermon vanished Sunday.

—Associated Press

## ECONOMY

### Consumers Grow More Confident

Americans' spirits rose in May as consumers remained confident in the current state of the economy, but expressed less optimism that this economic momentum would continue.

The Conference Board said Tuesday that its measure of U.S. consumer confidence increased to 128.0 in May from 125.6 in April. Confidence was downwardly revised in April.

Americans boosted their impressions of current economic conditions to a 17-year high, buoyed by a positive view of the job market, the latest survey shows. Their expectations for future conditions rose less robustly, while plans to purchase major appliances such as refrigerators and televisions fell in May.

—Sarah Chaney

## ALBERTO

### Storm Downs Trees And Heads to Interior

The soggy remnants of Alberto moved toward the nation's interior Tuesday, leaving scattered flooding and downed trees in the wake of the year's first named tropical storm.

More than 25,000 power outages were reported in Alabama, many caused by trees rooted in soggy soil falling across utility lines.

Subtropical storm Alberto rolled ashore Monday afternoon in the Florida Panhandle and then weakened overnight to a depression.

U.S. forecasters said rain could still cause dangerous flash floods in the coming days in northern Alabama and large areas of Georgia, Tennessee and the Carolinas.

—Associated Press

## CORRECTIONS & AMPLIFICATIONS

**The companies themselves**

were the source for a pie chart showing the member makeup of the boards of private companies and public companies that accompanied a Page One article Tuesday about technology entrepreneurs' relationships with venture capitalists. The graphic incorrectly said the source was Dealogic.

**Smartphone maker Xiaomi**

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

# Homeowners Raise Stink About Farms

**Suits vs. Smithfield over waste disposal threaten pig industry in North Carolina**

BY VALERIE BAUERLEIN

BEULAVILLE, N.C.—The linchpin of 500 legal complaints against Chinese-owned pork giant **Smithfield Foods** Inc. headed to federal court Tuesday, part of a historic challenge to North Carolina's \$2.9 billion hog industry.

A Raleigh-based jury will determine whether a 4,700-

hog farm run by a Smithfield contractor, with open pools of manure, emits enough odor and sprayed liquid waste to be considered a nuisance to a neighboring couple.

Lawyers representing Beulaville residents Elvis and Vonne Williams said in court filings that Smithfield is "a large enterprise with the ability to reduce and end the nuisance." They said the smell has hurt the couple's "ability to enjoy family gatherings, barbecues, outdoor chores, playing with children outside, and doing yardwork."

"When I'm in the house,

when I come outside and I smell the foul odor, it makes me, at times, sneeze, cough, vomit, watery red eyes," Mr. Williams said in a 2016 deposition.

Smithfield, a Smithfield, Va., unit of Chinese pork producer **WH Group** Ltd., said its farm complies with local, state and federal environmental regulations. Chief Executive Ken Sullivan said it is wrong to penalize owners for things like noise and smell, which go hand in hand with running a farm.

"Today, it's hog farms. What about chicken farms? The turkey guys? Grain farmers?" Mr. Sullivan said in an interview. "We've got to decide as a society how food is produced."

Lawyers for the Williamses declined to comment.

North Carolina has been hog country since the early 1990s, when a company that is now a Smithfield subsidiary popularized the system of housing hogs indoors and managing the breakdown of manure in lagoons. In Beulaville, as in other eastern North Carolina communities, hogs replaced tobacco as an economic anchor, with state production growing from two million hogs annually in 1990 to 8.9 million hogs now.

State regulators originally



North Carolina's system of housing hogs indoors and putting manure in lagoons was set up in the 1990s.

blessed the storing of manure and urine in open lagoons and spraying liquid waste as fertilizer on farmland. But the industry grew quickly and some lagoons failed, sending waste into rivers and streams during storms. A moratorium on new farms using lagoons has been in place since 1997, but the farm in the lawsuit—and hundreds like it—are grandfathered in, since nearly all hog farms in the state legally installed lagoons in the 1980s and '90s.

Smithfield uses its hogs for fresh pork sold to distributors, packaged foods like Nathan's Famous hot dogs, and exports of stomachs and snouts to Asian markets. WH Group bought Smithfield in 2013, in part to meet increased demand for pork among China's growing middle class. Lawyers for the Williamses said in court docu-

ments they are concerned WH Group may pressure Smithfield to produce more pigs for China, increasing the nuisance to neighbors.

The litigation has major implications both for North Carolina, which produces more hogs than any other state except Iowa, and for Smithfield, which owns the vast majority of the hogs produced here, both on company-owned farms and on farms run by contractors, like the one in Beulaville.

The plaintiffs said in court filings that they want to apply "sufficient pressure" to force the company to embrace newer, but costlier, methods of handling waste, such as converting it to energy. Smithfield said those types of changes would undermine its business.

"It's an existential threat to us in North Carolina," Mr. Sul-

livan said. Smithfield already has a narrow margin in the state, compared with its operations in the Midwest, he said, partly because the company has to import most of the grain it uses. If the lawsuits succeed, he said, "we will have to revisit whether we can continue doing business in North Carolina."

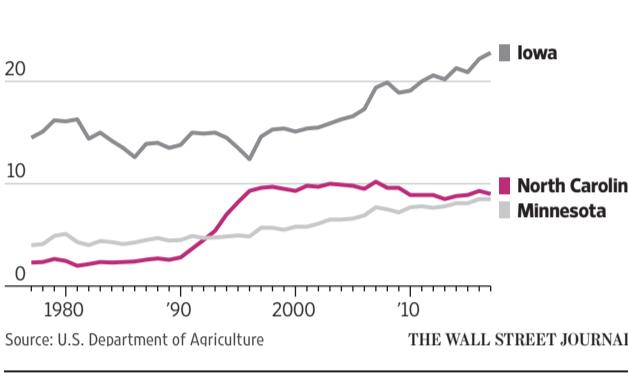
The Williams' case is one of a handful of bellwether trials that will help determine how hundreds of other complaints against Smithfield will be handled.

In the first trial last month, a Raleigh jury in U.S. District Court awarded \$50 million to 10 families living near a Smithfield contract farm in neighboring Bladen County. The judge subsequently lowered the settlement to \$3 million, to comply with a state statute capping punitive damages.

## Hogted?

North Carolina's hog industry hasn't grown since a 1997 moratorium on new farms storing waste in open lagoons.

### Total inventory of hogs



Source: U.S. Department of Agriculture

THE WALL STREET JOURNAL.

## Estimate Of Deaths In Puerto Rico Rises

BY ARIAN CAMPO-FLORES

A new study estimates the death toll in Puerto Rico from Hurricane Maria could exceed 4,600, the latest analysis to suggest the official figure of 64 is a severe undercount.

Researchers at Harvard T.H. Chan School of Public Health and other institutions conducted surveys of nearly 3,300 randomly chosen households across the island and asked about fatalities. They used the findings to calculate how much the mortality rate between Sept. 20, 2017—when the hurricane hit—and Dec. 31, 2017, exceeded the period in 2016.

Researchers found there were 4,645 excess deaths during those 2017 months, a 62% increase. Researchers said the figure could be as high as 5,740 excess deaths, when adjusted for bias and methodological issues.

Among the main reasons cited by respondents for the deaths were issues regarding access to medical care.

The study, published Tuesday in the New England Journal of Medicine, is the latest to challenge the longstanding official death count of 64. Since last year, Gov. Ricardo Rosselló has faced persistent criticism that his administration significantly undercounted fatalities stemming from the storm.

"The government of Puerto Rico welcomes the newly released Harvard University survey, and we look forward to analyzing it," said Carlos Mercader, executive director of the Puerto Rico Federal Affairs Administration. "We have always expected the number to be higher than what was previously reported."

In December, Mr. Rosselló responded to concerns about an undercount by ordering the Puerto Rico Demographic Registry and the Department of Public Safety to examine all deaths that occurred after Maria to derive a more accurate tally. That work is ongoing.

Several studies last year found the death count could approach or exceed 1,000. One analysis, by the Puerto Rico Center for Investigative Journalism, found there were at least 985 more deaths in the 40 days after Maria struck than during the same period in 2016.

Maria knocked out power for the entire island and damaged infrastructure. Hospitals had to rely on generator power, residents lacked refrigeration for medicines and many people couldn't travel to receive medical attention.

## Town Split on Bullying After School Shooting

SANTA FE, Texas—As this grieving town searches for answers concerning a mass shooting by a 17-year-old student, a divisive debate has emerged over bullying at the high school where the rampage took place.

By Tawnell D. Hobbs, Dan Frosch and Scott Calvert

The alleged shooter's father, Antonios Pagourtzis, said his son—a quiet former football player known for wearing a trench coat to school—had faced bullying and said he believed that was part of the trigger for the May 18 attack, which left 10 dead and 13 wounded.

With students returning to school Tuesday for the first time since the shooting, some say bullying has long been a problem at this rural Texas town's lone high school, but others don't recall the suspected shooter, Dimitrios Pagourtzis, being picked on by his peers.

Grace Johnson, an 18-year-old Santa Fe High senior who sat next to Mr. Pagourtzis in class each day, and hid with several others during the shooting, recalled him as always joking and as "a pretty normal student." Ms. Johnson said she doesn't think bullying is pervasive at Santa Fe High School, which she added has the sorts of social cliques commonly found in American high schools.

"I guess there was just normal bullying," she said. "I don't think it was bullying like you'll see in a movie or anything with people being thrown into lockers. I didn't see that. It was very, very minor."

In many mass school shootings in which the accused is a student, allegations have surfaced that the shooter was bullied, but whether there is a clear link between the two issues is the subject of contention.

An analysis by The Wall Street Journal found that in 17 of 33 school-shooting cases since 1990 that resulted in at least three victims dead or injured, the accused shooters had a history of being bullied, according to court documents and news reports.

Dr. Nadine Connell, director of the Center for Crime and Justice Studies at the University of Texas at Dallas, who studies bullying and youth criminal behavior, said her research hasn't shown any connection between bullying and mass school shootings. And some experts noted that kids are bullied without ever resorting to extreme violence.

"There were certainly situations where they were shunned by classmates, but they weren't bullied," she said of the school shooters she has looked at. "Their peers were afraid of them or not interested in interacting with them."



Community members showed support Tuesday as students in Santa Fe, Texas, returned for the first day of class since a mass shooting.

John Nicoletti, a police psychologist who also works with schools and helped respond to the 1999 attack at Columbine High School in Colorado and other mass shootings, said school shooters often feel a "perceived injustice" or feel victimized. But Dr. Nicoletti said that simply because a student feels that way doesn't necessarily mean they were bullied.

At Santa Fe High School, the local school district reported zero bullying incidents in four reporting cycles from 2009 to 2016, according to a Journal analysis of U.S. Education Department data. It isn't

alone in reporting zero bullying in the 2015-16 school year, when roughly 72% out of about 24,250 public high schools also reported no bullying incidents.

The federal government's definition of bullying includes actions such as making threats, spreading rumors, attacking someone physically or verbally, and purposely excluding someone from a group.

The Education Department requires school districts to report such information biannually to ensure compliance with civil-rights laws.

Officials with the Santa Fe school district didn't respond to requests for comment.

Experts said it is unlikely that any high school wouldn't have a single bullying incident over a seven-year span. But some schools track only the most serious cases, while others may intervene early in a case and not report every incident out of fear of federal or state intervention.

"They are supposed to report and they should, but many times they don't," said Ross Ellis, founder and chief executive of Stomp Out Bullying, a national antibullying group. "Some schools are not trained to properly deal with bullying, other times they may not consider it bullying or they may just not want to deal with the problem."

The day after the shooting, the Santa Fe district released a statement denying that Mr. Pagourtzis was bullied by coaches, following news reports where at least one student said he was picked on by coaches and other students.

That denial prompted varied reactions from current and former students, as well as parents. Beretta Colt said she dropped out of Santa Fe High her senior year partly because she was being taunted by other students over family problems she was having and teased because she had dated another female student at the school.

Others disputed that the school was troubled by bullying. Debbie Bowman, whose daughter attends Santa Fe High, said there is "absolutely" not a bullying problem. Students may pick on each other, she said, but it isn't a place "where kids come home from school every day crying because kids are being mean to them."



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## U.S. NEWS

**Making  
A Pitch in  
Nashville**

**ON THE TRAIL:** President Donald Trump shifted into campaign mode Tuesday, urging supporters in Tennessee to back Rep. Marsha Blackburn's bid for a Senate seat and to put other Republicans in Congress in the midterm election. "To keep on winning, you have to vote Republican in November," Mr. Trump said at a rally at the Gaylord Opryland Resort and Convention Center.



ANDREW HARNIK/ASSOCIATED PRESS

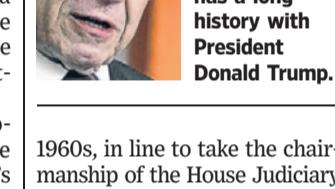
**President's  
Old Foe  
Could Gain  
More Clout**

BY BYRON TAU

**WASHINGTON**—Rep. Jerrold Nadler's first battle with Donald Trump came in the 1990s, when the future president sought federal money for a project that would have benefited one of his developments on Manhattan's Upper West Side. Mr. Nadler, a New York Democrat, opposed the subsidies and had them stripped from congressional spending bills.

The feud soon degenerated into acrimony and name-calling. Mr. Trump called Mr. Nadler dumb and suggested he lose weight. A spokesman for Mr. Nadler fired back: "If Mr. Trump thinks Mr. Nadler is so dumb, we would ask why Nadler never went bankrupt and had to spend his father's fortune to keep his family's business afloat."

Messrs. Trump and Nadler may go a few more rounds. Though the election is more than five months away, many political analysts say Mr. Trump's unpopularity and a surge of enthusiasm among Democrats give the Democrats a good chance at taking control of the House. That would place Mr. Nadler, a fixture of New York City politics since the late



**Rep. Jerrold Nadler, a New York Democrat, has a long history with President Donald Trump.**

1960s, in line to take the chairmanship of the House Judiciary Committee.

From that perch, the 70-year-old Democrat would conduct oversight over federal law enforcement, the U.S. Department of Justice and special counsel Robert Mueller's investigation into alleged Russian interference in the 2016 election, which Moscow has denied.

The Judiciary Committee also has the power to subpoena the Trump administration, including the White House, for documents and testimony.

Mr. Nadler has vowed that under his stewardship, the Judiciary Committee will protect the integrity of the special counsel inquiry that has already netted guilty pleas from a number of Mr. Trump's associates on financial crimes and charges of lying to the FBI.

"I can promise you that if Democrats win and I'm the chairman of the Judiciary Committee, this is not an issue that we will ignore or hide away," Mr. Nadler said at a recent town hall.

The White House didn't respond to a request to comment on Mr. Nadler's potential ascent to the Judiciary chairmanship.

Capitol Hill Republicans warn a Democratic House majority would launch endless investigations into the Trump administration. Mr. Trump has denied any cooperation with Moscow during the campaign and called the special counsel investigation a "witch hunt."

**Trump Says Probe Aids Democrats**

Tweet claims inquiry into Russian meddling in 2016 could tip the midterm elections

BY PETER NICHOLAS

Republican President Donald Trump broadened his attacks on the Russia probe with a tweet Tuesday accusing it of being a partisan exercise that could unfairly tip the midterm elections in favor of Democratic candidates.

The "angry Democrats" who are "working on the rigged Russia Witch Hunt, will be MEDDLING with the mid-term elections," the president said in his tweet.

Inside the White House, of-

ficials believe that the probe of Russian interference in the 2016 presidential election, led by special counsel Robert Mueller, a Republican, could have an outsize impact on the election, depending on how Mr. Mueller proceeds.

If Mr. Mueller has a damaging report prepared but waits until the eve of the election to file it, he could unduly sway voters, a White House official said. If he has an exculpatory report but waits until after the election to release it, he would deprive some voters of critical information before they cast ballots, the official said.

Mr. Mueller, whose office declined to comment Tuesday, is investigating whether there was collusion between Moscow and the Trump campaign dur-

ing the 2016 election, and whether Mr. Trump obstructed justice when he fired Federal Bureau of Investigation Director James Comey last year. The Mueller probe has returned indictments and guilty pleas for several top Trump campaign advisers on charges including money laundering and lying to law enforcement.

Russia has denied that it interfered in the election, and Mr. Trump has said that his campaign didn't collude with Russia and that he didn't obstruct justice.

The latest attack by Mr. Trump fits within a larger strategy of attempting to discredit the entire investigation so it has limited influence on independent voters and fires up his GOP base. The president

could also be trying to force an end to the probe or a confrontation with Justice Department officials that might prompt resignations, people close to the president said.

White House advisers describe Mr. Trump as "obsessed" with the Russia probe, which was the focus of more than a dozen tweets that he sent out since the weekend.

In keeping with his claim that the inquiry is unfair, Mr. Trump has spotlighted revelations that a suspected informant approached members of his campaign in 2016 as part of a counterintelligence operation. He has branded the matter "Spy-gate" and claimed it was proof of "crooked" behavior at the highest levels of U.S. law-enforcement agencies.

That line of attack, some mainstream Republicans warn, could undermine confidence in government agencies that rely on the public's confidence in their impartiality.

Alberto Gonzales, who served as attorney general under Republican President George W. Bush, said he worried that federal prosecutors appearing in court may have a tougher time of it when the president is questioning the basic integrity of the department they represent.

Mr. Gonzales said "public criticism from outside the department takes a toll that's damaging not only to the reputation of the Justice Department but to the rule of law."

—Sadie Gurman contributed to this article.

**White House Defends Immigration Policies**

BY LOUISE RADNOFSKY AND LAURA MECKLER

**WASHINGTON**—The White House cited a combination of court rulings and laws as the underpinning for its policy to separate immigrant children from their parents, and looked to shift the responsibility to Democrats in Congress.

The Trump administration has come under criticism for its policy of separating migrant children from their parents at the border, reversing a previous practice that families who cross the border seeking asylum were often released together into the U.S. while their cases are pursued.

Senior administration officials said Tuesday in a call with reporters that they believed adults including gang members and smugglers were using "loopholes" in the existing immigration system to exploit children, and that Congress should change the system if lawmakers didn't like it.

The "loopholes" cited by administration officials for incentivizing adults to bring chil-



LOREN ELLIOTT/REUTERS

Immigrants who turned themselves in to border patrol agents after illegally crossing from Mexico into Texas wait for processing.

dren across the border include a court settlement barring detention of children, a statute preventing fast deportation of certain unaccompanied children arriving at the border and a broader body of law involving asylum.

"The loopholes that they

fight so hard to protect are the source" of the controversy, said Stephen Miller, the president's top adviser on immigration policy, referring to Democrats. Mr. Miller and the other officials argued the issue is in Congress's hands.

Democrats said the adminis-

tration was trying to deflect responsibility for its own policies. "And 2+2=7. The mind blowing shamelessness of the lying today," tweeted Sen. Chris Murphy (D., Conn.), responding to a news report about the administration blaming the Democrats.

The focus on the separation of children from their parents is part of a broader debate about illegal immigration.

Lawmakers have focused this year on reaching a deal that would protect hundreds of thousands of undocumented immigrants, known as Dreamers, from deportation, in exchange for tougher border enforcement and other measures.

But several plans failed to gain enough support. President Donald Trump ended an Obama-era program that protected the Dreamers but it remains in effect due to federal court rulings.

Under terms of the 1997 Flores settlement agreement, reached in connection with a suit against the federal government, migrant children cannot be held in jail. Until re-

cently, the result was that families who cross the border seeking asylum often were released in the U.S. while their cases were pursued.

This month, the administration said that it would prosecute all adults, including parents, who cross illegally. Children with them are being transferred to Health and Human Services, which finds placements for them, often with relatives in the U.S.

Officials argued Tuesday that releasing the entire family would remove all consequences for adults trying to enter the U.S. They said they were barred from the alternative of detaining families as a unit by the Flores decision.

Immigration advocates maintained that the arguments presented by the Trump administration were inaccurate.

Ur Jaddou, director of DHS Watch at the advocacy group America's Voice, said: "There are no 'loopholes' nor statutory requirements that children be ripped from their parents' arms as a matter of routine practice."

ported efforts by Mr. Trump's administration to crack down on what they see as China's efforts to put them at a competitive disadvantage. Still, many major business groups are worried that Mr. Trump's tough approach risks touching off a trade war, with cycles of tariffs and retaliation on both sides.

"We would like to see both sides put the threat of sanctions on hold and quickly get into negotiations to resolve these important issues," said John Frisbie, president of the U.S.-China Business Council, which represents U.S. firms doing business in China. "Tariffs and restrictions on commerce will have a real and negative impact on the economy and jobs."

A White House spokeswoman and spokesmen for Messrs. Ross and Lighthizer declined to comment on the context of Tuesday's statement on tariffs and investment restrictions.

—Bob Davis in Washington contributed to this article.

**TRADE**

**Continued from Page One** mented "shortly thereafter." Planned investment restrictions aimed at preventing Chinese acquisition of U.S. technology would also be announced by June 30, the White House said in a statement.

The tariffs on \$50 billion in Chinese imports is the first tranche in a package that the White House said could lead to tariffs on a total of \$150 billion in Chinese imports.

In a response hours later, China's Commerce Ministry pledged to defend its "core national interests," issuing a statement calling the U.S. action both "unexpected" and "within expectations."

Officials in Beijing, who were working on measures to ease trade tensions, were caught off-guard by the announcement in Washington, according to people with knowledge of the matter. A few days ago, U.S. trade nego-

tiators led by Mr. Mnuchin, and their Chinese counterparts, led by Liu He, President Xi Jinping's economic envoy, had called a truce in the simmering trade conflict, saying both sides would put threatened tariffs on hold.

In their talks in Washington preceding the truce agreement, the U.S. side also indicated to the Chinese that President Donald Trump's administration was "under huge pressure" to act tough on China, the people said. "That's why today's statement from the White House is also within China's expectations," one of the people said.

Meanwhile, Beijing also sees the White House announcement as the administration's way of exerting pressure on China ahead of Mr. Ross's trip to Beijing to meet Chinese officials this week. In its statement, China's Commerce Ministry described the announcement by Mr. Trump's administration as strategic.

Some U.S.-China watchers agree. Mr. Trump "is just try-

ing to re-create leverage ahead of Ross's trip to China so that, one, there's more likely to be substantive progress, and two, he can claim to his domestic audience that whatever is achieved was because of these new threats," said Scott Kennedy, a China expert at the Center for Strategic and International Studies, a think tank.

Mr. Trump has also said he is relying on China to put pressure on North Korea as Washington and Pyongyang work to salvage a planned summit June 12 on nuclear disarmament and other issues.

"The Trump administration is clearly signaling, ahead of Wilbur Ross's trip to Beijing, that the gloves are off, given China's unwillingness to agree to a trade deficit reduction target or to make broader trade concessions," said Eswar Prasad, a Cornell University professor of international trade. In addition, he said, the "hard-line stance may partly reflect the perception that China played a part in nearly derailing the Trump-Kim summit."

The White House has renewed efforts to achieve a summit with North Korea, and Mr. Trump has linked trade pressure on Mr. Xi with his efforts to bring North Korea to the negotiating table.

Some U.S. lawmakers have expressed concern about Mr. Trump's administration softening its stance toward ZTE Corp., a major Chinese tech

company banned from buying U.S.-made parts after it was found to have violated sanctions on Iran and North Korea. ZTE has suspended business operations after the Commerce Department blocked it from accessing U.S.-made parts that are critical to its business.

The administration

planned ahead with its plan to save Chinese jobs at Iran and North Korean sanctions violator ZTE," said Sen. Ron Wyden of Oregon, the top Democrat on the Senate's finance committee. "Now there's a baby step in the other direction. I can't see any rhyme or reason to these erratic policy shifts."

Others applauded Mr. Trump's approach. "I commend President Trump for taking action against China's ruthless and unfair trade practices," said Rep. Matt Gaetz (R., Fla.). Robert Lighthizer, the U.S. trade representative, has emphasized that the U.S. may resort to tariffs under an investigation that his office conducted into alleged theft of U.S. technology and intellectual property. Tuesday's statement from the White House mentioned that investigation, launched under a trade law known as Section 301, as well as a case Mr. Lighthizer is pursuing against Chinese licensing requirements at the World Trade Organization.

Some businesses have sup-

## WORLD NEWS

## U.S.-North Korea Summit Plan Advances

Pompeo to meet with Kim Jong Un's right-hand man in New York on Wednesday

The U.S. moved on three fronts to prepare the ground for a potential summit with North Korea, as officials said Secretary of State Mike Pompeo would head to New York on Wednesday for a meeting with a top North Korean official.

*By Michael R. Gordon and Michael C. Bender in Washington and Andrew Jeong in Seoul*

The planned meeting between Mr. Pompeo and Gen. Kim Yong Chol, often described as North Korean leader Kim Jong Un's right-hand man, was announced as two separate U.S. teams work in the truce village of Panmunjom and in Singapore on substantive and logistical issues surrounding the potential summit.

The meeting between Mr. Pompeo and Gen. Kim comes as the two sides have publicly staked out different visions on the pace at which North Korea ought to denuclearize.

The State Department didn't provide details of when the meeting will take place or which officials in addition to Mr. Pompeo might also attend. Mr. Pompeo is scheduled to return to Washington Thursday.

This will be Mr. Pompeo's third meeting with Gen. Kim, who was included in the secretary of state's meetings in Pyongyang, where he met with Kim Jong Un.

Gen. Kim was sanctioned by the Obama administration in 2010 in his role as head of North Korea's premier intelligence agency, the Reconnaissance General Bureau. The Trump administration needed to issue a waiver so that he could travel to New York.

"Whatever was necessary was in fact done," said Heather Nauert, the State Department spokeswoman.

In sanctioning Gen. Kim in 2010, the Treasury Department cited his agency's role in proliferating conventional weapons. Through one of its key front companies alone, the intelligence agency was responsible for roughly half of the country's exports of arms and military materiel, Treasury said then.

The Obama administration in 2015 also blamed Gen. Kim for orchestrating a cyberattack on Sony Pictures Entertain-



Kim Yong Chol, a high-ranking North Korean official, front, walked through a Beijing airport Tuesday.

consists of Sung Kim, U.S. ambassador to the Philippines; Allison Hooker, director for Korea for the National Security Council; and Randy Schriver, assistant secretary of defense for Asian and Pacific security affairs. The delegation is meeting North Korean officials this week to discuss the summit, Ms. Sanders said.

Separately, Joe Hagin, White House deputy chief of staff, has a team in Singapore coordinating the logistics of the summit, Ms. Sanders said.

Meanwhile, John Bolton, the president's national security adviser, has been in contact with South Korean and Japanese counterparts "virtually every day," Ms. Sanders said.

Mr. Trump early Tuesday issued a Twitter message announcing that Gen. Kim was on his way to New York, calling the visit a "solid response" to his letter canceling the summit.

Despite the advances, the U.S. has signaled it intends to extend its campaign of maximum sanction pressure on Pyongyang in the event that the two sides can't reach an agreement on denuclearization.

—Chun Han Wong in Beijing and Ian Talley and Dustin Volz in Washington contributed to this article.

ment. South Korea has sanctioned Gen. Kim as well, accusing him of being involved in the 2010 sinking of a South Korean warship that killed 46 sailors. Gen. Kim also has been sanctioned by the European Union.

As part of his preparations for a possible summit with Kim Jong Un, President Donald Trump will meet with Japanese Prime Minister Shinzo Abe on June 7 at the White House, said Sarah Sanders, the White House press secretary.

"Since the President's May 24th letter to North Korean leader Kim Jong Un, the North Koreans have been engaging," Ms. Sanders said, adding the U.S. is actively preparing for the "expected summit."

Ahead of the Pompeo-Gen. Kim meeting, the U.S. has sent a delegation to the demilitarized zone on the border of North and South Korea that



This photo from Japan's defense ministry is said to show the North Korean Ji Song 6 and an unidentified vessel in the East China Sea.

JAPAN MINISTRY OF DEFENSE/ASSOCIATED PRESS

## Pyongyang Said to Transfer Cargo at Sea

BY ALASTAIR GALE

North Korean maritime transfers reported in the same region by Tokyo this year.

Ship-to-ship transfers to North Korean ships are banned by U.N. sanctions, as are almost all oil deliveries to North Korea.

The evidence of further illegal ship transfers supports the view of the U.S. government that North Korea is struggling under international sanctions pressure aimed at forcing it to give up its nuclear missile program.

Japan's foreign ministry

said Tuesday that on May 19, a Japanese military aircraft identified a North Korean cargo ship, Ji Song 6, alongside a vessel that was flying what appeared to be the Chinese national flag at sea around 135 miles southeast of Shanghai. The other ship wasn't identified.

Judging from lights on both vessels' decks and hoses connecting the two ships, Japan said it strongly suspects a cargo transfer banned by the U.N. was taking place. The Ji

Song 6 was banned by the U.N. from entering other countries' ports this year after it was involved in a suspected ship-to-ship transfer of oil in January.

The Chinese foreign ministry didn't respond to a request to comment. China has in the past said it abides fully with U.N. sanctions on North Korea and would deal with any violation in accordance with the law.

◆ Ship lines brace for renewed U.S. pressure on Iran..... B7

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## WORLD NEWS

# Italy Far-Right Leader Gets Boost

By ERIC SYLVERS

MILAN—Snap elections are months away, but one winner has already emerged from the political chaos sweeping Italy: Matteo Salvini, leader of the anti-immigrant League party.

The firebrand politician's popularity has soared in the polls by transforming the League from a near-defunct secessionist group to a nativist, hard-right movement often compared with France's National Front.

Now, as he hits the campaign trail with a virulently anti-European Union message, he has an even bigger prize—the premiership—in his sights.

Italy's political landscape was upended on Sunday after the League and its partner, the 5 Star Movement, declined to withdraw a euroskeptic figure as their choice to head the economy ministry, despite opposition from President Sergio Mattarella. That clash meant the end of a possible 5 Star-League coalition government.

The president then asked Carlo Cottarelli, an International Monetary Fund veteran, to try to form a new government. With both the League and 5 Star opposed to his candidacy, Mr. Cottarelli is unlikely to win the parliamentary vote of confidence he needs to become the head of a fully functioning government. Without that backing he would likely head a caretaker govern-



League leader Matteo Salvini has his eye on the premiership.

ment charged only with looking after day-to-day activities until fresh elections are held, possibly as early as July.

"Salvini got the exact result he wanted and that is early elections," Massimo D'Alema, a former center-left prime minister, said in an interview with Italy's Radio 24. "He knowingly planted the mine that would blow up the government." Mr. Salvini denied that allegation.

Mr. Salvini's fortunes have risen precipitously. The 45-year-old took over the League in 2013, dropping the party's

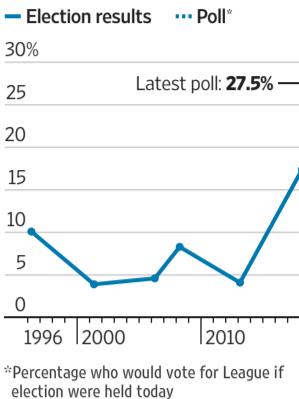
decades-old quest for the wealthy north to secede from Italy. In March parliamentary elections, the party grabbed 17% of the vote, up from 4% five years earlier.

Support for the League neared 28% in an SWG poll published Monday, making it the second-biggest party, trailing 2 points behind 5 Star, which dropped to 30% of the popular vote in the recent election.

The rise of the League has been almost as remarkable as that of Mr. Salvini, who dropped out of college and de-

**A Jolt**

Matteo Salvini took over the League following the party's poor showing in Italy's 2013 election.

**Support for the League**

\*Percentage who would vote for League if election were held today  
Sources: Italian Interior Ministry (election results in Chamber of Deputies); SWG poll of 2,100 adults conducted May 23-28

THE WALL STREET JOURNAL

"We will adopt every possible means to stop this invasion," Mr. Salvini said last year. "When I say every means I mean every means, obviously legal or almost [legal], because we are facing an evident attempt at ethnic cleansing, an ethnic substitution to the detriment of those living in Italy."

With his new strategy, Mr. Salvini pulled the League in line with other nationalist parties in Europe, including the National Front in France and the Fidesz party of Hungary's Viktor Orbán. Mr. Salvini cheered the election of President Donald Trump, whom he met in April 2016. Mr. Salvini tweeted a photo of himself next to Mr. Trump, both with a thumbs up and the words "Go, Donald."

The League chief completed his new "Italy first" message with attacks on the euro, feeding the feeling in Italy that its perennially weak economy and failure to fully recover from the financial crisis is due to the constraints imposed by the common-currency system. Mr. Salvini has branded the euro a flawed project doomed to fail.

On social media Mr. Salvini posts a steady stream of selfies at town festivals and demonstrations against immigrant reception centers.

"Salvini speaks to the people and they understand him," said Susanna Ceccardi, the League mayor of the town of Cascina near Pisa in central Italy.

## WORLD WATCH

## BELGIUM

**Deadly Attack Probed For Terrorism Links**

Authorities are investigating a potential terrorist attack after a man killed three people and took a woman hostage before being shot and killed by police in the eastern town of Liege.

Witnesses interviewed by local television news said they heard the attacker shout "Allahu akbar," an Arabic phrase meaning "God is great."

Belgian broadcaster RTBF identified the attacker as 36-year-old Belgian Benjamin Herman. It said he had been in prison until Monday and had been convicted several times for drug dealing and theft. He had been on a watch list for inmates suspected of radicalization since 2017, RTBF reported.

—Valentina Pop

## CHINA

**Mattis Explains Snub Of Invite to Exercise**

U.S. Defense Secretary Jim Mattis said he decided to rescind China's invitation to take part in a multinational Pacific Rim military exercise because Beijing is "out of step with international law" in how it has militarized the islands and reefs in the South China Sea.

Mr. Mattis, publicly addressing China's removal last week from the exercise, recalled Chinese President Xi Jinping's 2015 pledge not to militarize the islands.

Beijing maintains that it has "indisputable" sovereignty over all South China Sea islands and their adjacent waters, and that its new facilities are for defensive and civilian purposes.

—Nancy A. Youssef

## UKRAINE

**Russian Journalist Is Killed in Kiev**

A Russian journalist harshly critical of the Kremlin was shot and killed in the Ukrainian capital Kiev, and the national police said he apparently was targeted because of his work.

Ukrainian police said Arkady Babchenko's wife found him bleeding at their apartment building in Kiev and called an ambulance, but Mr. Babchenko died on the way to a hospital.

Police said he died of multiple gunshots wounds to his back.

"The first and the most obvious version is his professional activities," Kiev Police Chief Andriy Krishchenko said in televised comments.

The Committee to Protect Journalists in New York said on Twitter that "Ukrainian authorities should conduct a swift and thorough investigation" into Mr. Babchenko's death.

The 41-year-old journalist was scathingly critical of the Kremlin's policies, assailing Moscow's annexation of Crimea, its support for separatist insurgents in eastern Ukraine and the Russian campaign in Syria.

—Associated Press

## STOCKS

Continued from Page One

Italian President Sergio Mattarella's decision Sunday to block the formation of a euroskeptic government, which revived longstanding worries about the broader stability of the eurozone. His move suggested a fresh round of elections that could strengthen the hand of anti-euro forces, some of which seek to untangle Europe's increasingly vulnerable union.

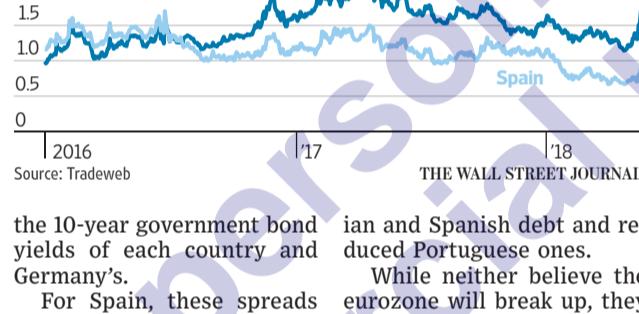
"There's an existential threat hanging over the single currency if we head into more elections this summer; I don't know how we get away from that now, given the scale of the financial implications," said Kit Juckes, chief foreign-exchange strategist at Société Générale.

The Dow Jones industrials dropped 391.64 points, or 1.6%, falling back into the red for the year. The S&P 500 declined 1.2% and the Stoxx Europe 600 closed 1.4% lower.

Financial companies were the hardest-hit sector in the S&P 500, sliding 3.4%, as bank shares tumbled. JPMorgan Chase & Co., the biggest American bank by assets, fell 4.3%, while Morgan Stanley,

**Contagion**

The politically driven selloff in Italian bond markets spread Tuesday to Spain.



THE WALL STREET JOURNAL

the 10-year government bond yields of each country and Germany's.

For Spain, these spreads widened to their biggest levels in a year, and for Portugal to the widest since September.

Amundi Asset Management, Europe's top investor, with €1.4 trillion (\$1.6 trillion) under supervision, had already cut most of its exposure to Southern European debt this year and is now "in a wait-and-see mode," said Isabelle Vic-Philippe, its head of eurozone government debt.

Dickie Hodges, a bond-fund manager at Nomura Asset Management, a firm with ¥50 trillion (\$457 billion) under management, said he had removed all his holdings in Ital-

ian and Spanish debt and reduced Portuguese ones.

While neither believe the eurozone will break up, they expect the market turmoil to continue—making eurozone bonds unattractive for now.

The spread between different eurozone government bonds is seen by some as a key gauge of how likely the bloc is to survive, rather than of economic performance. Even after two Italian anti-establishment parties reached an agreement for a new government earlier this month, Italian debt was mostly unruffled.

It was the news that the proposed government might seek to break eurozone rules—and had even drafted plans to exit from the euro—that brought back echoes of

the 2011-2012 sovereign-debt crisis, which European Central Bank President Mario Draghi is credited with ending with the promise to do "whatever it takes to preserve the euro."

It is unclear how much bonds can sell off and for how long, investors said, because their worth ultimately depends on a political decision to keep the eurozone together.

Aviva had previously benefited from a rally in Italian government debt and was hoping for Spanish bonds to deliver a similar return. It has now slashed exposure to Southern European bonds.

The banking industry is seen as especially vulnerable to write-offs in its large holdings of government debt, as well as to people taking their money out of Europe.

Shares in Italy's UniCredit SpA and BPER Banca SpA ended the day down by over 5%, while Société Générale and Deutsche Bank dropped 2.9% and 4.6%, respectively.

The selloff continued in Asia early Wednesday. At midday in Tokyo, Japan's Nikkei Stock Average was down 1.8%, Hong Kong's Hang Seng Index was down 1.6% and South Korea's Kospi was down 2%.

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## WORLD NEWS

# Israeli Jets Hit Gaza Targets In Retaliation

Military strikes bases, munitions warehouses, tunnel after militants fire over border fence

By FELICIA SCHWARTZ  
AND DOV LIEBER

TEL AVIV—Israeli jets launched airstrikes against targets in Gaza in response to militants firing mortar shells and rockets into the country, ramping up tensions after weeks of deadly clashes at the border fence.

More than 60 targets were hit in total in two waves of airstrikes, including a munitions manufacturing site, military compounds, munitions warehouses and a tunnel that extended into its territory, which belonged to Gaza ruler Hamas and militant group Palestinian Islamic Jihad, the Israeli military said.

The Israeli strikes came as militants in Gaza fired mortar shells and rockets into Israel through the day, setting off sirens in several border towns that continued late into the night, in what Israel's military called the largest such attacks from the Palestinian territory since the

50-day war known as Operation Protective Edge in 2014.

"We are the closest to war we have been since Operation Protective Edge....If a war breaks out that we are not interested in and that they aren't interested in—it depends solely on them," Israeli Intelligence Minister Yisrael Katz told Army Radio.

The Israeli military said late Tuesday that militants in Gaza launched a total of about 70 mortars and rockets into Israel in several barrages by 8 p.m. local time, including some that were Iranian made.

Three Israeli soldiers were injured and were receiving medical treatment, but the Iron Dome defense system intercepted most of the projectiles, the Israeli military said. One of the mortar shells from the morning volley landed in the playground of a kindergarten before children arrived and no one was injured, it said.

Israeli Prime Minister Benjamin Netanyahu blamed Hamas and the Palestinian Islamic Jihad, which Israel says is backed by Iran, for the attacks.

Hamas and Palestinian Islamic Jihad's armed wings issued a joint statement claiming responsibility for the attacks



Israel's military said militants in Gaza launched mortars and rockets in several barrages. Above, an Israeli vehicle Tuesday patrolled the border.

on Israel. They said the attacks were a response to Israel's recent attacks that have killed Hamas and Islamic Jihad militants as well as for violent clashes during recent protests.

The groups faulted Israel for this week's violence, citing events "48 hours ago."

Nikki Haley, the U.S. ambassador to the United Nations, on Tuesday called for an emergency Security Council meeting to respond to attacks on Israel from Gaza.

More than 100 Palestinians have been killed in clashes

with the Israeli military near the fence separating Israel and Gaza since the end of March, when protests there began. But Tuesday marked the first time since then that militants in Gaza fired into Israel, an attack that could result in a major escalation of recent clashes.

Israel's military assesses that Hamas, which controls the Gaza Strip, chose to allow Palestinian Islamic Jihad to attack because of "its lack of tactical success along the fence," including the group's inability to harm Israeli soldiers or suc-

cessfully breach the border, Israeli military spokesman Lt. Col. Jonathan Conricus said in a briefing.

Earlier Tuesday, Mr. Netanyahu said "Israel will make anyone who tries to harm it pay a heavy price." He added: "We see Hamas as the one responsible for preventing these attacks against us."

Israel's military urged residents living near the Gaza fence to stay close to shelters on Tuesday afternoon.

The Israeli military said the tunnel it destroyed started in

Gaza, ran through Egypt's Sinai Peninsula and then extended 900 yards into Israeli territory. Israeli officials said it was intended for both carrying out attacks in Israel and transferring munitions to Egypt.

American officials also faulted Hamas for the mortar attacks. "Hamas has failed—all it can offer is terror," said Jason Greenblatt, President Donald Trump's chief negotiator, who is part of an effort to draft a Middle East peace plan. "Palestinians in Gaza need real leaders to work on Gaza's real problems."

# Tensions in Southwest Syria Test Moscow-Tehran Ties

BY RAJA ABDULRAHIM  
AND FELICIA SCHWARTZ

The Syrian regime is threatening to move against an anti-government stronghold in the country's southwest, raising pressure on Russia to keep Iran and its proxies out of a fight that could inflame tensions with Syria's neighbor, Israel.

The Syrian military has dropped leaflets urging rebels to surrender and carried out scattered artillery attacks on their positions in the southwest province of Daraa. One of the regime's strongest militia has been redeployed from the capital Damascus to the region, where proregime media have reported preparations for a "full-scale assault" by government forces.

Rebels say, however, that the regime is trying to pressure them into a negotiated settlement without a fight. "We haven't seen the army amassing in the south," said Raed Radi, a commander of a Daraa rebel group. "There is a propaganda war being waged by the regime."

The maneuvers have cast a spotlight on a particularly

complicated corner of Syria bordering both Israel and Jordan. For nearly a year, Russia, the U.S. and Jordan have backed a tenuous cease-fire that has allowed Syrian rebels to establish relative stability in the country's southwest, stretching across the provinces of Daraa and Quneitra. Now the prospect that Iranian-backed forces, broadly present in regime-controlled areas, could join an offensive there is raising tensions with Israel and complicating Moscow's ties with Tehran.

Russia has joined with Iran to back Syria's President Bashar al-Assad in retaking large parts of the country, but Moscow also wants to avoid getting drawn into a fight with Israel and the U.S. The current cease-fire in the region stipulates that no foreign forces should be present there.

With Islamic State nearing defeat in Syria, Israeli officials said they see a welcome and growing opportunity for Russia to push Iran out of the country entirely.

"My assessment is the Russians are interested in stabilizing their achievements in



Damage last week in a rebel-held part of Daraa after regime shelling.

Syria, formidable achievements, and I think they too understand that if the Iranians continue on the present course, this will lead to escalation and will blow their plans out of the water," Chagai Tzuriel, director general of Israel's Ministry of Intelligence told reporters

Monday. "I think they don't want this either."

In a surprise meeting with Syrian President Assad this month, Russian President Vladimir Putin said, "It is necessary for all foreign forces to withdraw from" Syria. The comment, widely interpreted

as a swipe against Iran, came as Israeli Prime Minister Benjamin Netanyahu visited Moscow. It was echoed on Monday by Russian Foreign Minister Sergei Lavrov, who said only Syrian forces should be deployed in southern Syria.

Iran has been facing growing pressure over its presence in Syria.

This month, Israel carried out its largest-ever military operation against Iranian positions in Syria, striking dozens of Iranian military sites across the southern and central parts

of the country.

The U.S. has also increased pressure on Tehran, with President Donald Trump withdrawing from a nuclear deal with Iran that eased sanctions on its battered economy. This month, Secretary of State Mike Pompeo outlined 12 requirements for a new nuclear deal with Iran, including withdrawing all its forces from Syria.

Israeli officials say there are indications Russia is prepared to compel Iranian forces, including the Iran-backed militia Hezbollah, to move back from the Israeli border with southwestern Syria.

Israel isn't counting on that possibility alone, however. "We are acting against an Iranian military presence anywhere on Syrian territory," Mr. Netanyahu said Tuesday. "An Iranian departure from southern Syria alone will not suffice."

Russia's response to Israeli strikes on Iranian targets in Syria has been muted.

The U.S., meanwhile, has expressed concern that any offensive in southwestern Syria could jeopardize stability along Jordan and Israel's borders.

# France Helps Broker Vote In Libya

BY MATTHEW DALTON  
AND JARED MALSIN

Libya's warring political factions reached a preliminary deal to hold national elections in December, in a push by French President Emmanuel Macron to reinvigorate the country's peace process after seven years of bloody internal conflict.

Meeting in Paris at France's presidential palace on Tuesday, representatives of Libya's internationally recognized government, based in western Libya in Tripoli, and rival armed forces based in the east agreed to a timeline that would lead to presidential and parliamentary elections on Dec. 10. Other Libyan political factions endorsed the plan, as did regional powers that have taken sides in the conflict, such as Egypt, Turkey and the United Arab Emirates.

But the Libyan representatives must still win approval from their constituencies back in Libya and beat back opposition from powerful militias that weren't present.

The meeting marks the latest international attempt to corral Libya's fractious regional forces behind a political solution to end the chaos that erupted after the overthrow of strongman Moammar Gadhafi in 2011.



Yemeni forces took positions after seizing land near Hodeidah from the Houthi militia on Sunday.

# Yemeni Forces Advance on Key City

By ASA FITCH

Yemeni forces backed by a Saudi-led military coalition are closing in on the Red Sea port city of Hodeidah, a campaign that could prove a turning point in the war against the Houthis and a setback for Iran's interests in the country.

The military has swept to within about 12 miles of Hodeidah, the official Saudi Press Agency reported on Tuesday, citing a coalition spokesman. Its capture could isolate the Houthi rebels and push them toward negotiations to end the more-than-three-year war.

Yemen has emerged as one of the main flashpoints in the Middle East as rivals Saudi Arabia and Iran vie for greater influence in the region. The

Trump administration, while pulling out of the 2015 nuclear accord with Iran, demanded that Iran halt its support for militant groups in the region—appearing to give its allies a freer hand in confronting Iranian allies in the Middle East.

The coalition spokesman declined to say whether the Trump administration approved of the assault on Hodeidah. American officials couldn't immediately be reached for comment.

While the Houthis don't take commands from Tehran, a United Nations panel determined in January that Iran violated an arms embargo by shipping ballistic missiles to the Houthis that the rebels used to attack Saudi Arabia. Iran denies arming the Houthis.

Hodeidah is the Houthis' only major outlet to the sea, providing a crucial economic lifeline and a pathway for aid to help alleviate one of the world's worst humanitarian crises. The Saudi coalition accuses the Houthis of using Hodeidah to smuggle in Iranian weapons, including missiles fired at Riyadh and other parts of Saudi Arabia.

By capturing Hodeidah, the coalition hopes to push the Houthis toward political talks to end the war, but coalition forces have been preparing for a Hodeidah assault for more than a year, leaving the Houthis plenty of time to dig in.

The U.S. gives the coalition logistical and intelligence support, but American forces aren't directly involved in the surge toward Hodeidah.

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## IN DEPTH

## WASH

*Continued from Page One*

washers spraying down dirty driveways, sidewalks, roofs, siding and cars are gaining steam. Viewers say they feel instant gratification watching grime vanish without having to lift a finger themselves—except to click on a video.

Fred Stoverink doesn't own a pressure washer but likes watching online posts of other people using them, turning the volume up so he can hear the steady blast of water blend with the hum of the machine's motor. "It's satisfying because you're watching something that in your mind you think is permanently dirty and this water jet, which makes your garden hose look completely weak, is cutting right through the grime," he says. "There's a sense of catharsis."

Usually watching these videos relaxes him, but one caused distress because a dirty stone on a patio was overlooked. "I was like 'you've gotta get that one for God's sake or I'm not going to sleep tonight,'" says Mr. Stoverink, a Los Angeles-based actor and woodworker. "It becomes infuriating when somebody misses a spot."

Jon Peters, a woodworker in Red Bank, N.J., and creator of the suspenseful patio-washing footage, assured Mr. Stoverink via the video's comment section that he eventually did clean the dirty stone in question. "Trust me," Mr. Peters wrote.

Mr. Peters started using a pressure washer last fall and filmed his work in case the footage would appeal to online followers of the woodworking projects he posts. The video, which starts with a pitch for a hose, shows him cleaning his courtyard. With pressure washing, "You can see your progress

so obviously," he says. "There aren't many things in life that you can start and finish and get that feeling of accomplishment."

Videos can range from under-a-minute, time-lapsed cleanup jobs to compilations of multiple tasks that span an hour or more.

Keith Rossiter, owner of Rossiter Exterior Cleaning in Racine, Ohio, last year spent \$1,500 on a drone to film his pressure-washing

jobs after spotting some amateur pressure-washing videos online. "They weren't that good and they weren't time-lapsed," says Mr. Rossiter, who has worked as a pressure washer since he was a teenager.

Now 40 years old, Mr. Rossiter has his 19-year-old son,



Pressure washed away

Trent, operate the drone to film his dad cleaning driveways and patios across southeast Ohio. That aerial footage, posted on social media, is the main form of advertising for their growing business, Mr. Rossiter says. He gets permission from each client before filming the work, and so far no one has refused, he says.

Bright afternoons, especially close to noon, provide the best light for filming concrete, says Mr. Rossiter, who doesn't like shadows in his footage. The dark algae that coat the residences along the portion of the Ohio River where he lives are another advantage. "It builds up for years and makes a really crisp line as I go through with my pressure washer."

More homeowners are adding pressure washers to their outdoor-equipment arsenal as they increasingly spend time in their backyard, product makers say. The machines are getting easier to use, they say. New iterations of low-maintenance electric models have more spray power, which is quantified in pounds per square inch, or psi. The higher the psi, the faster and more thoroughly dirt can be removed, and the more it costs—washers can range from about \$150 to commercial-grade machines that cost thousands of dollars.

Lest people be intimidated by too much power, Briggs & Stratton sells its Powerflow+ pressure washers with a seven-in-one nozzle that allows users to adjust the spray pressure. "We like to say it is gentle enough to clean your car, strong enough to clean your driveway," says Molly Mulcahy, the company's senior director

of marketing for turf and consumer products. "People are intimidated because they don't want to take the paint off their house or car—that's an expensive thing to fix."

Stihl AG started selling pressure washers in the U.S. last year, selling 40% more machines than it expected, requiring the company to add extra production lines and work shifts to meet demand, says Brian Manke, Stihl's product manager.

Lauren Reeves, an office-supply saleswoman in Norfolk, Va., sometimes watches pressure-washing videos, but prefers using a pressure washer herself. Freeing her front porch of dirt and spider webs before settling down with a glass of wine is her favorite household chore, she says. "I like to see the before and after; that's the thrill," she says. "You just stand there and wave your magic wand around."

## LAW

*Continued from Page One*

they aren't paid excessive compensation, which would be considered self-dealing. About 10,000 private foundations checked boxes on their fiscal 2016 returns indicating they legally compensated insiders.

It's impossible to determine from tax data how many of the exemption claims were clearly justifiable, or whether some might stretch the definitions.

Even if legally defensible, transactions between foundations and insiders may violate the spirit of the law, said William Josephson, a former charities regulator in New York. Charitable-foundation assets are there for "serving a public purpose, and compensating you is not a public purpose," he said.

Foundation insiders deemed by the Internal Revenue Service to be self-dealing, such as via business with the foundation, must pay extra taxes and unwind the deals. The IRS imposes such extra taxes on about 200 people a year. The agency audits less than 1% of nonprofit tax filings.

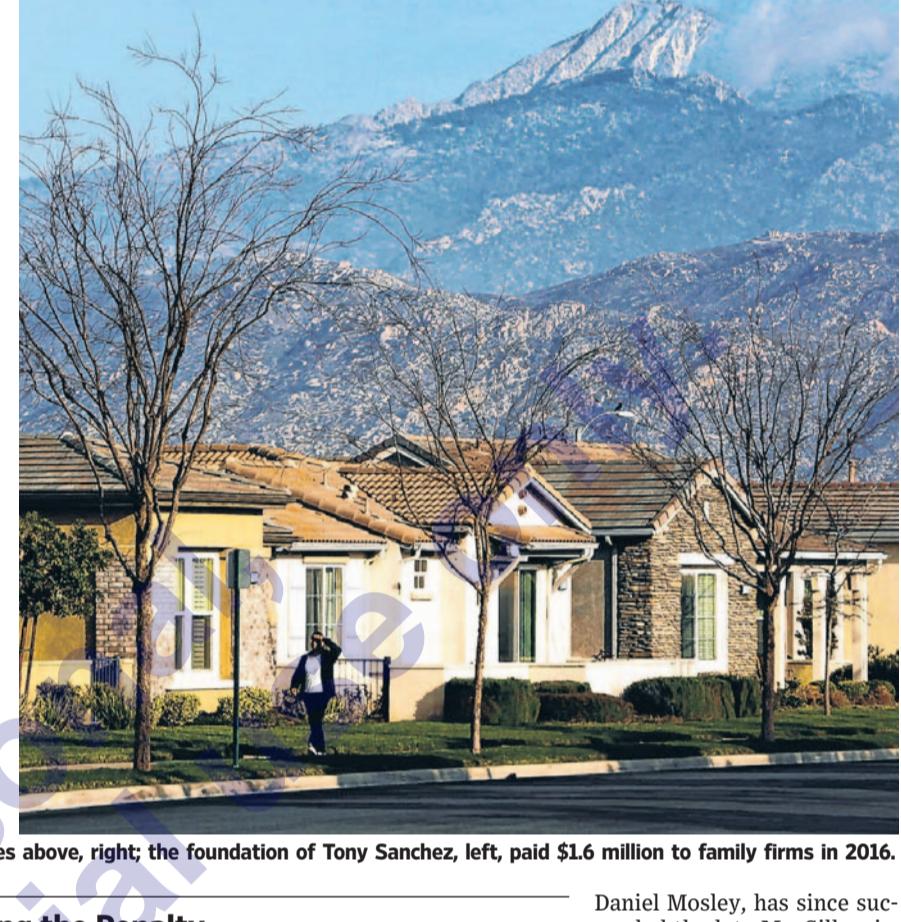
Federal regulations say foundations may hire insiders' businesses for certain kinds of professional work: law, banking and investment management.

The Journal found multiple examples of private foundations paying seven-figure sums to insiders' firms. They included the foundation of Antonio R. "Tony" Sanchez Jr., a Texas oilman who was the Democratic nominee for governor in 2002.

His foundation made charitable donations in 2016 of \$1.5 million, according to its tax return. The same year, it paid \$1.6 million to two Sanchez family-owned companies for investment and accounting services, its tax filing says.



A foundation was used in a land transfer to Hovnanian, builder of the homes above, right; the foundation of Tony Sanchez, left, paid \$1.6 million to family firms in 2016.



FROM LEFT: ROBERT MCGEE/GETTY IMAGES; PATRICK T. FALLON/BLOOMBERG NEWS

Through an attorney, Mr. Sanchez declined to comment.

The law to prevent self-dealing at private foundations encompasses the spouses, parents, grandparents, children, and grandchildren of insiders—but not siblings. "I think it was just an oversight," said Bruce Hopkins, a Kansas City attorney and expert in private foundation law. "I know of no particular reason why [siblings] should be excluded."

The exception helped make possible a series of deals in which about 500 acres of California land owned by Hirair Hovnanian was transferred to his foundation and then sold to the publicly held home builder Hovnanian Enterprises Inc. over about a decade.

Asked why Mr. Hovnanian

structured his foundation's donations and sales as he did, his daughter Siran Sahakian, an officer of the foundation, said it was probably for tax reasons, but she didn't remember the details. She said her father was unable to comment for health reasons.

Edele Hovnanian, another daughter and foundation officer, said she met with "a number of local and national builders to negotiate offers" before agreeing to the sale to Hovnanian Enterprises, which she said needed until 2013 to pay for the land because of the housing downturn.

A spokesman for Hovnanian Enterprises said its purchase was a "heavily negotiated, arms-length transaction" at market value.

## No lending

Among things private foundations can't do, except in rare cases, is make loans to their insiders.

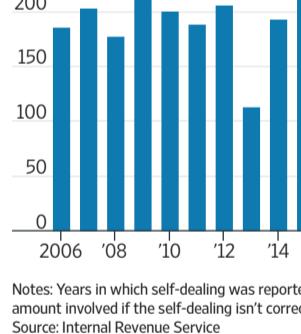
The latest available tax filing of the Tufenkian Foundation, dated in November 2015, reported \$9.7 million in outstanding loans to a carpet company owned by the foundation's president.

James Tufenkian said his foundation never made a loan to his carpet company, which is called Tufenkian Import-Export Ventures. Rather, he said, the carpet company is paying interest on promissory notes donated to the foundation about 20 years ago. "The notes with their above-market interest rates were created for purpose of donation to the Foundation," he said.

## Paying the Penalty

The IRS imposes extra taxes on about 200 people a year for self-dealing at private foundations, out of insiders at more than 100,000 foundations.

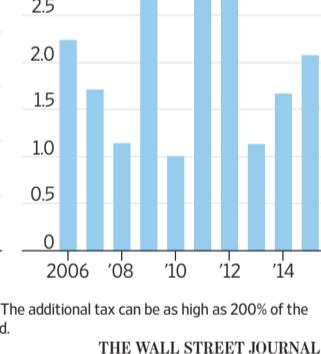
## Self-dealers taxed



Notes: Years in which self-dealing was reported. The additional tax can be as high as 200% of the amount involved if the self-dealing isn't corrected.

Source: Internal Revenue Service

## Revenue collected



THE WALL STREET JOURNAL.

Mr. Hopkins, the expert on foundation law, said such arrangements are a way foundations can get around the 1969 statute. A philanthropist can't donate money to his private foundation, take a tax write-off, and then have the foundation lend to a business he owns—but he can make a loan to his business and then make a tax-deductible donation of that loan receivable to his foundation.

Mr. Tufenkian said he didn't remember who made the loans to his carpet company and donated the I.O.U.s to his foundation. Mr. Tufenkian said the loans now are due in 2021.

The law saying foundations may pay insiders a reasonable sum for certain personal services doesn't clearly define reasonable. In 2016, about 60 foundation insiders earned at least \$100,000 while working one hour a week or less on foundation business, the Journal analysis found.

Several were trustees of a single foundation, and sons of the person who funded it.

The funder was the late Walter Helmerich III, former president of Tulsa, Okla., oil-driller Helmerich & Payne Inc. His foundation paid \$116,000 to each of its trustees—his five sons—in 2016.

One son worked an average of four hours a week on foundation matters and the others an average of one hour, its tax filing shows.

The men declined to comment.

Some good-governance groups say private foundations shouldn't pay their board members at all, and most don't.

The risk is that wealthy benefactors could partly skirt estate taxes by paying children through their foundations, said Dean Zerbe, a former tax adviser to the Senate Finance Committee under Sen. Chuck Grassley (R., Iowa).

A foundation called Carmel Hill Fund paid nearly \$10 million to its trustees over eight recent years, its tax filings show.

Daniel Mosley, has since succeeded the late Mr. Gillespie. Together, Messrs. Goldfarb, Gillespie and Mosley earned \$9.4 million from the foundation from 2009 through 2016.

Mr. Goldfarb, who earned nearly \$5 million as a trustee from 2009 to 2016 while also serving for much of that time as CEO of the firm managing Sequoia fund, declined to comment.

Mr. Mosley said the foundation was following New York state law in determining the payments. Carmel Hill is a charitable trust, and New York law says trustees of these are entitled to 6% of their income. Carmel Hill reported having \$313.6 million in assets at the end of 2016.

Mr. Mosley said Carmel Hill had high income in recent years because of shares donated by Mr. Ruane in his firm, adding that these shares have been sold, so trustee payments should be smaller in the future. He also said Cravath requires him to turn over his trustee fees to the law firm.

## Fees must be fair

Marcus Owens, a former head of the IRS division that oversees charities, said the agency can challenge trustee fees set under a state law. He said the key issue is whether fees paid to trustees are fair, in view of how much work they do.

Carmel Hill's trustees each spent 30 hours a week on foundation work from 2009 to 2016, its tax returns said.

"I was not aware that this statement had been made," Mr. Mosley said. "I have instructed the accountants who prepared the returns to correct this going forward given that I do not devote that level of time to this work."

Carmel Hill's charitable giving has been in decline. Its grants for the past five years totaled \$38 million, down 43% from the previous five.

Foundations typically must spend 5% of their assets a year on charitable work, by federal law, though they are permitted to count their overhead spending toward the total.

Carmel Hill does that. Its payments to trustees, sometimes upwards of \$1 million in a year, help it reach the 5% threshold.

—Lisa Schwartz contributed to this article.

## Classifying Nonprofits

Tax-exempt organizations registered with the IRS can fall into several categories.

## All nonprofits, 1.7 million

## Charities, 1.3 million

Organizations that conduct charitable activities.

## Other nonprofits, 0.4 million

Includes credit unions, business associations and social issue groups.

## Public Charities, 1.2 million

Hospitals, colleges and other organizations, such as the American Red Cross, that receive backing from the general public.

112,000

## Private foundations

Charities, such as the Bill & Melinda Gates Foundation, that are often backed by a single donor or family. Insiders are barred from self-dealing.

## Number of private foundations, by assets

76,000

Less than \$1 million

28,000

\$1 million to \$9.9 million

8,000

\$10 million or more

Note: Numbers rounded to the nearest thousand.

Source: Internal Revenue Service

THE WALL STREET JOURNAL.

# GREATER NEW YORK

## MGM Bets \$605 Million on Yonkers Casino

Deal is the company's latest move to grab a piece of the New York area gambling market

BY AUSTEN HUFFORD

**MGM Resorts** International is buying the Empire City Casino in Yonkers, N.Y., for about \$605 million, helping a push by the gambling-venue operator to expand its presence on the East Coast.

The harness-racing track and casino at Yonkers Raceway outside New York City has been owned by the Rooney family for more than four decades.

The Wall Street Journal reported in November that the casino was exploring strategic alternatives, including a possible sale or partnership. MGM also will assume roughly \$245 million of debt in the deal.

Empire City is about 15 miles from Times Square. The



Empire City Casino had been exploring strategic alternatives, including a possible sale or partnership.

97-acre site offers slots and electronic table games, dining and entertainment, and live and simulcast horse racing.

It was founded in 1899 as the Empire City Trotting Club.

In 1972, the Rooney family bought Empire City for \$52 million. Tim Rooney, whose family owns the National Football League's Pittsburgh Steelers, is the chief executive of

before 2023.

The deal comes as casino operators have been on the hunt for deals in recent months, and follows a Supreme Court ruling earlier this month that lifted limits on the U.S. sports-betting market.

The high court invalidated federal prohibitions from 1992 that essentially had restricted the legal gambling market to Nevada. Gambling operators, sports leagues and state governments are now vying for their share of the potential revenue from an expansion of sports betting, as state lawmakers discuss tax rates and possibly fees to be charged by sports leagues, such as the National Basketball Association and Major League Baseball.

The deal is MGM's latest move to grab a piece of the New York City metro area's gambling market. The company largely operates casinos in Las Vegas, but has operations in Atlantic City, N.J., Detroit and Macau.

Last fall, MGM said it wanted to open a \$675 million casino on the waterfront in Bridgeport, Conn., which is reachable by commuter rail from New York City.

State legislators have proposed an open competition to build a new casino in Connecticut, a move that could strain the state's relationship with Native American tribes that manage the other casinos in the state.

In the year ended March 31, Empire City reported about \$230 million in revenue and about \$70 million in adjusted earnings before interest, taxes, depreciation, and amortization.

MGM Resorts said it plans to sell Empire City to the company's real-estate investment trust MGM Growth Properties LLC. MGM Resorts will then lease the property back from MGM Growth Properties and operate it. The transactions are expected to close in the first quarter of 2019.

## Yellow-Cab Drivers Push for Limits on Uber

BY PAUL BERGER

Angry taxi drivers gathered outside City Hall on Tuesday to call for tighter regulation of ride-hailing services like Uber following the suicide of five cabdrivers in as many months.

Bhairavi Desai, executive director of the New York Taxi Workers Alliance, said the influx of ride-hailing cars during the past few years has driven down wages, forcing many drivers to the brink of despair.

Ms. Desai's group is calling for a cap on the number of ride-hailing vehicles on city streets. It also wants the city to raise wages by making minimum-metered fares uniform across the industry.

Many drivers say their earnings have plunged since the introduction of ride-hailing competition.

"We've never seen this level of desperation," said Ms. Desai, whose group organized the rally days after a body pulled from the East River last week was identified as Yu Mein "Kenny" Chow.

Mr. Chow, a yellow-cab driver from Queens, went missing on May 11. He had been struggling to repay the \$700,000 loan on his taxi medallion, the license that permits drivers to pick up passengers from the street in the city. He also recently had learned that his wife has stage 4 cancer.

His brother, Richard Chow, a medallion owner and driver, said at the rally that he has to work 12 to 14 hours a day to make the same as he would have earned five years ago driving for eight hours.

"I love my brother," said Mr. Chow, 59 years old. "I just worry that he left behind a wife and a daughter."

Since December, in addition to Mr. Chow, two livery driv-



Taxi drivers demonstrated Tuesday for higher wages after a fifth driver suicide. Below, police investigate a driver's death in February.



ers, one black-car driver and one yellow-cab driver have taken their lives. One of the drivers, Doug Schifter, killed himself outside City Hall.

according to the New York City Taxi and Limousine Commission. About 2,000 additional vehicles are licensed every month, according to the commission, mostly to serve app-based companies.

At the rally, several speakers railed against Uber and against "Wall Street" for giving app-based companies the ability to undercut fares of traditional drivers.

"Shame on the apps, shame on Uber and the gig economy," said one speaker, Victor Salazar, a taxi workers alliance member.

A spokeswoman for Uber, Danielle Filson, said in a statement that the company was "deeply saddened" by Mr. Chow's death.

"Drivers who own individual medallions have been left

behind by change and exploited by lenders, and we support action that eases their financial burden," Ms. Filson said.

The New York City Council's Committee on For-Hire Vehicles is considering a raft of bills aimed at helping all taxi drivers, including legislation that would limit the number of for-hire vehicle licenses in the city with the hope of boosting drivers' earnings.

Spokesmen for Council Speaker Corey Johnson and Mayor Bill de Blasio said in separate statements Tuesday that they are looking at ways to improve conditions for drivers.

Ms. Desai said the industry's best hope lies in legislation. "Anything else is just lip service," she said.

## GREATER NEW YORK WATCH

### NEW YORK

#### Annual Ticket Sales Surge on Broadway

It is boom time on Broadway. Annual ticket sales for the 2017-18 season, which concluded this past Sunday, increased by 17.1% to nearly \$1.7 billion, according to the Broadway League, the trade group that tracks the industry.

Additionally, annual attendance increased by 3.9% to 13.8 million.

Both the sales and attendance figures were new all-time highs, according to the league.

—Charles Passy

### CONNECTICUT

#### State Pier Targeted For \$15 Million Fix-Up

Connecticut is planning to spend \$15 million to upgrade the State Pier in New London for use by developers of several offshore wind projects.

Gov. Dannel P. Malloy announced a plan Tuesday that would include construction of a heavy lift pad on the pier. He said the improvements would give developers a well-protected harbor from which to deploy equipment for the construction of wind turbines off the coasts of Rhode Island, Massachusetts, New York and New Jersey.

Mr. Malloy said the spending would help spur economic development.

—Associated Press

### NEW YORK

#### Three Charged in Extortion Scam

Three men were charged with extorting money from more than 55 people across New York state by falsely claiming to have kidnapped their relatives and threatening to harm them if ransom wasn't paid, authorities said.

A 27-year-old man from Puerto Rico and two Syracuse men, ages 26 and 40, were charged with multiple counts of grand larceny, attempted grand larceny, coercion and conspiracy, authorities said Tuesday.

The extortion operation involved phoning people and claiming to have taken a relative from an accident scene where someone had been injured. Authorities said the ringleader would threaten to harm the relative if money wasn't paid to cover the injured person's insurance bills.

—Associated Press

### CONNECTICUT

#### Search Suspended For Missing Boater

The Coast Guard suspended its search Tuesday for a missing teen kayaker.

William Zadrozy, 18 years old, was last seen at the mouth of the Connecticut River.

Responders received a call at 5 p.m. Monday reporting an overturned kayak with a life-jacket and fishing gear on board. Over 381 square miles were searched, authorities said.

—Associated Press

## Restaurant Takes Comfort Food to New Heights

BY CHARLES PASSY

In the 28 years since it opened, Bubby's has become a culinary staple in Manhattan's Tribeca neighborhood, a no-frills, family-friendly restaurant known for such comfort-food favorites as pancakes and pie.

Now, Bubby's is taking comfort to a whole different level.

The restaurant, which has a second location in the Meatpacking District that opened in 2013, is the latest in New York City to introduce menu items made with cannabidiol, a derivative of the cannabis plant, as in marijuana or hemp.

And while cannabidiol, otherwise known as CBD, doesn't have the "high" associated with tetrahydrocannabinol (THC), another cannabis compound, it often is touted by cannabis supporters and some medical experts as offering a host of benefits, including stress and pain relief.

Starting this week, Bubby's

will feature drinks made with hemp-derived CBD. The offerings, including coffee, tea and lemonade, will sell for \$10 each.

Bubby's owner Ron Silver has long been interested in cannabis from a medical and business perspective.

"I'd rather sell cannabis drinks than liquor drinks any day of the week," he said. (Bubby's continues to serve alcohol as well.)

Even without the CBD products, Mr. Silver said business at Bubby's has been strong during the past year, with sales up nearly 13% over the same period last year.

Bubby's two New York City restaurants have annual revenue of about \$16 million, he said.

The Drug Enforcement Administration considers CBD a controlled substance, like marijuana itself, and therefore is illegal.

But in New York and some other states, the production of

hemp-derived CBD is legal as a result of federal agricultural legislation that allows for the cultivation of hemp as a crop at the state level, according to Shawn Hauser, a senior associate with Vicente Sederberg, a law firm based in Colorado that specializes in marijuana issues.

In April, New York Gov. Andrew Cuomo, a Democrat, announced an expansion of a state research program that looks at how hemp can be grown for a variety of industrial uses, from food to animal bedding.

"By providing an alternative crop for our farmers, industrial hemp has the potential to change the landscape of

our agricultural economy," Mr. Cuomo said at the time.

In the city, Bubby's is hardly alone in adding CBD to its offerings. A wave of food and beverage retailers is putting the cannabis compound in everything from frozen desserts to coffee drinks.

Soho Cigar Bar in lower Manhattan recently has introduced a line of CBD cocktails, with names like Quality Burn and Netherlands & Chill.

"You're always looking for the next new ingredient," bartender Jared Bailey said.

Mr. Silver said he has plans beyond Bubby's for CBD offerings. With a team of investors, he has launched a company, called Azuca, that will market CBD and marijuana products in New York and elsewhere, as laws apply.

Azuca CEO Kim Sanchez Rael said the company has raised at least \$1 million from investors, including Mr. Silver. "We expect to be a global brand," she said.



Bubby's is putting a little hemp-derived kick in some of its drinks.

AMIR LEVY FOR THE WALL STREET JOURNAL

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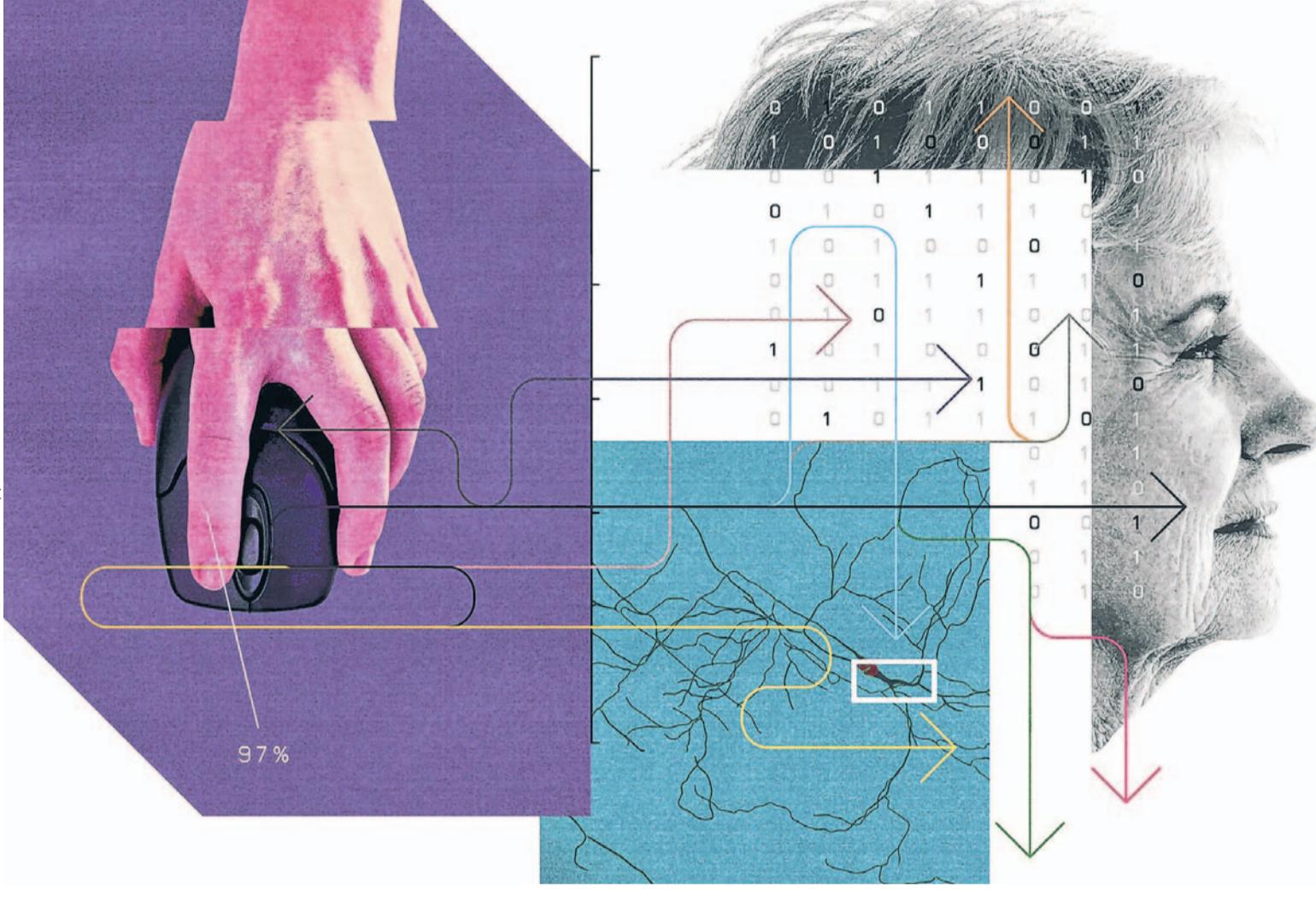
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# LIFE & ARTS



YOUR HEALTH | By Sumathi Reddy

## A Click Could Give Clues To Parkinson's or Alzheimer's

A study shows how artificial intelligence might detect medical conditions traditional medicine misses

**HOW YOU TYPE** or move a mouse could help detect whether you have a serious disease like Parkinson's.

A Duke University doctor working with Microsoft researchers sifted through data on the physical movements of computer users that came from millions of internet searches. Their study found links between some behaviors—such as tremors when using a mouse, repeat queries and average scrolling velocity—and Parkinson's disease. They used artificial intelligence, or a computer analysis, to identify which of the metrics separated a control group from those searching for Parkinson's disease symptoms.

The research is part of a trend sweeping health care: the use of artificial intelligence (AI) to help better diagnose and treat patients. The goal is to capture information by monitoring their everyday movements and behaviors. This could yield insights never possible in a pre-digital age. It also, in the case of commercial companies, raises questions about how best to protect the privacy of research subjects.

AI gives researchers a chance to get much more real-time information on how people function, says Jeffrey Kaye, director of the Oregon Center for Aging and Technology, part of Oregon Health & Sci-

ence University.

"Right now clinicians basically use the old-fashioned way of gathering information," he says. "It's like medical anthropology. You're trying to detect things that are happening based on really very little historical data."

Doctors say what they call digital biomarkers could be especially useful for brain disorders like Parkinson's and Alzheimer's.

"Both of these conditions in their very early stages can be very hard to differentiate from a host of benign conditions, so the misdiagnosis rate is high," says Murali Doraiswamy, director of the neurocognitive disorders program at Duke University, who was part of the Microsoft research.

Using a computer keyboard and mouse to monitor one's function means researchers need no special equipment. Plus, they can capture data over long stretches, Dr. Doraiswamy says. "You can see how someone is changing over time, which might give you greater sensitivity and accuracy in making a diagnosis."

The study he worked on with Microsoft analyzed more than 31 million user searches on Microsoft's search engine, Bing, over 18 months. About 700 of the user

searches were searching for Parkinson's disease symptoms, while the remainder were considered the control group. The data were anonymized and can't be linked back to users, Dr. Doraiswamy says. NPJ Digital Medicine published the results of this research in April.

This kind of data-driven research has grown more common. Adriana Seelye, a neuropsychologist at the

Minneapolis VA Health Care System and Dr. Kaye's former student, has focused on using sensors in cars and on computers to help detect early Alzheimer's disease.

"What we're working on is us-

ing the information that these sensors give us to figure out what the most important patterns are that emerge when someone is going from normal, healthy aging to early Alzheimer's disease," Dr. Seelye says.

In a study published in 2017 in the journal *Alzheimer's & Dementia*, she and co-researchers followed 110 healthy elderly adults for up to three years and six months. They tracked the participants as they did a weekly online health survey. They found 29 people ended up with mild cognitive impairment (MCI), which puts them at risk for developing Alzheimer's disease. Those with MCI took longer to complete the survey.

Dr. Seelye has also studied how people drive using information from the sensors installed in data ports in cars. The data port relays information on the number of trips taken, duration of trips, left

turns versus right turns and time spent on the highway versus local roads, among other information.

In a pilot study published in 2017 in the *Journal of Alzheimer's Disease*, Dr. Seelye and co-researchers analyzed the driving information of 28 people over an average of about 200 days. They found that those with MCI drove fewer miles and showed less variability in their driving patterns.

Now she's working on a federally funded study trying to replicate the findings with more than 100 patients followed over four years.

Dr. Doraiswamy of Duke says the next step is to test the digital metric they came up with in the Bing study to see if it would line up with the computer logs of patients already diagnosed with Alzheimer's or Parkinson's disease, with their consent.

Microsoft declined to comment on the study. A spokeswoman for Microsoft says Bing users' search and mouse activity is analyzed in a way that is not directly tied to individual users, which is common industry practice.

Arvind Narayanan, an assistant professor of computer science at Princeton University who researches and teaches about information privacy and security, says companies routinely collect computer user information such as mouse movements. "Do users know this is going on? I would say this collection of this information is disclosed in a privacy policy," Dr. Narayanan says. "But it is generally not the case that users read the privacy policy and understand it before using a site."

Privacy policies are usually vaguely worded, so it can be hard to decipher what the information will be used for, he says. Using the information for medical research without clear notice seems "inappropriate," he says. "On the other hand, what is an ideal consent model for this kind of surprising use of big data in a medical research context?" Dr. Narayanan says. "I think there are genuinely open questions and people are still working out the answers to these things."

Dr. Kaye, whose research has used sensors on keyboards and other technology in his studies, says while patient privacy can be a concern, studies have found links to brain diseases based on how people drive.

Other studies have found links to brain diseases based on how people drive.

Dr. Doraiswamy says the Microsoft researchers were able to analyze the

data after they were made anonymous with no intent to ever link back to the users.

"So this type of data is generally considered acceptable to analyze because it's de-identified, so there's no privacy issues," Dr. Doraiswamy says.

He notes companies and academic researchers are increasingly analyzing user data to flag for mental health and medical conditions.

Google unsuccessfully tried to use its data to predict flu outbreaks. Facebook has analyzed data to determine suicide risk, and researchers in Vermont published a study using Instagram photos to identify markers for depression.

### WELLNESS

## IS THE BIG CLINICAL TRIAL OBSOLETE?

BY LUCETTE LAGNADO

**SWEEPING CLINICAL** trials in which thousands of patients are studied for years at a stretch have long been the Holy Grail of medical research—especially when funded by the federal government.

But in the era of personalized medicine, where care can be tailored to a person's genetic makeup and doctors analyze a patient's DNA to figure out treatments, big trials are falling out of favor.

Instead, many researchers are arguing for smaller, nimbler trials that involve fewer patients and take less time. This has pitted those who believe small trials make more sense against those who worry that large trials are being cast aside in favor of flash-in-the-pan approaches that won't stand the test of time or efficacy.

To Ursula Matulonis, who treats ovarian cancer and other women's cancers at Dana-Farber Cancer Institute in Boston, the debate over trial size has a special urgency:

Many of her patients are desperately sick.

"You can't wait years to get these medications approved. What we are dealing with are women with cancers and their lifespans are limited. They need medications and they need them now, and they are not looking to wait for five years," says Dr. Matulonis, chief of gynecologic oncology. That is why flexibility in a trial's size is crucial, she contends. "As we become more genetically astute, and understand a type of cancer better, I think those large randomized trials will be hard to do. There won't be that many patients," that fit into one big group, she added.

One of her patients, Janet Sheehan, is grateful for the small clinical trial she has taken part in for the past five years. Ms. Sheehan, a 63-year-old nurse near Boston, was diagnosed with advanced ovarian cancer a dozen years ago. It has come back three times, and at one point she learned that she had a mutation in the BRCA1 gene which indicates a strong predisposition to breast and

ovarian cancer. Dana-Farber suggested in 2013 that she go on a randomized 90-person trial for a drug named Olaparib that showed promise among women with a BRCA1 gene mutation.

She has been taking capsules twice a day and going for check-ups every 28 days since then. Despite side-effects, she has been able to work and carry on. "I have seen my children [grow] and I have seen grandchildren I didn't have then," she says. Ms. Sheehan was on a randomized trial where both groups of patients received treatment with Olaparib. One group got the drug only, the other received Olaparib in combination with another drug, her doctor said, adding, "there was no placebo."

The big randomized clinical trial is an "endangered species," says the senior author of a recent study that charted a decline in clinical trials funded by the National Institutes of Health. "Everyone wants an answer in a hurry. Everyone wants to study a few patients," says Curtis Mein-

Please see TRIAL page A10



Dr. Matulonis says smaller trials have helped some of her patients stay alive.

## LIFE &amp; ARTS

MY RIDE | By A.J. Baime

# A Classic Cord Invokes Indiana's 'Little Detroit'

**Jim Weddle, 64, the managing partner of Edward Jones, in St. Louis, on his 1937 Cord 812 Phaeton, as told to A.J. Baime.**

**FORTY-TWO YEARS** ago, my wife Stacey and I moved to Connersville, Ind., to open a branch office of the investment company Edward Jones. I had been an intern at the St. Louis headquarters while getting my M.B.A., and this was my first "real" job. I've been a car guy since I can remember, and what we found in Connersville was not just a great community, but what was to me an amazing automotive history.

In the 1920s and '30s, an industrialist named Errett Lobban (E.L.)

Cord built Auburn and Duesenberg cars in Indiana. In 1929, he set out to build a car with his own name on it.

Cord created

a state-of-the-art car factory in Connersville to produce Cord and Auburn cars. Historians have called the small town Indiana's "Little Detroit."

When we moved there, my wife got a job at a company based in the old Cord assembly plant and you could see where the assembly line had once been.

Cord cars were luxurious and ahead of their time in terms of styling and engineering. Unfortunately, the Great Depression had a devastating effect on Indiana's auto business. Auburn, Duesenberg, and



**Jim Weddle**

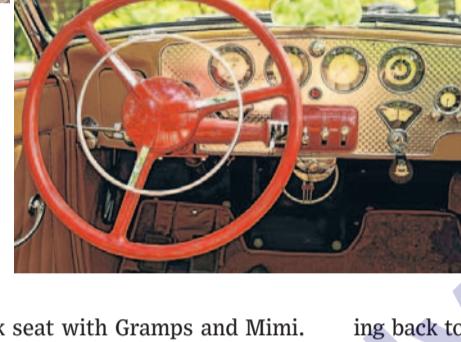
Cord all ended production during the Depression.

But the people of Indiana still celebrate these cars. We would see Cords at July 4th parades in Connersville, and I remember saying to my wife years ago, "Someday we are going to own one of those cars."

In 1984, we moved back to Edward Jones' headquarters in St. Louis. Ten years ago, my wife and I fulfilled our goal of purchasing a Cord. We found our 812 Phaeton through a classic car broker, for \$200,000—top dollar, but it was one of the best I have seen. E.L.

Cord envisioned this car to be a "baby Duesenberg." Coincidentally, our car was built during the final year of Cord's production.

The car has front-wheel drive, retractable headlights controlled by cranks on either side of the dashboard, and a V-8 engine built by E.L. Cord's Lycoming company. Our car had been restored before we bought it, and it is a delight to drive once you figure out its quirks. Our youngest son and his wife were driven from their wedding in our Cord, and our grandchildren delight in riding in the



back seat with Gramps and Mimi.

Today, I have a collection of cars, but the Cord is a sentimental favorite. At the end of this year I will retire from Edward Jones, and travel-

The Weddes fell for Cord cars in 1977 living in Connersville, Ind., where they were built, and later bought this 1937 Cord 812 Phaeton.

ing back to Connersville with this car is on my retirement bucket list.

Contact A.J. Baime at [Facebook.com/ajbaime](https://Facebook.com/ajbaime).

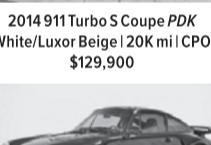
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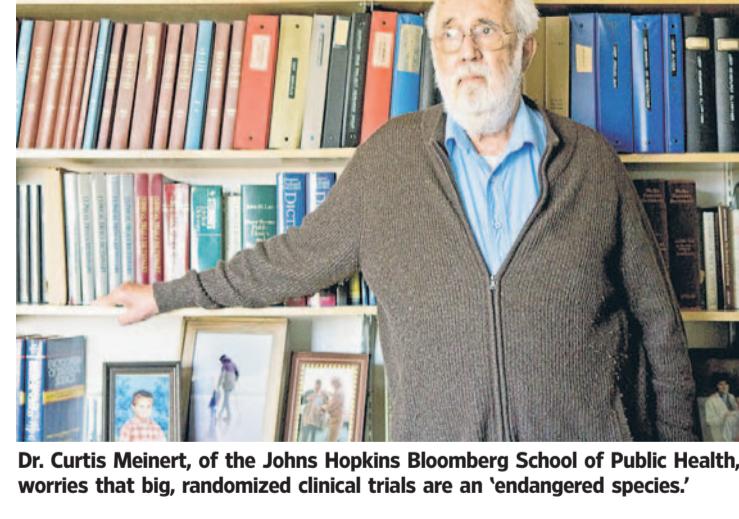
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**Dr. Curtis Meinert, of the Johns Hopkins Bloomberg School of Public Health, worries that big, randomized clinical trials are an 'endangered species.'**

believes in small trials—and does some himself—but has been concerned that large trials have increasingly been critiqued as unnecessary.

TAILORx disproves that: "The results will affect the care of 100,000 women in the United States," he said, because the women will—or won't—receive chemotherapy and that guidance could only have been achieved through a large trial.

To Dr. Norton, the debate may stem from a divide in "world views" among scientists. Young people entering medicine have embraced the

away a lot of good drugs and a lot of good diagnostics because our trials are too small," he said.

At Genomic Health, the company that produced the test in the TAILORx trial, co-founder Steven Shak, the lead developer of the Oncotype DX test, says it came about after many small trials. Small trials can lead to significant innovations, he said, and are "critical to developing technologies." Of course, he added, big trials are crucial "to determine if these [new innovations] really work."

## LIFE &amp; ARTS

## EXHIBITION REVIEW

# Candela: King of Apartments

CLOCKWISE FROM TOP: ROB STEPHENSON/WURTS BROS./MUSEUM OF THE CITY OF NEW YORK; MICHAEL ARNAUD



BY JULIE V. IOVINE

New York

**RESIDENTIAL** architecture offers us the DNA of a moment, revealing telltale traces of values, education, technical advances and workaday lives.

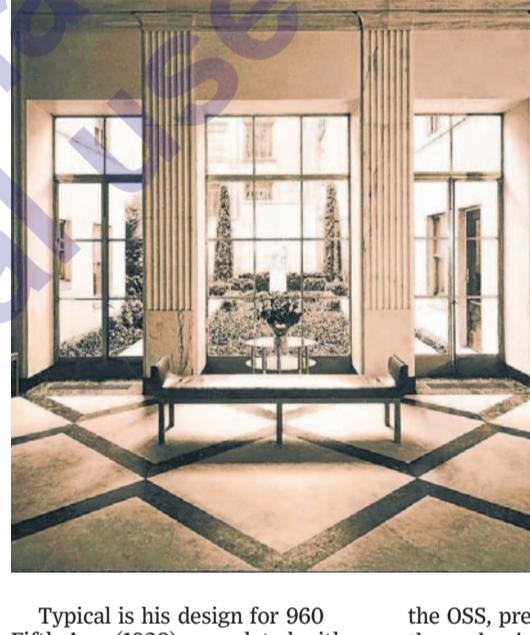
And so a small but insightful exhibition, "Elegance in the Sky: The Architecture of Rosario Candela," at the Museum of the City of New York, cracks the code of some of the most aspirational apartment houses in New York City, translating forms, plans, moldings and marketing materials into revelations about the people who built, bought and lived in them.

Rosario Candela, as those who obsessively pore over New York real-estate listings know, is a name to conjure with, associated with the glamorous Jazz Age of Manhattan apartment living between the two world wars. Candela was the architect of dozens of the most storied penthouse apartment buildings that rose on the Upper East and West Sides of Manhattan when extreme wealth was beginning to be distributed from among the very few to a few more. It was a time when Manhattan glittered, in the words of F. Scott Fitzgerald, with "all the iridescence of the beginning of the world."

In a city of restless and constant transformation, Old Money wealth was decamping for the greener pastures of Connecticut and Long Island while a rising professional class was exploring ways to substantiate its ascension. Deluxe apartment buildings were fast replacing the single-family manses that had themselves superseded



The porte-cochere of 1 Sutton Place South in 2016, left, and lobby looking toward interior courtyard of 19 East 72nd St., below



townhouses and tenements. McKim Mead & White designed the first apartment building on Fifth Avenue in 1910 and by 1931 there were already 43. Seven of them were by Candela, who also was the architect or co-architect of 10 on Park Avenue. These and a few more on Sutton Place are bellwether works

and the subjects of the show.

An Italian immigrant who arrived from Sicily around 1910, Candela studied to become an architect at Columbia University, where Beaux Arts classical knowhow was still valued but inklings of pragmatic modern functionalism were seeping in from abroad.

Typical is his design for 960 Fifth Ave. (1928), completed with Warren & Wetmore and Cross & Cross. A lavish limestone pile, it actually comprises two buildings. The more prominent is basically a stack of 12 mansions facing Central Park (one with a 58-foot double-height living room), indicating that people were only half ready to abandon multistory homes for apartment living. A second section with another entrance at 3 East 77th St. contains more straightforward rentals.

Another stunner, 778 Park Ave. (renamed 780 in 1930, but that's a whole story unto itself), rises from a red-brick and limestone-trimmed

**770 and 778 Park Ave. in 2018, both designed by Rosario Candela**

base to a veritable Italian hill town of terraced penthouses cascading asymmetrically from a pinnacle water tower majestically encased in Corinthian pilasters and Palladian arches. Far from profligate folly, this gloriously staggered array of terraces is the architect's clever answer to setbacks required by zoning laws. At 960 Fifth Ave., he deploys a similar ensemble of terraced setbacks better to accommodate the lower surrounding scale and allow some light and air to penetrate the building stuck behind it on the side street.

The curator of "Elegance in the Sky," Donald Albrecht, puts Candela's work in its place as an essential piece of the city's story as it evolved into a world capital, helping us see these stolid stone-clad containers for the complex and responsive organisms they are. At 856 Fifth Ave. (1928), the architect acknowledges ghosts of the past with a three-story rusticated base and heavily corniced roofline that mimic the neo-Renaissance manse that once stood on the site, only with a midsection stretched over 12 stories.

Finding eloquence aplenty in the language of architecture, rather than dwelling on the over-gossiped-about lives of the tenants within, the show includes newly commissioned photographs of the buildings along with historic images of apartment interiors. Marketing materials are especially fun to deconstruct for clues about what mattered to prospective buyers—who knew that views of the Goldwater Hospital on Roosevelt Island were a selling attraction!

With the stock market crash of 1929, the deluxe apartment building rush slowed to a dribble. Candela's last luxe apartment, designed with Mott B. Schmidt, was at 19 East 72nd St. (1937). Its metal balconies, cornice-free roof and, most notably, the abstract banding of the lowest three floors—possibly quoting Austrian architect Josef Hoffmann's work at the 1925 Paris Decorative Arts Exposition—give a distinct nod to the rising preference for a more modern than classical look.

A deft expert at communicating codes about wealth and ambition, Candela moved on to cryptography, writing several books on the subject and working during World War II for

the OSS, predecessor to the CIA. In these classically deluxe apartment buildings, Candela has bequeathed Manhattan a built legacy that seems both more civil and cosmopolitan but also somehow less dated and pretentious than the total exposure of today's all-glass luxury dwellings, where everything is on show but deeper meaning is less evident.

**Elegance in the Sky: The Architecture of Rosario Candela**

Museum of the City of New York, through Oct. 28

*Ms. Iovine reviews architecture for the Journal.*

BY HEIDI WALESON

Charleston, S.C.

**FOR THOSE** who can't get enough Donizetti operas, the Spoleto Festival USA, the annual multi-arts extravaganza that runs through June 10, is presenting the U.S. premiere of his "Pia de' Tolomei" (1837). It's a musically engaging piece, well worth exhuming, but the misguided production by director Andrea Cigni, which is shared with three Italian opera houses, did it no favors. The opera, which had its debut two years after "Lucia di Lammermoor," with text by the same librettist, Salvatore Cammarano, features a heroine falsely accused of infidelity and is set against a backdrop of clan warfare in Sienna. Mr. Cigni opted to update the opera to mid-20th-century Italy and make the clans Fascists and resistance fighters. This was a problematic choice, particularly since the heroine, Pia, in her dying cabaletta, begs the two groups, led respectively by her husband and her brother, to make peace, which seems historically unlikely.

The modern setting also unhelpfully emphasized the opera's formulaic structure. The chorus had to stand around staring cluelessly at deeply personal outpourings of grief; almost every aria—a slow cavatina followed by a fast cabaletta—was interrupted by some startling piece of news to

## OPERA REVIEW

## AN UPDATED DONIZETTI PREMIERE



A scene from the U.S. premiere of Donizetti's 'Pia de' Tolomei' at the Spoleto Festival USA

justify the radical change of mood. A period staging, to say nothing of subtler directing, could have solved these theatrical problems by acknowledging that this was the style of the era.

Mr. Cigni also attempted to modernize the heroine and make

her more than the helpless female victim that she is: In his staging, she is supposedly protecting works of art from the coming war. Thus, Dario Gessati's clumsy set involved a large, intrusive frame and several sizable paintings in partial wrappings, including a period por-

trait that appeared to represent Pia, but the interpolated concept was confusing rather than informative. Other staging ideas were similarly odd—the Fascist soldiers, for example, sang one chorus holding flashlights illuminating their faces and another while hidden

under large black umbrellas. Modern costumes are less expensive than period ones, an advantage to budget-conscious producers, but these 1930s looks, designed by Tommaso Lagattolla, did not flatter the leading lady. Fiammetta Baldissari's lighting was obvious and sometimes overly dark.

With conductor Lidiya Yankovskaya firmly in control, the orchestra was much more lively and idiomatic than the staging. Amanda Woodbury brought a bright, flexible soprano to the role of Pia, communicating the character's perpetual state of anguish, and she valiantly restarted her aria in the opera's final scene after a brief power outage stopped the show. As her husband, Nello, baritone Valdis Jansons displayed a scenery-chewing intensity but had difficulty transitioning between jealous rage and regret. As Pia's brother, Rodrigo, mezzo Cassandra Zoe Velasco was best in their poignant reunion duet, though she was so much shorter than Ms. Woodbury that she looked, jarringly, like a child. Tenor Isaac Frishman was uneven as Ghino, the villain, who makes the false accusation and then repents. The Westminster Choir was game and capable, even though the singers seemed to have forgotten those umbrellas at the end of the Act II storm scene.

*Ms. Waleson writes about opera for the Journal.*

# SPORTS

## FRENCH OPEN

### A WINNING RETURN

BY TOM PERROTTA

**PARIS**—Playing her first tournament match since March, Serena Williams is back at the French Open—and she's playing a lot better than anyone could expect.

Williams won her first round match against Kristyna Pliskova, 7-6(4), 6-4 in an hour and 45 minutes. She hit 13 aces. She won 80% of her first serve points. She had 29 winners and 25 unforced errors. She was spotty at times, especially on her serve (she hit seven double faults). But already, after one match, she looked a lot more like the Serena of old.

"I feel like I'm on the right track," Williams said. "I have been putting a lot of work in on the court."

Williams, 36 years old, played her last Grand Slam event in January 2017, when she won the Australian Open. She was pregnant when she won that title, and had her daughter, Alexis Olympia Ohanian Jr., in September. She didn't compete until March this year, and in those two tournaments—in Indian Wells and Miami—she won two matches and lost two, including the first round in Miami. During both events, she looked out of sorts when running to the ball and while serving.

That's why it was so encouraging to see how she played in Paris on Tuesday. Williams moved well—she had enough speed and stretch to run down the ball—and seemed determined on every point, with various "Come on!" shouts and fist pumps. She swung her forehand and backhand with authority, and seemed comfortable sliding on the clay.

Besides winning, Williams said on Tuesday she had an extra incentive to waste little time on the court at Roland Garros.

"I want to get home and see Olympia, because I have been here all day," Williams said. "Usually we hang out all the time."

Williams will next play Ashleigh Barty, a 22-year-old from Australia who is ranked No. 17.



Stephen Curry, right, is guarded by LeBron James during Game 1 of the 2017 NBA Finals.

MARIO JOSE SANCHEZ/ASSOCIATED PRESS

## NBA FINALS

### The Warriors and Cavs Meet Again

There's a big difference this time: Golden State and Cleveland have gotten worse since last season

BY BEN COHEN

**THIS WASN'T** supposed to happen again.

The Golden State Warriors and Cleveland Cavaliers played in the last three NBA Finals and became so familiar with each other that Golden State employees came to be treated like regulars in Cleveland coffee shops. But after the Warriors destroyed the Cavaliers last year, it seemed unnecessary for them to play again. Unlike the Warriors' championship in 2015 or the Cavaliers' title in 2016, one team was very obviously better than the other.

It also seemed unlikely they would play again. The league became obsessed with beating the Warriors, and the Cavaliers were such a hot mess that one of their players threw a bowl of soup at one of their coaches.

As recently as this weekend, there was a chance for two new teams in the Finals. The Cavaliers were down 3-2. And then LeBron James did things that only LeBron James can do in Game 6 and Game 7. The Warriors were also down 3-2. And then they came back from 17 points in Game 6 and 15 points in Game 7.

So now, despite everything that's happened in between, after the entire league was turned upside down in a desperate effort to avoid exactly this outcome, the same teams

are back in the same place for the same reasons: the Warriors and Cavaliers will play Game 1 of the NBA Finals on Thursday night.

It's the most desirable matchup that not many actually desired. Never before in the four major American sports have the same teams played each other four times in a row for a championship, but the fundamental difference about this year's Finals is that neither team has improved since last year's. The Warriors and Cavaliers are both worse versions of who they were.

The Cavs winning the Eastern Conference used to be inevitable. But this year it was inconceivable until they actually did it. Cleveland is here because—and only because—they happen to have LeBron James.

This is his eighth straight Finals appearance, which means he's been in the Finals for two full presidential terms, long enough to experience the entire spectrum of fan emotions: James has gone from hated to respected to admired. He's averaging 34 points, 9.2 rebounds and 8.8 assists, and even those numbers don't fully capture the degree to which he controls the game when he's on the court. And he's on the court more than anyone. James was already the active player with the most career minutes before he led the entire league in minutes this season and then played all 48 minutes of Game 7 on the road against the Boston

Celtics with the Finals on the line.

Now he's not only the most gifted basketball player on earth but also the most appreciated and maybe even the most beloved. James has become the Great Dane of underdogs.

The Cavaliers have so many problems, though, that upsetting the Warriors would be nothing short of James's greatest accomplishment yet. The big one is that they no longer have Kyrie Irving. It also wasn't ideal that their defense ranked 29th in the NBA this season and there were only 30 teams in the NBA this season.

But the real problem is that they're playing the Warriors. And the Warriors are finally starting to play like the Warriors.

They are rich enough in talent to win an NBA championship even after treating the regular season like a glorified preseason. After three straight trips to the Finals, Golden State struggled to care until they had no choice. While they never engaged in Cleveland's soup warfare, the Warriors lost enough this season to lose their aura of invincibility as were plagued by complacency, injuries to their four All-Stars and existential threats to their nascent dynasty.

There was no team that spent as much time strategizing with the Warriors in mind than the Houston Rockets. Even before last season was

over, the Rockets were hatching a plan to beat a team that seemed awfully unbeatable. It almost worked. And then it all went horribly wrong.

In a breathtaking display of bad timing, a team that shot the most 3-pointers in NBA history had their worst shooting night of the season against the Warriors in Game 7 of the Western Conference Finals. At one point the Rockets missed 27 consecutive threes. When the night and their season was over, they were 7-of-44 from behind the arc.

The Warriors were able to overcome their bad habits and beat a team that did everything in its power to beat them with one of the volcanic third quarters they have used to destroy so many teams over the years.

Golden State in the third quarter had the best net rating this year of any team in any quarter. It's when the Warriors become the Warriors.

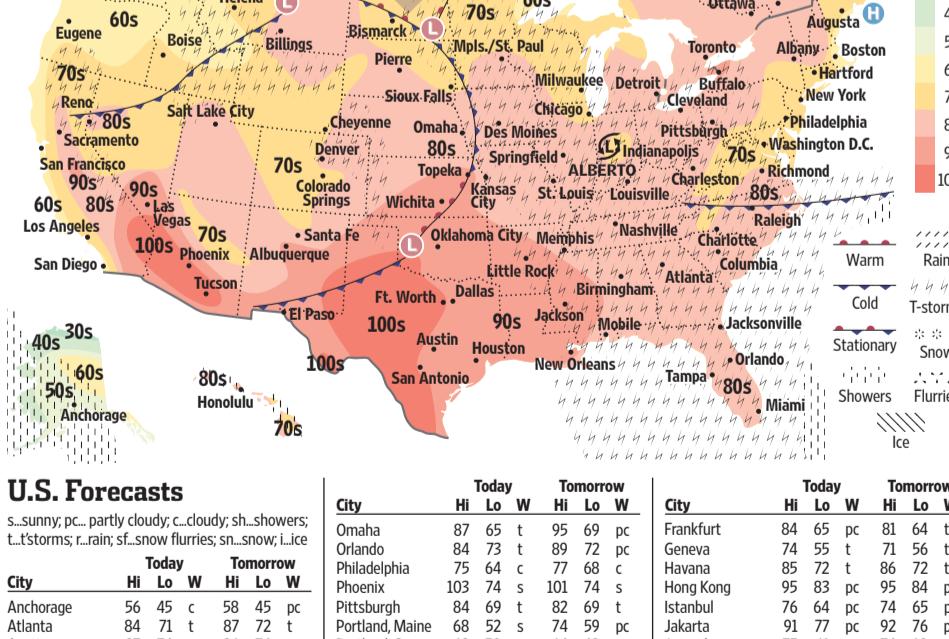
That's who they had to be on Monday night with their season on the line. Golden State outscored teams by 18.5 points per 100 possessions in the third quarter this season. They won Game 7's third quarter by 18 points. Stephen Curry made four 3-pointers as the Rockets missed all their 3-pointers, and Kevin Durant clinched the game in the fourth quarter.

It was a neat encapsulation of this entire season: It turned out the Warriors really were unstoppable.

CHRISTOPHE SIMON/AGENCE FRANCE PRESSE/GETTY IMAGES

Serena Williams is back in action.

## Weather



## U.S. Forecasts

s...sunny; pc...partly cloudy; c...cloudy; sh...showers; t...storms; r...rain; sf...snow flurries; sn...snow; l...ice

Today Tomorrow Today Tomorrow

City Hi Lo W Hi Lo W

Anchorage 56 45 c 58 45 pc

Atlanta 84 71 t 87 72 t

Austin 97 74 s 96 74 s

Baltimore 78 68 c 82 70 t

Boise 75 54 c 68 48 sh

Boston 67 55 s 75 60 pc

Burlington 83 64 s 81 68 c

Charlotte 84 71 t 85 71 t

Chicago 77 70 r 91 66 t

Cleveland 86 73 t 89 69 t

Dallas 98 74 s 97 74 s

Denver 81 53 pc 89 54 s

Detroit 85 72 t 88 67 t

Honolulu 84 74 c 85 74 pc

Houston 94 73 pc 95 75 pc

Indianapolis 79 70 t 90 71 t

Kansas City 88 68 t 89 71 t

Las Vegas 99 73 pc 92 67 s

Little Rock 91 74 t 93 75 s

Los Angeles 71 59 pc 69 56 sh

Miami 85 75 t 85 73 pc

Milwaukee 73 67 t 88 63 t

Minneapolis 81 65 t 84 66 t

Nashville 84 72 t 88 72 t

New Orleans 91 76 t 92 76 t

New York City 75 60 pc 70 65 sh

Oklahoma City 93 73 pc 90 74 s

## International

Today Tomorrow

City Hi Lo W Hi Lo W

Amsterdam 78 63 t 78 60 t

Athens 85 68 s 84 66 s

Bahrain 108 73 s 105 79 s

Bangkok 90 79 t 91 78 c

Beijing 92 61 s 95 66 s

Berlin 86 65 t 88 67 t

Brussels 78 61 t 76 60 t

Buenos Aires 62 49 r 56 42 c

Dubai 101 88 s 102 87 s

Dublin 65 52 pc 68 53 t

Edinburgh 64 51 r 67 53 pc

## The WSJ Daily Crossword | Edited by Mike Shenk



### INNER NERD | By Zhouqin Burnikel

- | Across                      |   |  |
|-----------------------------|---|--|
| 1 Provide one's fair share  | 25 Underwriter's concern                | 46 Volvo rival, once                   |
| 6 "Knock it off!"           | 26 Result of an eHarmony match, perhaps | 48 Decreased?                          |
| 10 Cabin components         | 30 Overriding idea                      | 50 Moon mission                        |
| 14 Playground retort        | 32 Court pledge                         | 52 Words with discount or disadvantage |
| 15 "Look what I just did!"  | 33 "Westworld" network                  | 53 Like Mr. Hyde                       |
| 16 Otherworldly radiance    | 36 "That makes sense"                   | 55 Neighborhood pharmacy               |
| 17 Red carpet wear          | 37 Moralistic sort                      | 58 Skirt for Pavlova                   |
| 39 Red or blue state?       | 59 Value Meal beverage                  |  |
| 20 Huffy state              | 40 Objective                            | 60 Diamonds in the sky                 |
| 21 Go (for)                 | 41 Hard kick                            | 61 ESPN tidbit                         |
| 22 Personal preferences     | 42 Instrument panel sight               | 62 GI on the run                       |
| 23 Provide one's fair share | 43 Dachshunds, casually                 | 63 Bakers, on occasion                 |

► Solve this puzzle online and discuss it at [WSJ.com/Puzzles](http://WSJ.com/Puzzles).

### Down

- |                                |  |
|--------------------------------|--|
| 1 Skateboarder's protection    | 31 QVC alternative                         |
| 2 Political convention venue   | 33 The speaker may call for one            |
| 3 "Without a doubt!"           | 34 Where cranberries grow                  |
| 4 "Now?"                       | 35 Poetic tribute                          |
| 5 Eggy drink                   | 37 Author known for macabre tales          |
| 6 Unforested plain             | 38 Harry and Hermione's friend             |
| 7 Like lemon meringue pie      | 39 Charming                                |
| 8 Uncanny                      | 41 Book with Numbers                       |
| 9 Go in different directions   | 42 Slimy gunk                              |
| 10 Glasgow gal                 | 43 Waldorf salad bit                       |
| 11 Removes from power          | 44 Morning tea, for many                   |
| 12 Homer's language            | 45 Pain in the neck                        |
| 13 Bratty talk                 | 46 Teakettle feature                       |
| 18 Gerund, e.g.                | 47 It passes over the heart                |
| 19 Starfleet Command setting   | 49 More desperate                          |
| 24 Knoxville-to-Phila. heading | 50 Circus segments                         |
| 27 MapQuest line               | 51 Predatory whale                         |
| 28 Many a Little League rooter | 52 Folk singer Guthrie                     |
| 29 Grabbed a snack             | 54 Subtracting                             |
| 30 Make even                   | 56 Its highest closing record is 26,616.71 |

### Previous Puzzle's Solution



## OPINION

## Clapper Disinformation Campaign

BUSINESS WORLD  
By Holman W. Jenkins, Jr.

James Clapper, President Obama's director of national intelligence, gained a reputation among liberals as a liar for covering up the existence of secret data-collection programs.

Since becoming a private citizen, he has claimed that President Trump is a Russian "asset" and that Vladimir Putin is his "case officer," then when pressed said he was speaking "figuratively."

His latest assertion, in a book and interviews, that Mr. Putin elected Mr. Trump is based on non-reasoning that effectively puts defenders of U.S. democracy in a position of having to prove a negative. "It just exceeds logic and credulity that they didn't affect the election," he told PBS.

Mr. Clapper not only exaggerates Russia's efforts, he crucially overlooks the fact that it's the *net* effect that matters. Allegations and insinuations of Russian meddling clearly cost Mr. Trump some sizeable number of votes. Hillary Clinton made good use of this mallet, as would be clearer now if she had also made good use of her other assets to contest those states where the election would actually be decided.

Mr. Clapper misleads you (and possibly himself) by appealing to the hindsight fallacy: Because Mr. Trump's victory was unexpected, Russia

must have caused it. But why does he want you to believe that he believes what he can't possibly know?

There's been much talk about origins. Let's understand how all this really began. James Comey knew it was unrealistic that Mrs. Clinton would be prosecuted for email mishandling but also knew it was the Obama Justice Department's decision to make, own and defend. Why did he insert himself?

### Why does a former intelligence chief make claims he can't back up?

The first answer is that he expected Mrs. Clinton to win—and likely believed it was necessary that she win. Secondly he had a pretext for violating the normal and proper protocol for criminal investigations. He did so by turning it into a counterintelligence matter, seizing on a Democratic email supposedly in Russian hands that dubiously referred to a compromising conversation of Attorney General Loretta Lynch regarding the Hillary investigation.

Put aside whether this information really necessitated his intervention. (It didn't. This is the great non sequitur of the Comey story.) Now adopted, Russia became the rationale for actions that should trouble Americans simply on account of their foolishness.

Think about it: The FBI's original intervention in the Hillary matter was premised on apparent false information from the Russians. Its actions against the Trump campaign flowed from an implausible, unsupported document attributed to Russian sources and paid for by Mr. Trump's political opponents.

In surveilling Carter Page, the FBI had every reason to know it was surveilling an inconsequential non-spy, and did so based on a warrant that falsely characterized a Yahoo news article. Its suspicions of George Papadopoulos were based on drunken gossip about Hillary's emails when the whole world was gossiping about Hillary's emails.

The FBI's most consequential intervention of all, its last-minute reopening of the Clinton investigation, arose from "new" evidence that turned out to be a nothingburger.

There is a term for how all this looks in retrospect: colossally stupid. Democrats now have a strong if unprovable case that Mr. Comey changed the election outcome. Mr. Trump has a strong case his presidency has been hobbled by unwarranted accusations. Americans harbor new and serious doubts about the integrity of the FBI.

As an extra kick in the head, its partners in so much idiocy, and perhaps the real fomenters of it, in the Obama intelligence agencies have so far gotten a pass.

If a private informant was enlisted to feel out the Russian connections of a couple

of Trump nonentities, this was at least a sensitive and discreet approach to a legitimate question when so many FBI actions were neither.

It was *after* the election, with the outpouring of criminal leaks and planted disinformation (see Clapper), that a Rubicon was crossed. Consider just one anomaly: Any "intelligence community" worth the name would get to the bottom of foreigner Christopher Steele's singular intervention in a U.S. presidential election, based as it was on the anonymous whisperings of Russian intelligence officials. Not ours. Our intelligence community is highly motivated *not* to know these answers because any finding that discredited the Steele dossier would also discredit the FBI's actions in the 2016 campaign.

It practically goes without saying that all involved now have a stake in keeping the focus on the louche Mr. Trump and threatening him with investigations no matter how far afield from Russia collusion.

You can be a nonfan of Mr. Trump; you can believe he's peddling a conspiracy theory about FBI and CIA actions during the campaign. But every president has a duty to fight to protect himself and his power. And notice that his conspiracy theory is but the mirror image of the conspiracy theory that his political, institutional, and media enemies have been prosecuting against him since Election Day 2016.

BOOKSHELF | By Allan Massie

## The Other Bonaparte

## The Shadow Emperor

By Alan Strauss-Schom  
(St. Martin's, 496 pages, \$32.50)

**I**t began with a coup d'état and collapsed in military defeat in an unnecessary war. The Second (Bonapartist) Empire lasted longer than the first, 18 years as against 10, but left no sunset memory of "la gloire." The exiled Victor Hugo dismissed its emperor, Louis Napoleon, as "Napoleon le Petit." Bismarck called him "a sphinx without a riddle."

Louis Napoleon's story is certainly remarkable. Alan Strauss-Schom tells it with brio in "The Shadow Emperor." He makes a good case—perhaps the best possible case—for an enigmatic figure who emerged from futility to be elected president of France's Second Republic and who, within four years, was installed atop a new French empire. Comparing him with the first Napoleon, Mr. Strauss-Schom writes that, "despite some errors of judgment . . . and sometimes maddening indecision, beneath that quiet, good-humored exterior, Louis Napoleon achieved vastly much more in the long run for France" than his uncle had. As for the Second

Empire, it "left France one of the most prosperous, modern, and progressive states in Europe." This is a big claim, big enough to make this a boldly revisionist biography.

He was the son of Napoleon Bonaparte's brother Louis, who was briefly king of Holland, and Hortense, a daughter of the Empress Josephine by her first marriage. He was brought up in exile principally by his mother. He studied, flirted with the movement for a united Italy, attempted two ludicrous ill-planned coups in France, escaped from prison, returned to Paris when the Revolution of 1848 overthrew the Orléans monarchy and took a seat in the National Assembly. Later in the same year, he was elected president of the republic. Few knew anything about him: The names "Napoleon" and "Bonaparte" were enough. A coup in December 1851, organized by his illegitimate half-brother, Auguste de Morny, soon made him emperor. Liberal republicans disapproved, but Lord Palmerston, the British foreign secretary, sent his congratulations.

It was an extraordinary turn of events. Louis Napoleon—now Napoleon III—was well-meaning but lacked charisma. Under his rule, the press was censored and political activity regulated; there was an extensive police network. Nevertheless, years of brooding in exile had given the new emperor ideas about public welfare and policy. He embarked on an ambitious program of investment that would do much to transform the French economy. It transformed the fortunes of his associates too: Corruption was rife. Paris was rebuilt by Baron Haussmann, his Alsatian prefect. Many complained at the time of the destruction of medieval Paris, but the Paris so many of us love today is Haussmann's.

## For all the corruption and repression that marked his reign, Louis Napoleon may have done more for France than his famous uncle.

Mr. Strauss-Schom places great and fair emphasis on his hero's contribution to economic development and even his care (more in theory than practice) for the welfare of the working class. Certainly the Second Empire was a period of rapidly rising prosperity. Perhaps not as much of this can be laid to the emperor's credit as his biographer would have us believe. The 1840s had been years of poor harvests and depression throughout Western Europe. In the 1850s the economic cycle turned, and wealth increased everywhere. In this respect, Louis Napoleon was lucky.

The first Napoleon was a man of war. His nephew declared that "the Empire means peace." Even so, he engaged in several wars, besides continuing the Orléanist policy of colonial expansion in Algeria. The Crimean War saw him allied with Britain in defense of the Ottoman Empire against Russia. In 1859, with the Piedmontese, he expelled the Austrians from all of northern Italy except Venice.

These wars may be considered successful; the second even added Savoy and Nice to French territory. Then, in 1860s, came the Mexican adventure. Initially a small-scale invasion intended to recoup a substantial debt, it became an attempt to establish a Habsburg archduke as emperor of Mexico, someone who would promote European interests. Even with the U.S. distracted by the Civil War, this was a crazy notion, one that ended in national retreat and humiliation. Then Napoleon, egged on by his Spanish wife, Eugénie, was inveigled into war with Prussia.

Bismarck, the Prussian prime minister, said that it was "a stroke of luck" that the French had "committed such a folly." Louis Napoleon might have prevented the war, but, Mr. Strauss-Schom says, "he lacked the will and character required at the most critical moment of his life." He took nominal command of an army ill-prepared for a European war. The campaign was disastrous. He surrendered at Sedan in September 1870. The empress and the heir, the so-called Prince Imperial, escaped to England. The emperor himself, released by the Prussians, joined them there and died in 1873.

Louis Napoleon's biographer does his best for him, persuasively enough to make the derisive descriptions of him in his own time and later seem unfair. Yet he remains a puzzle: a man of sometimes impenetrable reserve, a ruler who sought to do good but whose regime was both repressive and corrupt. Would it have survived if he had not taken Bismarck's bait? It seems unlikely. Louis Napoleon had embarked on modest liberalization—always a dangerous moment for an authoritarian regime. There was simmering discontent, social resentment and, despite the emperor's benevolent intentions, economic hardship for the working class, well documented by the novelist Emile Zola.

The empire would be followed by the Third Republic, which the veteran politician Thiers said was the regime that divided Frenchmen least. There were few Bonapartists left. Yet the Second Empire was a glittering time, the beginning of France's Belle Epoque, and, whatever Louis Napoleon may or may not have achieved, there is this to his credit: The victorious Prussians, besides annexing Alsace and Lorraine, demanded huge reparations; the Second Empire had created such prosperity that France cleared this "war debt" in just over two years.

Mr. Massie is the author of "The Royal Stuarts: A History of the Family That Shaped Britain."

## Can America Grow Like It Used To?

POLITICS & IDEAS  
By William A. Galston

While controversies over Iran and North Korea have dominated the recent news, most Americans remain focused on the economy, where declining unemployment and faster growth have improved President Trump's standing. But can the U.S. economy return to the 3% annual increases in gross domestic product witnessed during the postwar years? This question was the subject of last week's Wall Street Journal debate among four opinion contributors—Mary Anastasia O'Grady, Arthur Laffer, Jason Furman and me.

We agreed on the normative proposition that the U.S. would benefit from faster economic growth. More upward mobility expands the American dream and reduces competition over scarce opportunities. Growth increases government revenue, taking the edge off tough choices between guns and butter, and between the present and the future.

We also agreed on the basic framework for analyzing growth. If economic production is determined by the number of hours worked times output per hour, then we can increase long-run growth through a larger labor

force, higher productivity, or both.

And finally, we agreed that there was room to raise the aggregate level of work in our society. Consider the basic facts. This April, the official employment rate was 3.9%—the same level as in April 2000. But this apparent similarity masks a consequential change. Over those 18 years, labor-force participation among Americans of prime working age (25 to 64 years) dropped by 2.5 percentage points. In the same period, labor-force participation for U.S. women 25 to 64 fell from eighth to 26th among nations in the Organization for Economic Cooperation and Development. For men, the ranking dropped from eighth to 29th. American men experienced the largest decline of any OECD country, and American women were the only female cohort in the entire OECD whose workforce participation fell.

These international comparisons strongly suggest that better policies could make a difference. We need to make it easier for formerly incarcerated men to rejoin the workforce, for women to balance the demands of work in the home and in the market, and for older Americans to continue working well past what previous generations considered retirement age. We need to attack substance abuse—especially opioids—

which thwarts too many men and women on the threshold of the workforce. And where there is solid evidence that poorly designed social supports discourage work, we should restructure them.

Although these changes would make a difference, they can do nothing to alter the reality that America is aging

### There are reasons to think not, chief among them the aging population.

rapidly. Two thousand was the last year in which the entire baby-boom generation was of prime working age, and 2019 will be the first year in which none of it is. During the last two decades of the 20th century, the U.S. workforce expanded at an annual rate of about 1.5%. During the next two decades, it will expand at an estimated 0.5% annually. By itself, this slowing growth of the workforce will be enough to knock a full percentage point off annual economic growth. Productivity improvements that once yielded 3% growth will now yield only 2%.

There is no sign of a new baby boom on the horizon. On the contrary, the birthrate reached an all-time low in 2017, continuing six decades of decline. So there is only

one way to boost the growth rate of the workforce: expand dramatically the number of working-age immigrants admitted each year. If the U.S. prioritized working-age entrants the way most other advanced countries do, it would increase annual labor-force growth by up to 0.3% without increasing the aggregate level of immigration.

I've said little about the other key component of economic growth—productivity—because most economists regard it as unpredictable. Between 1950 and 1973, it grew at 2.4% annually before collapsing to just 0.7% from 1974-81. It accelerated to 1.7% between 1982 and 1990, and to 2% from 1991-2001. But then, just when analysts began to hail a new golden age of information technology, productivity growth fell to 1.4% in 2002-07, and to 0.9% during the past decade.

We understand the basics of productivity—investment in the workforce, plant and equipment, research and development, and infrastructure, plus an environment that encourages innovation. But the pace at which new technologies and processes are integrated into the workplace remains mysterious. If a new generation of robotics and artificial intelligence yields a productivity boom, we could return to the growth of the postwar years.

But we don't know enough to bet on it.

Buying a Home? It's a Process

By Matthew Hennessey

My wife and I just bought our first house. Congratulations are customary on such occasions, but I'll take your sympathies.

When the seller accepted our bid 2½ months ago, all my friends said the same thing about getting a mortgage and closing the deal: "It's a process." If I heard it once, I heard it 10 times. "Closing on a house is a process, but you'll get there."

I'm 44, a late age for a first home purchase. While I know a little bit about a lot of things, the only "process" I'm really comfortable with is the editing process. Still, people buy homes every day all over America. How bad could it really be?

We trusted our broker, the brother of a friend, to steer us. He'd handled the search and got us to what I thought was the finish line—the accepted

offer. It was only the start.

The inspection came next. It took a week to arrange and complete and revealed nothing of grave concern. Then the financial examination. Our credit is decent; I have a good job; we'd scraped together the cash for the down payment. Everything verifiable was verified. We got the green light.

"How's it going with the house?" my friends asked.

"The process is going smoothly," I replied.

After the mortgage approval came the appraisal, which is the lender's version of the inspection. Our bank looked at the house and decided it was worth exactly what we had agreed to pay. But our first offer had been rejected. Had it been accepted, would the appraisal have come in lower, too? How could that be? It's the same house.

I asked our broker if all appraisals hit the mark this way. His eyes twinkled as he smiled and said, "It's part of the process."

We had thought getting a mortgage would be difficult. Now for the first time it occurred to me that maybe the bank would lend us the money no matter what the process turned up.

### The seller accepted our offer. That was only the start.

Next came the title search to make sure the seller really owned the house. We signed some disclosure forms. Turns out our broker and our lawyer both own a piece of the title company. Hmm, the process thickens.

The title search came out fine, but our lawyer worried there was no recent survey of the property on file. So we spent \$800 and 10 days on a new one that also turned up no problem.

We started to worry we

might be getting ripped off a little. Everyone told us: "Don't question the process."

Time came for the closing in our lawyer's conference room. The process got weird when everyone started talking at once. Our lawyer spoke to us and only us. The sellers' lawyer spoke only to them. The real-estate agents gossiped with each other. The lady from the bank chatted with a guy who came in to use the copier.

Amid the crosstalk, our lawyer told us that the bank would sell off our loan before we made our first payment. "Isn't that what sank the economy in 2008?" I asked. He shrugged and pushed another paper in front of me.

As I signed my name, I turned to my wife and said: "It's a process." She already knew.

Mr. Hennessey is an associate editorial features editor at the Journal.

## OPINION

## REVIEW &amp; OUTLOOK

## Why CVS Loves ObamaCare

**B**ig business feasts on big government, and ObamaCare has been a bonanza for companies that have figured out how to exploit it. Witness how CVS Health is dining out on Ohio's Medicaid expansion.

In addition to retail pharmacies, CVS operates a pharmaceutical benefit manager (PBM) that acts as a middleman between insurers, pharmacies and drug manufacturers. PBMs decide which drugs are listed on a formulary, how much pharmacies are reimbursed and how much insurers pay.

Ohio contracts with five managed-care organizations (MCOs) to administer Medicaid benefits, four of which outsource their drug benefits management to CVS Caremark, the CVS PBM. The state uses drug claims data to set its annual drug budget. So if claims increase, the state will allocate more Medicaid funds for drugs the following year.

Yet CVS appears to be billing the state for far more than what it is paying pharmacies, driving up taxpayer costs. CVS's actual drug payments aren't transparent to the state or MCOs.

CVS is also attempting to drive independent pharmacists out of business and expand its retail market share. We spoke with eight current or former independent pharmacists in Ohio who complained that CVS has slashed payment rates below the pharmacists' wholesale drug costs. They say CVS is pocketing the increased "spread pricing"—that is, the difference between what the PBM pays pharmacies and charges the state.

The precondition for this Medicaid machination is ObamaCare. In the last decade Ohio's Medicaid enrollment has swelled by more than half to 21.4% of the state population, driven in large part by ObamaCare's expansion to people earning up to 133% of the poverty line. Medicaid is now the biggest insurer in many rural areas where independent pharmacies predominate.

\* \* \*

Independent pharmacists say they first noticed a decline in Medicaid payment rates three years ago. CVS slashed them further last fall. For 35 years Larry Hildebrand ran a pharmacy in Marengo, a town with a few hundred people. When he started to lose money from declining Medicaid payments, he sold his pharmacy to CVS, which bought his drug inventory and prescription files. After he closed, his customers had to travel 25 more miles to get prescription filled at CVS.

Dominic Bartone has been a pharmacist for 41 years and operated three retail pharmacies in Dayton and two in Lebanon. After CVS cut payment rates last fall, his Lebanon pharmacies were losing money on between 40 to 50 prescriptions a day. When Mr. Bartone complained to the MCOs about below-cost reimbursements, he didn't get a response. Eventually he had to stop delivering prescriptions to patients in institutions. In February he and his business partners sold the stores to CVS.

Most pharmacists don't want to be publicly identified because their CVS contract bars them from disclosing payment rates. But one said he was getting paid 18 cents per capsule of the generic antidepressant duloxetine while his wholesale cost is about 23 cents. According to Centers for Medicare and Medicaid Services

data, PBMs in Ohio last fall were charging Medicaid \$1.53 per duloxetine pill. The spread pricing for a 60 mg dosage of duloxetine during the first nine months of 2017 totaled \$6.3 million.

Several pharmacists said that they were losing between \$60 and \$100 last fall on each prescription of buprenorphine, a generic opioid addiction treatment.

Ohio state Senator Dave Burke, who runs an independent pharmacy and serves on the state Joint Medicaid Oversight Committee, says two-thirds of the Medicaid drug claims he processes are below his drug acquisition cost. He's fortunate that Medicaid patients make up less than a quarter of his customers.

CVS payment rates, he says, are "take it or leave it." Independent pharmacists have no negotiating leverage. If pharmacists refuse to accept Medicaid prescriptions, they risk losing CVS contracts for Medicare Part D and commercial plans that typically pay more.

Some pharmacists said that after the Medicaid payment reductions they received solicitations from CVS Pharmacy Regional Director of Acquisitions Shane Stockton saying: "I'm a pharmacist myself. I know what independents are experiencing right now: declining reimbursements; increasing costs, a more complex regulatory environments. Mounting challenges like these make selling your store to CVS Pharmacy an attractive and practical option."

\* \* \*

In the last three years, Ohio has lost 164 independent pharmacies while CVS has added 68. A CVS Caremark spokesperson told us that the company maintains a firewall between its PBM and retail pharmacies as required by a 2007 Federal Trade Commission merger agreement. CVS also says it pays independent pharmacies on an aggregate basis more than chains, though the spokesperson didn't define aggregate.

When Arkansas Independent Pharmacies obtained insurance explanation of benefits data from Medicaid patients, they found that CVS Caremark billed Medicaid plans more than twice as much on average as what their pharmacies got paid. Data from fully-insured commercial health plans showed that CVS paid itself over \$60 on average more per prescription than independent pharmacists.

ObamaCare requires MCOs to spend at least 85% of all taxpayer dollars on patient medical claims and care improvements. The rest can be split among overhead, marketing and profits. Contracting with PBMs allows MCOs to off-load administrative costs and thus take more profit. Rising drug claims also let them pocket more money. Mr. Burke, the Ohio legislator, says this dynamic encourages a "don't ask, don't tell" relationship between PBMs and MCOs.

States ostensibly have an incentive to curb their Medicaid spending and scrutinize PBM payments. Yet many may be turning a blind eye because they can pass on the bills to the federal government, which picks up 63% of the costs for Ohio's pre-ObamaCare population and 94% for the expansion population.

But as neighborhood pharmacies close, health-care access for low-income patients diminishes. That at the very least should concern politicians.

### Medicaid expansion helps big business reduce competition.

sanctions-violating ZTE Corp. last week, Mr. Trump has decided to publish a final list of targets for the \$50 billion tariffs he promised earlier but had held off pending more talks. He also threw in new limits on Chinese investment in the U.S. This amounts to giving a pass to the guilty, ZTE, while punishing innocent Americans who will pay higher prices for imports.

It isn't clear what Mr. Trump hopes to achieve with his on-again, off-again trade war with China, and markets can't figure it out either. The Chinese thought they had a truce ahead of another round of trade talks later this week. Stocks fall when Mr. Trump turns protectionist and they rise when he announces a reprieve—which ought to be another warning. Investors don't like arbitrary tax increases.

And neither do business executives, as the nearby table shows. In the Institute for Supply Management's latest semi-annual survey of manufacturing execs, some 74% said they expect that tariffs will raise their prices, and some 58% expect delays and disruptions in their supply chains. The comparable figures for non-manufacturing executives are 50% and 59%. On average they expect prices due to tariffs to rise by 5.4% for manufacturing and 7.2% for non-manufacturing.

All of this adds up to more uncertainty for business supply management, pricing and potential sales, which will inevitably affect business investment. This is the great lesson from the arbitrary regulation of the Barack Obama years, which Mr. Trump has done so much to reduce. Yet now he's replacing Mr. Obama's government-made uncertainty with his own via arbitrary tariffs. America First trade policy is meeting Mr. Market, and Mr. Trump is likely to lose if he insists on a showdown.

### Trade and Uncertainty

Semi-annual survey of manufacturing executives, May 2018

	Yes	No
Do you believe that tariffs will raise the price of the goods that you produce and deliver to your customers?	73.9%	26.1%
Do you believe that tariffs will cause delays and disruptions in your supply chain?	57.5	42.5

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Source: Institute for Supply Management

Europe in turn has teed up retaliatory tariffs on some \$3.2 billion in American goods if the U.S. doesn't continue its exemption on European steel and aluminum imports beyond the current June 1 deadline.

With Italy in turmoil and bond yields rising in Italy and Spain (which has its own political troubles), the Trump tariffs will hit Europe at a dangerous economic and political moment. Someone should tell the President that Europe buys American goods, and that weaker growth in Europe means weaker growth in the U.S. too. The world economy is not a one-off real-estate transaction.

The mercurial Mr. Trump also decided Monday to end his short-lived trade truce with China. After lifting a trade death sentence on

## LETTERS TO THE EDITOR

## Better Pay Won't Solve School-Structure Ills

Regarding Robert Maranto's "Pay Teachers More—but Make Sure They Earn It" (op-ed, May 22): The root problem is that education's political, bureaucratic and labor leaders have no incentive to serve anyone but themselves, much less the poor trapped in poor schools.

We can wait a further two or three generations to see if the monopoly somehow heals itself, or we can use the same money to pay for all children to go to schools competing to please parents and students with different types of education for different types of people. Note that such free-market schools would also compete for the best teachers by offering higher salaries, better working conditions and fewer barriers to a teaching career.

President Trump, elected not for his manners but for his political courage, could do the country no better service than ending the government's monopoly on education by whatever means he can muster. The situation won't fix itself.

STUART GARNER  
Georgetown, Texas

Mr. Maranto leaves out the law of supply and demand. School boards pay what they must to attract teachers, just as accounting and engineering firms pay what they must to attract accountants and engineers. It's not a matter of what is more important; it's economics.

STEVEN MORGAN  
Richardson, Texas

Most teachers get a defined-benefit pension, so they can spend their entire monthly paycheck without fear of having to save for the future. Could the same be said for the accountants and civil engineers whose median pay was used as a comparison in the article? Teachers in the Omaha Public School system can retire at age 55 with 30 years of service, receive a defined-benefit pension and then teach for another 10 years in a different Nebraska public-school system and double dip in that district's defined-benefit pension. It has been shown over and over that pouring more money into public education doesn't guarantee improved quality. Mr. Maranto concedes that reforms are needed to improve teacher quality, but higher pay isn't at the top of the list.

JOHN ILCISIN  
Omaha, Neb.

Mr. Maranto notes that elites in the U.S. often send their children to private schools where highly qualified, but uncertified, teachers are employed. On average, however, private-school teachers make significantly less than their public-school peers, with nothing like public-school pensions and other benefits.

When the value of extremely generous pensions, health and other benefits is added to the base pay of teachers, and an adjustment is made to account for teachers teaching roughly three-quarters of the year,

the average total compensation for teachers looks very competitive with those of other high-value professions. The best teachers love their profession, love molding and inspiring children and are wise enough to know that there are monetary trade-offs made for intangible benefits. Throwing 40% more taxpayer money at today's unreformed public schools is a terrible waste of money.

DOUG RYAN  
Palm Coast, Fla.

I agree that teachers should be paid more, but the return on this investment should be having teachers work a full year as other professionals do. In New York, only 180 days (minus three teacher-conference days) of instruction are required. Compare that to the workdays of the accountants, doctors and engineers cited. We haven't been an agrarian society for a long time, so we don't need Johnny and Mary off from school to help on the farm. We are falling behind in an information-based world. We need a new paradigm for our educational system.

PETER J. SPINELLI  
Pittsford, N.Y.

We've been increasing education spending for decades with little or nothing to show for it. A proposal to fire and replace a significant percentage of existing teachers is obviously going nowhere politically, even if it doesn't cost 40% more. Maybe most current teachers aren't incompetent but just trapped in a dysfunctional education bureaucracy. Maybe we need to redesign schools from the ground up. But we'll never figure it out so long as we focus myopically on teacher pay.

KEVIN CLARK  
Franklin, Tenn.

Public education in this country is failing because of bad students and wrongheaded public policy. Money and certification won't cure this. Teachers need only two things: parental support and control of their classrooms. Expulsion for unruly students is now virtually impossible due to liberal social engineering. Until this policy is changed and teachers again become masters of their classroom, American education will continue to fail.

HARRY O. MCKINNEY, PH.D.  
Southfield, Mich.

Regarding your editorial "I Don't Believe That Anymore" (May 19): The problem isn't funding; our per-pupil spending is the highest in the world. The country is filled with hardworking and loving teachers, administrators, paraprofessionals and volunteers. Unions might not help, but they are not fundamentally the source of the problem, which is the design of the educational system. Until this is changed, the present rot and destruction of young lives will continue.

JOHN CONLIN  
Littleton, Colo.

## Congress Should Not Act Like a Wax Museum

A class of politicians has emerged in our nation—one that makes Congress their permanent home and has no accountability or desire to achieve anything noteworthy for the people they serve back home. ("A Radical Idea: Congress Acts," Review, May 19).

A recent example of Washington's inaction happened right here in my own state. Sen. Bill Nelson and 11 other members of Florida's congressional delegation sent a letter urging the state of Florida to do their jobs for them by passing state-level health-care policy because of their own self-admitted failures at the federal level. This attempted handoff of responsibility is exactly what we cannot stand for from our leaders in Congress.

I recently rolled out my "Make Washington Work" plan to focus on improving accountability and reforming the tired ways of thinking in Washington. The first step is instituting term limits for Congress. Decades-serving members have gridlocked Congress and proved to be more of a hindrance than a catalyst for any real change. Term limits ensure politicians work for Americans, not the other way around. The second component is to require a supermajority vote of two-thirds of each house of Congress to approve any tax or fee increase before it can become law. This keeps more money in the pockets of hard-working Americans by ensuring Congress rightfully treats tax and fee increases as an absolute last resort, not as a knee-jerk reaction to

fund government waste.

Government can move efficiently and secure results—if it has the right leaders.

GOV. RICK SCOTT  
Tallahassee, Fla.

Gov. Scott is running against Sen. Bill Nelson for the U.S. Senate.

I think Congress began shirking its duties much earlier than 25 years ago. The Supreme Court case *Roe v. Wade* was decided in 1973. The decision had the effect of law—judicially made legislation—and Congress wasn't and isn't embarrassed or responsible enough to pass its own law to replace the judge-made decision, even with legislation that says the same thing. I observe that the chances of Congress passing legislation are inversely proportional to its importance.

HAL DANTONE  
Kingsville, Texas

## Pepper ... And Salt

THE WALL STREET JOURNAL



"He thought he named a star after me but it was only a piece of flaming space junk."

## OPINION

# Italy's Crisis—and Europe's

By Francesco Ronchi

**M**inor decisions and small mistakes can change history. Italian President Sergio Mattarella's decision to reject the populist right-left coalition's attempt to form a government in Italy may turn out to be a turning point for Europe.

While Mr. Mattarella's desire to protect the country from turbulence is no doubt sincere, his action could end up having the opposite result.

**The president rejects the populist election winners, setting up a clash between democracy and the EU.**

By openly invoking the role of investors, financial markets and the defense of the eurozone in his speech on Sunday, the president lends credence to the populist argument that Italy has become the battleground in a war between the international establishment and national democracies. Even if populists win the elections, their supporters believe, they will never be allowed to hold power for fear that they would oppose the dogma that dominates the eurozone.

The statement by Günther Oettinger, one of the most senior members of the European Commission, that "markets will teach Italians how to vote" is not a reassuring one. Likewise, German Chancellor Angela Merkel's comparison between Italy and Greece is an unveiled threat: Italians had better toe the line, or they will not be spared what the Greeks have been going through.



Italian President Sergio Mattarella at a press conference Sunday.

This disdain for Italian voters is not only undemocratic but also dangerous. It fuels nationalism and anti-German sentiment in Italy. By appealing to national pride and the defense of democracy against external influences, populist parties are likely to increase their share of the vote in the next elections, which may take place in the next few months. Transforming these elections into a de facto referendum on eurozone membership would be another dangerous gamble in a climate of growing Euroskepticism.

Italy is not Greece. It is the third-largest economy in the eurozone and the ninth-largest in the

world. An Italian government with an openly Euroskeptic mandate would head for a clash with Germany, which would certainly have a disruptive effect on the eurozone.

But what is happening in Rome is not only about the future of the euro. It has also to do with the state of democracy in Italy and in Europe. Discussing and questioning the governance of the eurozone, as the Italian right-left populist coalition wished to do, should not be a taboo in mature democracies.

If Berlin and Brussels really care about the survival of the eurozone, they should not fear such a debate. The economic gap between South-

ern and Northern Europe is widening and will be unsustainable before long if it isn't properly addressed.

Limiting the space for democratic debate in Europe seems to confirm the perception that the EU is immune to public opinion. That dangerously widens the divide between Europe's people and institutions.

Barring populist forces from government will also weaken Italy's already fragile democracy. A right-left populist cabinet would have helped integrate the populist forces into the constitutional system. The League and 5 Star Movement would have been confronted with the almost impossible task of governing Italy. They would have been forced to make decisions, to form alliances, to play fully the democratic game. Incorporating populists into the institutions would have broadened the democratic base and legitimacy of the Italian constitutional system, making it stronger and more resilient.

Instead, the decision to marginalize the League and 5 Star has already radicalized their positions and polarized Italian public opinion. Italian politics is volatile and unpredictable and could change course within hours. A right-left populist government, based on a stable majority in Parliament, could still be created if President Mattarella, the League and 5 Star find a reasonable compromise that allows both sides to save face. Voters would then judge the new government based on its actions.

If this does not happen, Italy could experience a major constitutional crisis. It could end up as a case study in how liberal democracies commit suicide.

*Mr. Ronchi is a lecturer at Sciences Po in Paris.*

# Fossil-Fuel Divestment Is Futile

By Paul H. Tice

**T**he fossil-fuel divestment campaign has made its way from the campus quad to Wall Street. Watch for disruptions at Wednesday's annual meeting of Exxon Mobil shareholders. Climate-change and environmental activist groups have become the ideological driving force behind the environmental-social-governance movement, or ESG, sweeping the investment-management industry.

ESG criteria purport to promote "sustainable investing" by imposing "social responsibilities" on corporations—including the responsibility to prevent global warming—under the guise of fiduciary responsibility, risk management and financial transparency. Because the environmental question relates to what oil and gas companies do, as opposed to how they operate, there is no obvious way for them to comply, apart from getting out of the business.

**If climate activists have their way, oil prices will rise—and so will stocks in energy companies.**

That means there's no obvious way for fund managers to comply with ESG activists' demands other than by divesting themselves of fossil-fuel companies. The activists have succeeded in redirecting investment flows away from the coal and oil-sands industries, with crude oil the next hydrocarbon in the crosshairs.

But fund managers need return performance and portfolio flexibility. That's the main reason college endowment boards have generally ignored student climate protesters. Energy is a significant component of the world's financial markets—too large, diverse and volatile a sector for major institutional investors not to own. Depending on the benchmark index, the industry comprises between 5% and 15% of the major U.S. debt and equity markets.

By framing the debate in terms of fiduciary responsibility, the ESG movement is actually sowing the seeds of its own destruction. In the long run, the effort to starve energy companies of capital will only make the oil and gas sector more attractive to investors.

Consider the following irony: Many traditional energy investors are making common cause with anti-fossil-fuel groups by also advocating for a curtailment of capital to the industry—including to some of the best U.S. shale-oil plays, such as the Permian Basin in West Texas. Energy-company shareholders are agitating for a shift away from the historical business model focused on growing reserves and production while perennially outspending cash flow.

Such calls for "capital discipline" are transparently self-serving. In the near term, any cash not put back into the ground through the drill bit would likely be returned to shareholders in the form of dividends and stock buybacks.

The overriding goal is to jack up oil prices by slowing down drilling activity and production growth. Despite strong wellhead economics, energy stock prices continue to lag and underperform nearly four years after the 2014 fall, due to their high correlation with world oil prices. All else equal, most energy companies and investors would prefer to leave oil in the ground until prices rise. Forcing energy companies to live within cash flow by deferring capital spending helps that happen.

That dedicated energy investors are now echoing the arguments of the ESG movement should motivate the latter to crack open an economics textbook. The basic law of supply and demand suggests that if the ESG movement gained critical mass so that it had a real effect on the cost and availability of capital for fossil-fuel companies, it would likely push oil prices well above the \$100-a-barrel mark, generating windfall returns for energy companies—and for those investors who resist peer pressure and maintain exposure to the sector.

ESG-minded funds that divested from the sector for moral reasons would significantly underperform their peers and relevant benchmarks, thereby failing in their fiduciary role. And unlike 100-year climate-projection models, investment managers are gauged by their actual return performance every year.

Something for the ESG environmentalists to think about as they march toward Pyrrhic victory.

*Mr. Tice works in investment management and is an adjunct professor of finance at New York University's Stern School of Business.*



**UPWARD MOBILITY**  
By Jason L. Riley

professional sport

were losing their way?

After two seasons of sheepish thumb-twiddling, Commissioner Roger Goodell announced last week that players will now be required to stand for the playing of the "The Star-Spangled Banner" or remain in the locker room until the anthem has been performed. No more kneeling before the television cameras to protest this or that social cause ahead of game time on any given Sunday. Teams will be fined if players violate the new rule.

Mr. Trump, a harsh critic of the player protests, offered support for the new policy and called for the league to go further. "I don't think people should be staying in the locker rooms," he told "Fox & Friends." "You have to stand proudly for the national anthem. Or you shouldn't be playing, you shouldn't be there. Maybe you shouldn't be in the country."

It's doubtful many Americans believe kneeling for the anthem is a firing offense—let alone a deportable one. And the Supreme Court has held that such protests are constitutionally protected. Mindful of First Amendment values, the league is wise to give the athletes safe harbor if they don't want to stand for the anthem. The protesting players, who say they are calling attention to police treatment of black criminal suspects, among other causes, are free to showcase their higher consciousness at other times and in other places. Just not on the field before kickoff.

Mr. Goodell said in a statement that the goal of the new policy is to "keep our focus on the game and the

extraordinary athletes who play it—and on our fans who enjoy it." That makes perfect sense. What's odd is how long it took for the league management to realize that it was out of step with so many ticket holders and viewers. A Yahoo Sports/YouGov survey released last week found that 53% of self-described NFL fans sup-

**The new national-anthem policy will help put to rest the myth that America is awash in police murders.**

port the policy change while only 32% oppose it. The general public supports the policy by a 16-point margin.

Those numbers haven't moved much since Colin Kaepernick, a former backup quarterback for the San Francisco 49ers, first took a knee during the anthem at a preseason game in 2016. Polls have consistently shown that Americans oppose this behavior. Mr. Trump isn't the only person in the country who tunes into

According to New York magazine, "the origins of the word can be traced back to 'BASEketball,' the 1998 film by 'South Park' creators Trey Parker and Matt Stone." But why use such a lackluster word? When it comes to expressing disdain for what someone has said or

the NFL to watch, you know, football.

But the protests have been more than an annoying distraction for sports fans. On a more substantive level, they have been used by political progressives and the mainstream media to advance a dangerous anti-police narrative at odds with the available empirical data. An increase in the coverage of police shootings, thanks to social media and cable news, has been presented as evidence of an increase in the number of police shootings. Statistically rare and isolated incidents are offered as evidence of an epidemic.

In fact, police use of lethal force has been falling for decades. Police shootings in New York City are down by more than 90% since the early 1970s. In Chicago, shootings involving police fell by more than half—to 44 from 107—between 2011 and 2015, according to a database compiled by the Chicago Tribune. That means police-involved shootings represented just over 1% of total shootings in the Windy City in 2015. Over the same five-year period, police in other major cities with sizable minority populations,

including Los Angeles, Houston and Philadelphia, resorted to lethal force less frequently than Chicago police officers.

A recent study published in the Journal of Trauma and Acute Surgery assessed more than a million service calls to police departments in North Carolina, Louisiana and Arizona and found that cops used physical force in the course of arrests less than 1% of the time.

Writing earlier this month about the study's findings, the Manhattan Institute's Rafael Mangual lamented "a media landscape that regularly devotes front pages and opening monologues to graphic cases of police force, against racial minorities in particular" without providing proper context. "Despite the slim chances of being subjected to police violence, many Americans continue to harbor fear of the police, substantially attributable to near-constant coverage of isolated incidents."

The NFL's indulgence of this false narrative perpetrated by the political left has contributed to this undermining of social trust. Even those of us who don't watch football should be grateful for the new policy.

## What's Another Word for Derp?

By Stephen Miller

**T**he Durability of Inflation "Derp" read a headline in the New York Times. *What's derp?* I wondered. An economist wrote the article, so I thought it might be a term economists use. I soon learned that derp has been around for two decades. It means stupid, foolish or incoherent writing or speech.

According to New York magazine, "the origins of the word can be traced back to 'BASEketball,' the 1998 film by 'South Park' creators Trey Parker and Matt Stone."

But why use such a lackluster word?

When it comes to expressing disdain for what someone has said or

written, the English language is an embarrassment of riches. To name some of my favorites, there's blatherskite, balderdash, twaddle

I especially like claptrap, which first saw the light in the mid-18th century, according to the Oxford

**I would put my money on hogwash, but I'm also hoping twaddle makes a comeback.**

English Dictionary. Claptrap was language actors employed to elicit applause, but also the name of "a mechanical contrivance for making a clapping noise to express applause." In Trollope's "Phineas Finn," a character dismisses a radical politician's letter outlining a reform agenda: "It is just the usual claptrap . . . only put into language somewhat more grandiloquent than usual."

I also like twaddle, first used in 1782. It was a favorite with three great American writers: Henry James, William Dean Howells and Mark Twain. Writing to the novelist Sarah Orne Jewett, James characterized the compliments writers pay one another as "the mere twaddle of graciousness." Howells called Christian Science founder Mary Baker Eddy's writing "illiterate twaddle." Twain said most interviews are "pure twaddle."

There are many other synonyms, including mumbo-jumbo, which has been around since the mid-18th century and refers to pretentiously

deep or spiritual language. Two fifty 20th-century words are malarkey (1929) and gobbledegook (1944). The latter was coined by Rep. Maury Maverick of Texas. There is also a good old word that means incoherent prose or speech: gibberish, which has been around since 1557. And don't forget codswallop, a word that sounds Shakespearean but was coined in 1959.

Will derp have staying power? It's dull and sounds like burp, so I doubt it. I would put my money on hogwash, which originally meant kitchen swill for pigs. It didn't get its current meaning of foolish or nonsensical ideas until the late 19th century. According to Google's usage graph, hogwash has become increasingly popular in the last 50 years.

I hope twaddle makes a comeback. It trips easily off the tongue. Around the turn into the 20th century it was popular throughout the English-speaking world. When asked in 1897 why he didn't write in Polish, Joseph Conrad replied: "I value too much our beautiful Polish literature to introduce into it my worthless twaddle." Writing about the arts in England in 1908, Max Beerbohm made a comment that still resonates: "Good work may, does sometimes, succeed. But never with the degree of success that befalls twaddle and vulgarity. . . . Twaddle and vulgarity will have always the upper hand." That's no baloney.

Mr. Miller's latest book is *Walking New York: Reflections of American Writers from Walt Whitman to Teju Cole* (Fordham, 2014).

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## WORLD NEWS

# Brazil Leader Vows to End Truckers Strike

'I won't deviate from my agenda' of market liberalization, President Michel Temer says

BY PAULO TREVISANI  
AND JEFFREY T. LEWIS

SÃO PAULO—Brazil's President Michel Temer pledged Tuesday to end a disruptive truckers strike and press on with his effort to overhaul Latin America's largest economy.

Mr. Temer on Sunday agreed to tax cuts for diesel fuel and other benefits for truckers with a cost to taxpayers of close to \$3 billion through the end of this year, after a week of highway blockades that have slowed or halted shipments of food, fuel, medicine and other goods.

Mr. Temer said his administration would make sure the National Treasury, and not the state-run oil company Petrobras, bears the brunt of a new policy under which diesel prices will change only once a month. Markets had feared the return of a government-controlled price policy that forced Petrobras to pile up on debt in 2014.

Mr. Temer's ministers have said this year's fiscal targets would be met despite the fuel subsidies and tax cut. "I won't deviate from my agenda" of market liberalization, the president said.

Many truckers continued to block some of the country's highways on Tuesday, even after union leaders called on their members to return to work. Mr. Temer denounced the remaining strikers, saying their goal was no longer to improve their economic situation.



Mr. Temer, right, discussing measures to take against the truckers strike with Finance Minister Eduardo Guardia in Brasília on Sunday.

"There is political motivation inside the movement," he said to reporters on the sidelines of an investment forum here, without elaborating. "We'll fight back, identify who ever is doing it" and prosecute them, he said, adding that 47 investigations have already been opened into alleged strike-related misconduct.

The president of the Brazilian Association of Truckers, José da Fonseca Lopes, called on the union's members to return to work because the government has conceded to all of their demands. He also warned that people who want to overthrow the government were

trying to influence drivers.

"There are a lot of people trying to take advantage of our movement, claiming they work in favor of truckers," he said in a video distributed via WhatsApp. "We need to end this [strike], because our demands have been met."

The nine-day strike was popular among the Brazilian public, and antigovernment groups used it to call for the military to take over and end widespread corruption.

But Mr. Temer played down the risk of a coup like the one that launched Brazil's last dictatorship, from 1964 through 1985. A constitutional lawyer

by training, the president said Brazil has changed its constitution every three decades or so, but insisted that fate wouldn't befall the current one, which was proclaimed 30 years ago in October.

"It's time Brazil breaks this vicious historic cycle," he said.

The truckers' work stoppage has been largely backed by average Brazilians, even as it forced them to spend hours in line at the very few gas stations supplied with fuel. Mr. Temer on Tuesday said that support was ebbing.

"Our internal poll showed that by [Monday] morning 56% approved of the strike. By

the evening it had fallen to 32%," he said.

The economic cost of the work stoppage continues to climb. A Brazilian meatpackers group said Tuesday the strike has stopped shipments worth 4.5 billion reais (\$1.2 billion).

The strike has also amounted to a heavy blow to Mr. Temer, whose term is up on Dec. 31. He took office in May 2016 as the impeachment trial began against his predecessor, Dilma Rousseff, who was ousted in August of that year.

Mr. Temer promised to unite the nation and promote stability, laying out a goal of luring foreign investors to fi-

## Weakening Recovery

Change from previous quarter in Brazil's gross domestic product



Source: Brazilian Institute of Geography and Statistics

THE WALL STREET JOURNAL.

nance much-needed infrastructure projects to leave behind a fierce recession and growing budget gap.

Since then, Brazil has resumed economic growth and both inflation and borrowing costs have come down substantially. But the good news has been muted by continuing corruption scandals, leaving the president's approval rating mired in low single digits.

Mr. Temer was accused last year by the country's attorney general of accepting bribes, but the president's many allies in Congress voted to block a trial.

As a result of the drawn-out saga, Mr. Temer's economic reforms, including an overhaul to Brazil's insolvent pension system, wound up shelved. His other efforts to reduce an alarming budget deficit and boost the private sector's role in the economy have irked many Brazilians, as reflected in the truckers' support.

# Argentina Faces Pressure to Hasten Reform

Investors have lost patience with President Mauricio Macri's gradualist economic overhaul

BY RYAN DUBE

BUENOS AIRES—Not long ago, Marisa Arcella's small restaurant was doing so well that she considered opening a second one. Now, as President Mauricio Macri's economic overhaul buffets Argentina, she is just trying to keep the lights on.

Ms. Arcella said her electricity bill has risen 10-fold since Mr. Macri began cutting subsidies in 2016. Her food costs soar daily due to high inflation. With talk of a possible recession on the horizon, customer numbers are dwindling.

"I've thought about closing," said Ms. Arcella, shaking her head disapprovingly at Mr. Macri's economic policies.

Mr. Macri's cautious approach to curbing the country's overspending—known as gradualism—has failed to slash inflation and jump-start the economy to the promised rate. He sought financial support from the International Monetary Fund this month after the peso plummeted against the dol-

lar. The peso's weakness prompted the Central Bank to raise a key lending rate this month to 40%, further weighing on the economy.

Now, Mr. Macri faces a difficult trade-off. He is under pressure by investors to extend spending cuts to pensions, social programs and to reduce state employment. But all that risks hurting middle-class Argentines and sparking a backlash that could let Mr. Macri's political adversaries exploit growing discontent.

"It is inevitable that they will have to cut things that have more social impact," said Bruno Binetti, a political analyst at the Torcuato Di Tella University in Buenos Aires.

After taking office in December 2015, Mr. Macri began to open up the highly protected economy and to unwind the leftist policies of his predecessor, Cristina Kirchner, who bequeathed Mr. Macri the biggest fiscal deficit in decades, double-digit inflation and rising poverty.

Mr. Macri's administration

lifted currency controls, cut taxes, and slashed electricity and transportation subsidies that had cost the government billions of dollars a year. He restored trust in a discredited statistics agency and reached a deal with creditors from a massive 2001 default, letting Argentina tap international markets again.

This gradualist recipe, intended to avoid the upheaval of past economic shock therapies, relied heavily on fresh credit to plug the deficit. It worked for a while as Argentina took advantage of low interest rates to sell \$100 billion in public debt over the past 2½ years.

But investors soon became impatient. They questioned the central bank's credibility as it cut rates in January to support growth despite inflation at 25%, well above target. They worried about the government's ability to reduce expenses to plug the fiscal gap and enact regulatory changes intended to improve business competitiveness and cut red tape.

They pointed to total gov-

## International Help Would Likely Come With Conditions

Argentina still has lots of international support. President Donald Trump tweeted recently that the U.S., which has a powerful voice in approving International Monetary Fund loans, endorses President Mauricio Macri's "vision for transforming his country's economy."

ernment expenditures, which stayed at 41% of gross domestic product last year, according to the IMF, the same high level they were under Mrs. Kirchner and her late husband, Néstor, who led Argentina before her.

"Gradualism is dead," said Arturo Porzecanski, a professor of international economics at American University who closely tracks Argentina. "For 2½ years they just maxed out their credit cards. And now investors are asking questions."

While the government has

but any loans are likely to come with conditions such as budget cuts and a depreciation of the peso.

That has many Argentines worried—and preparing for more personal economic pain. Supermarket chains have announced plans for layoffs, while the footwear industry says production fell last year to its lowest levels in nearly a decade, hurt by higher costs, weaker consumption and an increase in cheap imports.

managed to narrow its primary fiscal deficit—which doesn't include interest payments on debt—to 3.9% in 2017, the overall government deficit remained high at 6.5% because of increased debt-servicing fees.

Mr. Macri said recently he was initially overly optimistic and committed to quickening the belt-tightening. "The world decided that the speed that we were committed to reducing the fiscal deficit wasn't enough," he said. "We have to move faster."

# India's Sugar Stockpiles Grow as Government Tries to Dig Out

BY VIBHUTI AGARWAL

RAJPURA, India—The Indian government's price controls have created an unsustainable sugar glut, and now New Delhi wants to dump it on the already struggling world market for the commodity.

India is the world's second-largest producer and biggest consumer of sugar. Thanks to strict controls of imports, exports and prices, the country generally produces all it needs.

In a holdout from an era of central planning, New Delhi sets the minimum price for cane and, to keep sugar-cane farmers sweet with the government, it keeps raising that price. But end-user sugar prices are free to fluctuate and currently are so low that refiners say they lose money on every teaspoon they sell.

"Stocks get added every year, but there are not as many takers," said refiner Amit Agarwal, who runs sales operations at a sugar mill in the northern state of Uttar Pradesh. Pointing to a warehouse packed with 77,500 metric tons of sugar he can't sell,

Mr. Agarwal said his mill is under pressure to pay farmers on time. "But where is the money to pay them?" he said.

Refiners are required to buy everything the cane farmers bring them at a government-set price. But because they have to pay the farmers only after they sell it, they are hoarding the sugar and waiting for a better price—or better incentives.

The result: piles and piles of sugar in warehouses all over India. Mr. Agarwal's five warehouses all have sugar bags piled 34 feet high. At last count, in late May, Indian refiners had a stockpile of 13 million tons of sugar—more than all of the sugar consumed in the U.S. last year.

India's sugar output is ex-

pected to rise to 31.5 million tons in the 12 months that began on Oct. 1, exceeding the annual demand by 6.5 million tons, according to latest estimate by the Indian Sugar Mills Association, a New Delhi-based industry group.

India's roughly 50 million sugar-cane farmers say they deserve a living wage for their

hard work, and acknowledge that government guarantees have improved their lives. But they are desperate to get paid.

"We invest our entire earnings in the crop. If we don't get paid on time, how will we eat?" said Bansi, a farmer in Rajpura who goes by one name and owns a 6-acre plot. He says the mills owe him

150,000 rupees (\$2,213).

New Delhi is pressuring the refiners to sell so they have the cash to pay off the cane farmers and is even offering refiners an extra incentive to export their extra sweetener.

The government wants to placate farmers since they are a large and politically influential lobby, forming a huge vot-

ing bloc. With national elections due next year, the government is trying to court the cane farmers and secure their votes.

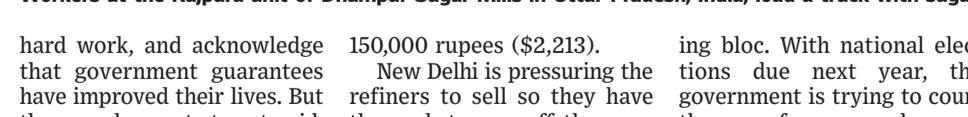
India hopes to get rid of around 2.5 million tons of its excess sugar on the international market. While refiners lose money on the global market just as they do at home,

the government is creating incentives, such as the elimination of sugar export taxes, to help them offset more of their losses through exports.

New Delhi is also working to subsidize a part of cane payments made by mills to farmers. This month, India's cabinet permitted a payment of 5.5 rupees a kilogram of sugar to be paid directly to the farmers on behalf of the mills. New Delhi is also considering building a buffer stockpile of three million tons to help lift domestic prices, which it hopes will in turn get the refiners to sell and pay what they owe to cane growers.

Refiners say these measures don't go far enough. "If the government wants to keep the mills alive and running, it should stop raising the cane price. That is the only solution," Mr. Agarwal said.

As new cane starts coming in for the next harvesting season beginning in October, Mr. Agarwal plans for his mill to either sell sugar on the local market at lower prices or keep stocks until next season.



Workers at the Rajpura unit of Dhampur Sugar Mills in Uttar Pradesh, India, load a truck with sugar.

ELENA DEL ESTAL FOR THE WALL STREET JOURNAL

## PERSONAL TECHNOLOGY: A \$530 PHONE THAT'S SMART ENOUGH B4

# BUSINESS & FINANCE

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## Moonves Assailed in CBS Battle

Shari Redstone says CEO told the board he would quit unless her family lost its control

BY KEACH HAGEY  
AND JOE FLINT

Shari Redstone shot back at CBS Corp. in court Tuesday, alleging that CBS Chief Executive Leslie Moonves gave the CBS board an "ultimatum" that he would resign unless directors voted to strip her family of voting control.

In a complaint filed Tuesday in the Delaware Court of Chancery, Ms. Redstone and her family holding company, National Amusements Inc., say that CBS's action to strip

National Amusements of voting control by issuing a dilutive dividend to all shareholders is invalid.

They say that the recent legal attacks against the Redstone family aren't motivated by the CBS board's concern over being forced to merge with corporate sibling Viacom Inc., as CBS says. Rather, Ms. Redstone says the motivation is Mr. Moonves's opportunistic seizure of the moment to throw off the yoke of having a controlling shareholder that he has long chafed against, according to the complaint.

"The only cogent, but manifestly improper, explanation for the Director Defendants' unprecedented action is that Leslie 'Les' Moonves, CBS's longtime CEO, has tired of

having to deal with a stockholder with voting control and has taken particular umbrage that the exercise of such stockholder's control has migrated from Sumner Redstone

*Gifford is accused of 'grabbing [Redstone's] face and directing her to listen to him.'*

to his daughter, Ms. Redstone," the complaint alleges.

Ms. Redstone, the vice chairman of CBS and Viacom, rose to power in 2016 after a power struggle at Viacom that led to the resignation of her

ailing 95-year-old father, Sumner Redstone, from the boards of both media companies.

Following several months of merger talks that stalled over how the merged company would be managed, CBS filed a lawsuit on May 14 saying it had voted against a merger and was seeking to block National Amusements from being able to replace any board members before it could vote on stripping the firm of control.

National Amusements then changed CBS's bylaws to require 90% of directors to support such a move, a day before the CBS board held the vote. The outcome is now up to a Delaware judge.

"Today's reactive complaint from NAI was not unexpected," CBS said in a written

statement. "The amended complaint filed last week by CBS and its Special Committee details the ways in which NAI misused its power to the detriment of CBS shareholders, and was submitted after careful deliberation by all involved. We continue to believe firmly in our position."

In the complaint, Ms. Redstone and National Amusements reiterate their insistence that they were never going to pursue a merger without the companies' support. In fact, according to the complaint, a week before the CBS special committee convened to recommend against a merger and filed a lawsuit, "NAI had determined that it no longer supported a merger"

Please see CBS page B7

### Easier Money

Net percentage of banks tightening standards for loans to large and middle-market firms.



Source: Federal Reserve

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## Looser Lending Worries Regulators

BY RACHEL LOUISE ENSIGN  
AND LILLIAN RIZZO

Faced with tepid loan growth and heated competition for clients, banks are sweetening their deals on loans to businesses, a development that concerns regulators.

Lenders are giving corporate borrowers lower rates and looser terms, even if they operate in industries that are under strain, according to regulators and a Wall Street Journal analysis of lending data. The development is a boon to companies looking to borrow cheaply while the economy is doing well. But regulators are raising red flags, particularly since rising interest rates may make it harder for businesses to pay off the loans.

The Office of the Comptroller of the Currency in a report last week identified the easing of commercial-loan standards as a top risk in the industry. While the rate of bad business loans remains very low and most banks still have a moderate risk appetite, the regulator said that over the past year it privately issued more warnings ordering financial institutions to modify business-lending practices. "The worst loans are often made in the best of times," Comptroller of the Currency Joseph Otting warned Thursday.

Banks became more conservative lenders after the financial crisis, tightening standards in some sectors to focus on

Please see LOANS page B14

## Starbucks Closes Doors Around U.S. for Antibias Training



CLOSED SESSIONS: As part of a companywide effort, employees underwent racial-bias instruction at a Starbucks store in midtown Manhattan on Tuesday. B2

## CEO Exodus Upends Food Sector

BY ANNIE GASPARO  
AND JACOB BUNGE

America's food giants are shedding a generation of CEOs at a remarkable rate, the culmination of years of bleak sales in an industry that until recently, had gone unshaken for half a century.

Over the past two years, at least 16 major packaged-food and beverage chief executives have stepped down, according to a Wall Street Journal analysis. The departure of Campbell Soup Co. chief Denise Morrison earlier this month followed CEO changes at General Mills Inc., Mondelez International Inc., Kellogg Co., Nestle USA, Hershey Co., J.M. Smucker Co. and Twinkie maker Hostess.

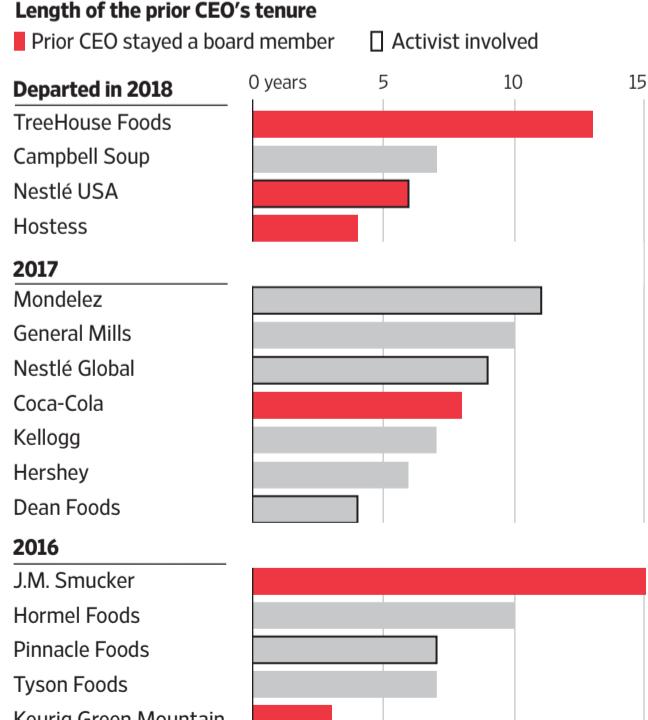
"I don't think we've ever seen something like this," said Greg Wank, partner at Anchin, an advisory firm that works with food companies.

The outgoing executives have contended with a new era of American eating and grocery-shopping habits, shepherded in by millennials and the internet. Stalwart food brands no longer can consistently command higher prices from retailers, forcing management to focus on cost cuts. And as executives try to invest in change, investors want stronger profit margins. The S&P 500 Packaged Foods & Meats subindex has dropped 15% in the past two years, while the S&P 500 has climbed 30%.

### Food Shuffle

The largest U.S. food companies have changed CEOs at a remarkable rate over the past two years.

#### Length of the prior CEO's tenure



are at their wit's end trying to figure out growth," said a now-retired big-food-company chief.

"It was certainly much easier in my early decades than today's CEOs have it," said Gary Rodkin, who retired in 2015 after serving as chief executive of ConAgra Foods, now

called Conagra Brands Inc.

While each company's situation is a little different, companies say they now have the right leaders in place to navigate next steps. Mondelez said its prior CEO had improved its profit margin in recent years while sales growth was slower than it hoped. Most of the other companies declined to comment further.

Hershey's Chief Digital Commerce Officer, Doug Stratton, said the industry for decades trained people on how things were—including focusing on physical stores and not e-commerce. "It's really hard to burst out of that mind-set, including for the CEOs," he said, adding that sometimes a new face at the top can do that.

Sean Connolly, who succeeded Mr. Rodkin as chief of Conagra Brands Inc., quickly shook things up at the maker of Hunt's ketchup, Peter Pan peanut butter, and Chef Boyardee. He relocated its headquarters to downtown Chicago from Omaha, Neb., and sold off two big chunks of the business.

With Conagra shares up 26% since he took over, Mr. Connolly has called out rival food companies for neglecting brands and letting bureaucracy impede innovation. Walking down the frozen-food aisle, "you'll still find plenty of products that look like they're left over from the 1980s and 1990s," he said at a conference

Please see CEO page B2

### HEARD ON THE STREET | By Aaron Back

## Possible Risk Lurks in Borrowing for Autos



Concerns over consumer debts have abated lately as credit growth has slowed and the U.S. economy has improved. Trouble could still be lurking.

The New York Federal Reserve's quarterly report on household debt earlier this month showed total consumer debt grew by 3.8% from a year earlier in the first quarter, slower than the average 4.5% over the previous four quarters, thanks largely to a pullback in auto loans. Overall delinquency rates also declined slightly because of improvements in student loans and mortgages.

But in the two areas where lenders have been most aggressive over the past few years—credit cards and auto loans—delinquencies have continued to mount. Credit-card loans that are more than 90 days delinquent rose to 8% of total balances in the first quarter.

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## CEO

*Continued from the prior page* this month. "They're going to have trouble hanging on to that real estate unless they modernize themselves."

Until recently, big brands were synonymous with the foods they made—Kraft and cheese; Heinz and ketchup; Kellogg and cereal; Coke and soda. They won prime shelf space with retailers and had big marketing budgets that furthered their favor with consumers. And they could always charge a little bit more for their products to keep profits

*Many food companies have recently become vulnerable to activists seeking change.*

rolling in when costs rose or sales slowed. The strategy for success was straightforward and often attainable.

Now, shifts toward simpler ingredients and shopping for food online, combined with a rise in niche, small brands and grocery-store brands, have made the old playbook irrelevant.

Campbell tried to break into the fresh-food sector by acquiring Bolthouse Farms in 2012. But the move backfired in many ways, weakening profit margins and revealing the difficulties of managing the supply chain for perishables.

Meanwhile, Campbell's core soup sales continued to struggle. Ms. Morrison's departure came as the company faced its fifth consecutive year of lower U.S. soup sales.

Investors said the CEO shuffle is a positive step for the industry, particularly when a new executive is brought in from outside. "There's always a bit more intrigue when you have an external hire come into a company that's been

around for 100 years," said Jacob Gameran, senior research analyst at Neuberger Berman Group, which manages \$299 billion of investor funds.

Many of the food companies that have changed CEOs over the past two years, however, have promoted internal candidates instead. Campbell's interim chief and board member Keith McLoughlin said the company is open to internal and external candidates for its CEO.

A few factors unite some of the newly named leaders. Many, like General Mills' Jeff Harmening and TreeHouse Foods' Steve Oakland, have worked across different divisions of companies and bring experience integrating acquisitions or restructuring operations.

Others, including Kellogg's Steve Cahillane and Mondelez's Dirk Van de Put, have worked on developing international markets, where packaged-food sales have been growing faster than in the U.S.

Meanwhile, since 2016, activists have publicly demanded changes such as a CEO replacement or sale at more than 40 food and drink manufacturers around the world, according to data from Activist Insight, making food processing one of the consumer-goods industries most vulnerable to activists.

Some expect more changes. PepsiCo Inc. CEO Indra Nooyi has been leading the beverage and salty-snack giant since 2006. Unilever PLC's Chief Paul Polman has been at the helm since 2009, and people familiar with the matter told the Journal last November that the board was looking for his successor. Pepsi and Unilever declined to comment.

"The industry kind of reminds you of an NFL off-season with all the coaching changes," said Brett Hundley, food analyst at the Vertical Group LLC. "When a team changes its head coach, that doesn't do anything in and of itself unless that person brings a new strategy and gets a different outcome."

—Cara Lombardo contributed to this article.

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## BUSINESS & FINANCE



JESSICA KOURKOUNIS/REUTERS

A Starbucks in Freeport, Maine, closed Tuesday afternoon as part of the chain's nationwide program.

## Starbucks Takes a Break For Its Antibias Training

BY JULIE JARGON AND RACHEL FEINTZEIG

**Starbucks** Corp. closed thousands of cafes Tuesday afternoon to provide antibias training for its employees, sending customers around the country to competitors for a caffeine fix.

Jeremy Ciskowski, a customer-service manager, was counting on a venti white chocolate mocha to perk up his afternoon. "I'm falling asleep at my desk," the 22-year-old said after attempting to get into a closed Starbucks in Stamford, Conn. He said he would head to a McDonald's down the street for a coffee.

The closure of more than 8,000 company-operated Starbucks for antibias training comes more than a month after an incident in Philadelphia. There, a store manager called police after two black men who hadn't purchased anything and were denied bathroom access allegedly didn't leave the store when asked. The Starbucks stores won't reopen until Wednesday morning, and the closures could cost Starbucks about \$12 million in lost sales, analysts say.

Tuesday's training is the first step in what Starbucks says will be continuing education of its employees to ensure that its cafes—which they describe as a "third place" between home and work—are welcoming to everyone. With coffee available from an abundance of outlets, however, coffee drinkers didn't have to go far to find a substitute on Tuesday.

Antonio Tomarchio, chief executive of Cuebiq, said Dunkin' Donuts likely benefited in the Northeast and Peet's Coffee on the West Coast.

Some customers applauded Starbucks's effort. Mike Oran, a user-experience designer in Chicago, was meeting a former

### Sharing Coffee

Share of Starbucks customers who also visit the coffee chain's competitors.

#### McDonald's

49%

#### Dunkin' Donuts

19.8%

#### Peet's Coffee

3.6%

#### Tim Hortons

2.6%

Source: Cuebiq

THE WALL STREET JOURNAL

### Fast-food giant McDonald's Corp. was poised to benefit from the extra business from afternoon coffee drinkers, according to Cuebiq, a company that analyzes anonymous data from the geolocation engine it provides for hundreds of consumer apps. The firm found that 49% of Starbucks customers also frequent McDonald's.

A McDonald's spokeswoman said she wasn't aware of any franchisees offering special deals Tuesday.

Antonio Tomarchio, chief executive of Cuebiq, said Dunkin' Donuts likely benefited in the Northeast and Peet's Coffee on the West Coast.

Some customers applauded

Starbucks's effort. Mike Oran, a user-experience designer in Chicago, was meeting a former

co-worker at a Starbucks in Chicago but when he got there, it was closing, so he went across the street to Argo Tea instead.

"I don't mind having to go somewhere else. I think it's a good thing they are doing the training," Mr. Oran said.

At the Starbucks in Detroit's Midtown district, a security guard opened the door about a half hour after the store closed to allow for the delivery of at least five boxes of pizza.

Starbucks employees were scheduled to watch videos featuring Starbucks Chairman Howard Schultz, hip-hop artist Common and others discussing what bias means and how to treat others respectfully. Starbucks executives said the police never should have been called at the Philadelphia cafe in April.

Also planned during the Tuesday session were exercises in which staff could share stories of how they have experienced bias in their own lives.

The company, which settled with the two men for an undisclosed amount, has faced controversy for weeks since the incident. The coffee chain recently announced a new policy allowing everyone, including nonpaying guests, to use its cafes, bathrooms included.

Starbucks hasn't disclosed how much the antibias training will cost but said it would continue to be an area of investment.

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## BUSINESS NEWS

# Teamsters Strike at Canadian Pacific

By JACQUIE McNISH

TORONTO—Train conductors and engineers went on strike at **Canadian Pacific Railway** Ltd. late Tuesday, stranding large volumes of commodities and manufactured goods that are shipped across North America by the country's second-largest railroad.

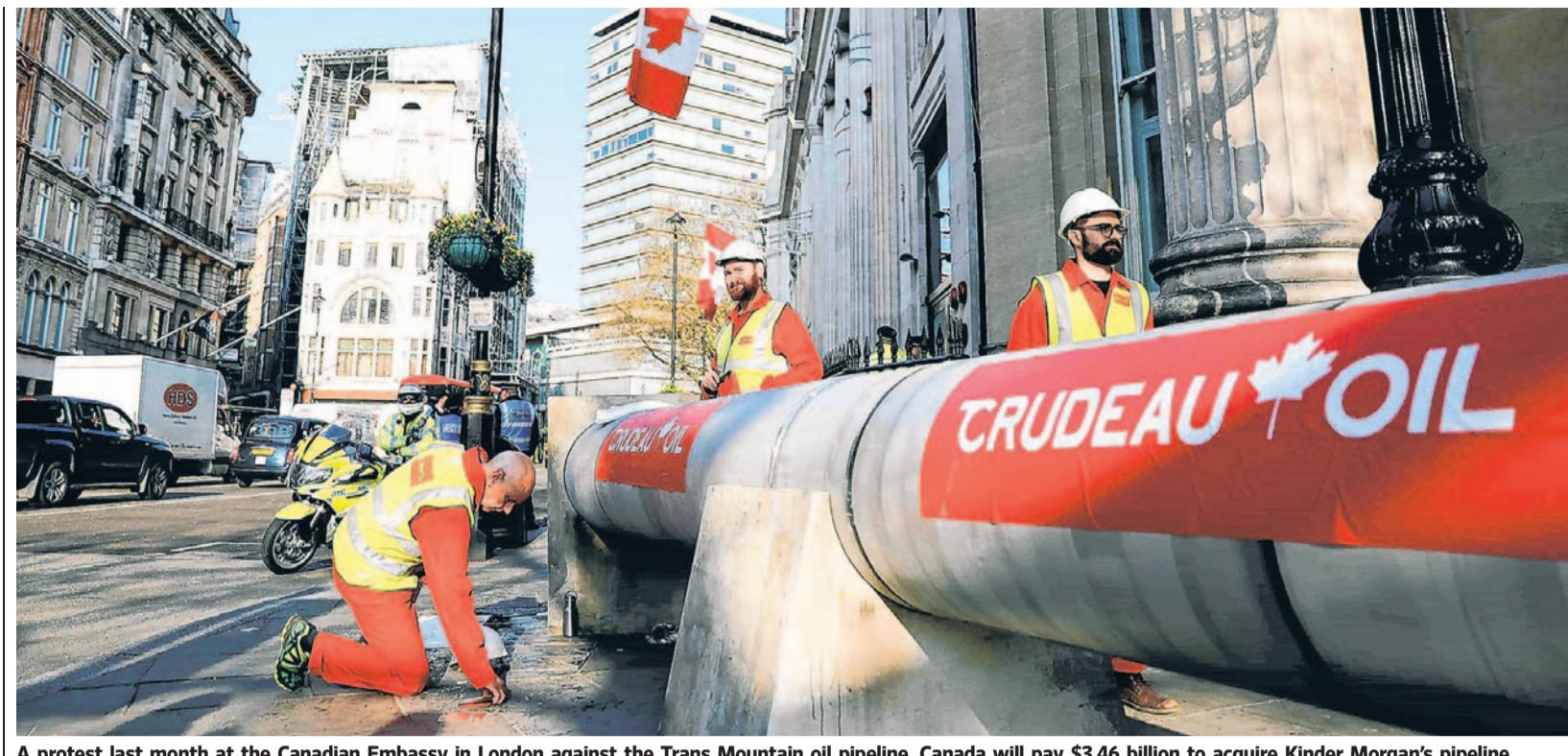
A spokesman for the union representing the workers, Teamsters Canada, said that union representatives will remain at the table in a last-ditch effort to reach an agreement.

The railroad came to an 11-hour deal on a tentative, new three-year contract Tuesday night with one union that represents nearly 400 electrical workers. But it was unable to forge an agreement with the union representing about 3,000 train conductors and engineers, who started striking shortly after 10 p.m. Tuesday.

The breakdown followed months of negotiations. The union has said it is seeking benefit increases and more predictable work schedules.

Canadian Pacific has been winding down its railcar deliveries to prepare for the strike, which it said would bring its shipments to a halt. Chief Executive Keith Creel said in April that the railway wouldn't be "taken hostage" by demands that would interfere with the operations of one of the most efficient railways in North America by operating ratio.

The strike is the latest blow to grain, crude oil, forest product and mining producers, who experienced significant shipping delays over the winter months as CP and its rival, **Canadian National Railway** Co., struggled to keep up with a surge in demand for oil and other commodities.



A protest last month at the Canadian Embassy in London against the Trans Mountain oil pipeline. Canada will pay \$3.46 billion to acquire Kinder Morgan's pipeline.

# Ottawa Buys Pipeline in Dispute

By PAUL VIEIRA  
AND VIPAL MONGA

OTTAWA—Canada is forking over billions to acquire a pipeline project it says is vital for the economy but on the brink of collapse amid regional opposition.

Canada's Liberal government agreed Tuesday to buy **Kinder Morgan** Inc.'s Trans Mountain pipeline for 4.5 billion Canadian dollars (US\$3.46 billion). Finance Minister Bill Morneau said Canada acted to ensure construction can proceed on a planned C\$7.4 billion expansion.

The Liberal government of Canadian Prime Minister Justin Trudeau had come under fire for failing to act on the interprovincial dispute as jobs and investments hung in the balance. Mr. Trudeau's government had approved the project in late 2016. Though he has cast himself as environmentally progressive, he has said natural-resource development and environmental responsibility can go hand in hand. On Tuesday, federal officials underscored their commitment to getting the expansion done.

The deal was struck days before a deadline that the Houston company issued in April. Kinder Morgan warned it was ready to walk away from the expansion project unless it was satisfied by Canadian efforts to remove uncertainties over the project in British Columbia. The prov-

ince, under its year-old left-leaning government, vowed to use every legal and policy lever at its disposal to thwart the project unless its environmental demands were met.

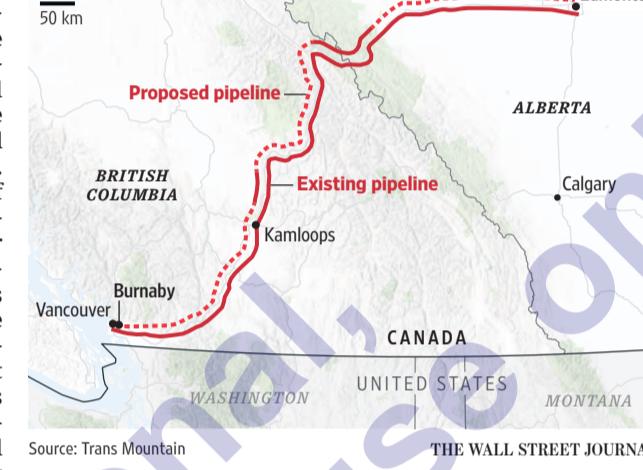
Last month, British Columbia launched a challenge to the expansion project in a provincial high court, and aboriginal groups have a lawsuit before the courts to overturn federal approval for Trans Mountain.

The Liberal government of Canadian Prime Minister Justin Trudeau had come under fire for failing to act on the interprovincial dispute as jobs and investments hung in the balance. Mr. Trudeau's government had approved the project in late 2016. Though he has cast himself as environmentally progressive, he has said natural-resource development and environmental responsibility can go hand in hand. On Tuesday, federal officials underscored their commitment to getting the expansion done.

"This is an asset that has a lot of value, and we can pro-

## High Energy

The proposed expansion to the Trans Mountain pipeline would nearly triple its capacity.



Source: Trans Mountain

vide additional value," Mr. Morneau said.

Project proponents said there was urgency to push ahead with this 710-mile pipeline expansion, because other pipeline proposals for moving

Alberta crude across Canada to new global markets have either been rejected or withdrawn.

Mr. Morneau said the government doesn't intend to be a long-term owner of the pipeline, and said Canadian pension

funds, indigenous groups and other investors have expressed interest in the asset. As part of the agreement, Kinder Morgan will help the Canadian government identify potential buyers until late July.

Kinder Morgan Chief Executive Steve Kean said Canada will fund, via a loan, construction work on the project until the transaction closes, expected in the third quarter or early fourth quarter. It is subject to Kinder Morgan shareholder approval.

British Columbia Premier John Horgan, whose opposition helped push Kinder Morgan toward the exit, said he has no plans to back down. Canadian government ownership "does not reduce the risk of a [crude-oil] spill and the impact that would have on the province's economy and environment," he said. "I will continue to do my best to protect British Columbia's interests...with the full force of my efforts within the courts and the rule of law."

—Kim Mackrael contributed to this article.

# Costco Chastised Over Taiwan

By WAYNE MA

**Costco Wholesale** Corp. is the latest company to be confronted on Chinese social media over its stance on Taiwan, creating a potential distraction for the retailer as it moves into mainland China.

The issue centers on a 2016 letter that a Costco executive sent to the Formosan Association for Public Affairs, which supports Taiwan's right to be an independent country. The letter came in response to the group's complaint that an online job application form didn't include Taiwan.

"We have retail locations in Taiwan and very much consider it a country," Patrick Callans, Costco's senior vice president of human resources and risk management, wrote in the April 14, 2016, letter.

The letter was posted on the group's Facebook page two years ago, and Formosan Association executive director Coen Blaauw confirmed its authenticity.

"Costco went the extra mile by putting [the letter] out. We never asked them," he said.

Costco declined to comment.

Images of the letter began circulating on Chinese social media last week after a report in the overseas edition of state-run People's Daily noted that Costco had signed agreements to open its first store in China. The article included comments from a reader saying Costco should apologize for its past support of Taiwan.

That led to additional expressions of anti-Costco sentiment online. "There is nothing small when it comes to the national interest," said one comment on the Chinese social media platform Weibo. "We should firmly boycott and stick to the One China principle."

Beijing claims Taiwan as Chinese territory, but the island split from the mainland in a civil war nearly seven decades ago.



LUKE MACGREGOR/BLOOMBERG NEWS

After the deal, Pret is expected to accelerate its U.S. expansion.

# A Doughnut and Sandwich Combo

By SAABIRA CHAUDHURI

The owner of Krispy Kreme and Panera Bread is deepening its bet on prepared food, saying it has agreed to buy **Pret A Manger** Ltd., the British sandwich chain that has been expanding in the U.S.

Privately held **JAB** Ltd. said Tuesday that it plans to acquire Pret, as the chain is commonly known, from private-equity owner **Bridgepoint**. The deal values Pret at roughly \$2 billion including debt, according to a person familiar with the matter.

**JAB** punctuated its ambition to become one of the world's largest owners of consumer-focused food and drinks brands in January, saying it would pay \$26 billion to buy **Dr Pepper Snapple Group** Inc., the No. 3 soft-drink company in the U.S. It already owns Peet's Coffee & Tea, Krispy Kreme doughnuts and Panera Bread Co. after a decadeslong acquisition spree. In late 2015, **JAB** took control of Keurig Green Mountain in a \$13.9 billion deal that further expanded its coffee business.

The flurry of deals in recent years has spurred rivals to react. **JAB**'s growing coffee empire, including distribution deals with Dunkin' Donuts and Starbucks Corp., has made it a rival to Switzerland-based Nestle SA, the industry leader. Nestle has embarked on its own shopping spree, adding ready-to-drink coffee brands Chameleon Cold-Brew and tak-

ing a majority stake in **Blue Bottle Coffee** Inc. Earlier this month, Nestle agreed to pay Starbucks more than \$7 billion to distribute the Seattle-based company's coffee and tea to grocery and retail stores.

With the Pret purchase, **JAB** aims to succeed where McDonald's Corp. stumbled. The U.S. fast-food company took a 33% stake in Pret in 2001. Yet Pret's ensuing rapid international expansion, in which it opened 14 stores in Japan, brought the company close to bankruptcy. It was forced to retrench and cut costs. McDonald's sold its stake to Bridgepoint in 2008, which also acquired other shares, paying about £200 million (\$266 million) to secure a majority stake.

Pret, whose name is French for "ready to eat," was co-founded by college friends Julian Metcalfe and Sinclair Beecham in 1986. It started out serving Italian-style sandwiches from a single location in London.

After growing across Britain, it opened its first overseas location, in New York, in 2000. Of its more than 500 stores, 92 are in the U.S. It also has outlets in Hong Kong, China and France.

Pret tries to differentiate itself from other fast-food chains by offering healthier food. It sells protein pots, coconut porridge and salads with ingredients such as sweet potatoes, smashed beets and crayfish.



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## TECHNOLOGY

WSJ.com/Tech

PERSONAL TECHNOLOGY | By David Pierce

# A \$530 Phone Provides Bang for the Bucks



I have two phones right now. They're both glassy rectangles with large screens marred only by a big notch at the top. They have a few small differences—only one has a headphone jack, only one is waterproof—but they both stay charged all day, with high performance. One costs twice as much as the other. What gives?

The more expensive of my two devices is **Apple's** iPhone X, which starts at \$1,000. The cheaper—and larger—model is the \$530 OnePlus 6.

Apple you've surely heard of. **OnePlus** is a Chinese company that has been making phones since 2014.

OnePlus doesn't embrace new technology. It just tries to make great phones and sell them cheaper than the other great phones.

In pure bang-for-your-buck value, the OnePlus 6 is difficult to beat. While its specs might not always match what you can get from **Samsung** or **LG**, they exceed the "super good" threshold that phones hit a few years back. Even the camera, which had been OnePlus's

Achilles' heel, is finally at least good enough.

It appears time to ask the question that has been lingering ever since Apple announced the price of the iPhone X last year: How much should a phone cost?

The OnePlus 6 feels more high-end than any of the company's earlier models, largely because its all-glass body looks and feels like something Samsung and Apple would make. I don't care for all this glass on any phone: It makes big phones even more slippery, and becomes a magnet for fingerprints. Still, the soft, rounded design oozes class.

**O**nePlus's primary audience is the sort of tech-savvy user who likes big phones with beefy specs: The 6 has a 6.3-inch screen with a pixel resolution of 2280 by 1080. It runs on Qualcomm's new Snapdragon 845 processor, 6 gigabytes of RAM and 64GB of memory. You can upgrade to 8GB of RAM and 256GB of memory for an extra \$130.

It's easy to accuse OnePlus of copying other smartphones. The notch at the top of the screen does look like the iPhone's. It lets you un-



The iPhone X, left, and OnePlus 6, which costs half as much.

lock your phone with either your thumb or your face, similar to Samsung's Galaxy S9, and it has a fast charger similar to Samsung's.

But there are little ways in which it stands out. It has a handy switch on the right that shifts from ringer to vibrate to totally silent. And in an era when headphone jacks

also like wireless charging: OnePlus says it didn't include the feature because it charges too slowly, but it's more about convenience than speed. Another issue: OnePlus says the phone isn't compatible with **Sprint** or **Verizon** in North America.

The bigger trade-off is the camera. The 6 has a good one. But OnePlus can't keep up with all the advanced features other top-tier phones offer. The phone has two rear-facing lenses and can use them to capture soft-background photos, but the results look like a bad iPhone knockoff. Samsung, LG and others can automatically apply filters, shoot awesome-looking slow-mo footage, or even use image recognition to figure out what's in your photo. OnePlus does those things not as well, or not at all.

OnePlus and other lower-cost manufacturers keep prices low by reducing costs. OnePlus relies on word-of-mouth. And it sells through its own website.

"They run a thin operation," says Wayne Lam, a mobile analyst at IHS Markit, "but they have a loyal following." A OnePlus spokesman said the company

is profitable, even selling at such low prices.

**S**till, this approach puts OnePlus at a disadvantage. It isn't in a position to acquire a company that created facial-recognition technology to build the best front-facing camera. It also can't integrate its phone with other devices, or build a software platform around it: Apple Music and the Apple Watch are great reasons to buy an iPhone.

OnePlus mostly leans on Google's services, which are excellent, but it isn't invested in creating its own. It can make a great phone but has few ways to differentiate from the long list of other companies—Huawei, Oppo, Motorola—doing the same.

I'd recommend the OnePlus 6 over the iPhone 7 or Galaxy S8, because it will probably feel better longer.

(Apple's older devices don't always keep up with its services.) The iPhone X, on the other hand, is a better phone. But you have to ask yourself: Is it \$470 better?

Maybe you're looking for haute cuisine. Or maybe you're just hungry. Maybe a hot dog—cheap, easy and delicious—would hit the spot.

## Alibaba Battles for Delivery Edge With New Investment

BY LIZA LIN

SHANGHAI—Facing tougher competition in online retailing, Chinese e-commerce giant **Alibaba Group Holding** Ltd. and its logistics arm are leading a \$1.4 billion effort to boost their delivery capabilities.

Under a deal announced Tuesday, investors led by Alibaba and its majority-owned logistics unit, **Cainiao Network**, will spend almost \$1.4 billion to buy a 10% stake in

express-delivery company **ZTO Express** Inc. of Shanghai, which delivered more than 6 million parcels last year.

Logistics and delivery have become a major battleground as online retailers compete to deliver goods quickly to consumers.

JD.com Inc., Alibaba's biggest rival in China, operates its own delivery fleet and recently raised about \$2.5 billion from investors to expand its logistics division. The company

chipped away at Alibaba's market share last year by focusing on fast deliveries and customer service. Beijing-based JD.com is also experimenting with unmanned delivery drones and **Amazon.com** Inc.-style in-car delivery services.

Alibaba, the operator of two of China's largest e-commerce sites, doesn't own a delivery fleet. Instead, online merchants choose from more than a dozen delivery firms based on data provided by Cainiao,

such as cost and delivery time.

Many of the Cainiao shipments are routed by algorithms to ensure the network's three million couriers get packages to customers as efficiently as possible. Alibaba owns 51% of the company.

Alibaba increasingly has recognized the importance of customer service and is seeking to improve the consumer experience, said Steven Zhu, an analyst at Pacific Epoch in Shanghai.

"The service quality of the last-mile delivery will decide the customer experience, and if Alibaba loses in that area, even if they had a powerful Cainiao system, it won't solve consumer complaints," Mr. Zhu said.

Hangzhou-based Alibaba has sought to deepen its investment in the logistics sector, pledging last September to invest 100 billion yuan (\$15.6 billion) over the next five years to strengthen its deliv-

ery network. It is also experimenting with delivery robots in China that can make automatic phone calls and take elevators to deliver parcels.

The transaction announced Tuesday is likely to be completed in early June, and the three companies said they would work together to introduce new delivery solutions for customers as China's traditional brick-and-mortar store formats merge with online retail.

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# Nintendo Looks to Pokémon Fans

Japanese company hopes new games will keep sales rolling for its Switch console

BY SARAH E. NEEDLEMAN  
AND TAKASHI MOCHIZUKI

Three new Pokémon videogames coming to Nintendo Co.'s Switch game machine this year could feed sales momentum and help the company avoid the kind of thin slate of games that doomed its previous console.

The \$300 Switch, a console-hand-held hybrid machine that debuted in March 2017, has sold more than 17 million units through March 2018, according to Nintendo—a surprise hit that marks a resurgence after the company's previous console, the Wii U, flopped.

The Wii U sold only 13.56 million units in its five-year lifetime, plagued by a scant lineup of games in its first years, analysts said.

Switch owners already have access to games from popular franchises such as Mario and Zelda, first-year releases that helped draw longtime fans to the new hardware. But industry watchers say Nintendo will have to keep up the pace of strong software releases to meet its goal of selling another 20 million Switch units in its current fiscal year.

"The Wii U was such a massive failure in part because the games were not attractive enough," said Serkan Toto, a Tokyo-based industry consultant.

Pokémon, with its child friendly monsters and cult-like following, could provide a significant boost. More than 300 million Pokémon games have been sold world-wide since 1996, according to Pokémon Co., which manages the franchise and is co-owned by Ninten-



Three role-playing videogames from the franchise are due out this year. Competition at the Pokémon world championships last year.

tendo, Game Freak Inc. and Creatures Inc.

Allie Cooper, a 24-year-old freelance artist in Tampa, Fla., said she would buy a Switch if it meant she could play Pokémon games akin to the classics she grew up on. The franchise is "really important to me," Ms. Cooper said. Without Pokémon, the Switch "just doesn't have enough [games] to really draw me in."

The three new Pokémon games are the franchise's first role-playing games for a console that hooks up to a television set. Developer Game

Freak said it drew inspiration from the late-1990s hit "Pokémon Yellow" to appeal to long-time fans. But it also hoping to win over the massive audience that fell for the 2016 smartphone game "Pokémon Go."

"Pokémon Go" currently has 65 million monthly active users, according to Pokémon Co.

Nintendo said Pokémon games are second in franchise-unit sales only to the Super Mario lineup, whose games have sold more than 344 million copies. Pokémon games have largely been for handhelds such as the Nintendo DS.

Pokémon's charm hasn't always translated into strong sales. A Pokémon game released on the Switch in September has sold only about one million copies, according to Nintendo. Analysts said that is likely because it is a fighting game, which strays from the role-playing format for which the series is best known.

One of the new Pokémon games, "Pokémon Quest" is due out Tuesday night. The two other titles, slated for release Nov. 16, are called "Let's Go, Pikachu!" and "Let's Go, Eevee!"

## Sold 'Em All

Global sales of flagship Pokémon videogames on hand-held system

System	Titles	Copies sold
Game Boy (1996-2000)	76 million	
Game Boy Advance (2002-2004)	35	
Nintendo DS (2006-2012)	62	
Nintendo 3DS (2013-2017)	54	

Note: Data as of March 2018

Source: Nintendo

THE WALL STREET JOURNAL.

# HP's CFO Plans to Retire in Early 2019

BY MARIA ARMENTAL

Cathie Lesjak, a Hewlett Packard veteran who as chief financial officer helped steer the company through one of the largest corporate breakups, plans to retire from HP Inc. in early 2019.

Until her retirement, Ms. Lesjak will take on the operations chief role formerly held by Jon Flaxman, who died in March.

Steve Fieler, another known and trusted name at HP, will succeed her on July 1 as chief financial officer of HP Inc., the printer and personal-computer maker born from the 2015 split.

The executive changes were disclosed Tuesday as HP raised its annual forecast following strong results in the most recent quarter, and said it expected to record up to \$200 million more in restructuring costs as it increased the number of workers that it plans to lay off.

Second-quarter profit surged to \$1.06 billion from \$559 million in the same quarter of 2017. Excluding restructuring charges and other items, profit rose to 48 cents a share from 40 cents a share a year earlier.

Net revenue rose 13% to \$14 billion, beating the consensus forecast, helped by a 27% revenue increase at printing commercial hardware, which includes last year's acquisition of Samsung Electronics Co.'s printer business. HP's PC business, its largest by revenue, also reported solid gains as the company continued to gain market share.

—Jay Greene contributed to this article.

# KKR to Buy BMC

BY ALLISON PRANG

KKR & Co. has agreed to buy **BMC Software** from an investor group led by private-equity firms for an undisclosed amount.

KKR said Tuesday it is buying the Houston-based software company from a group that includes **Bain Capital Private Equity** and **Golden Gate Capital** along with **Insight Venture Partners**, hedge fund **Elliott Management Corp.** and GIC.

BMC, founded in 1980, was taken private in September 2013 in a roughly \$7 billion deal.

The company has more than 10,000 customers and about 6,000 employees.

The software company had been looking at combining with CA Inc., a software company based in New York, but those talks ended last year, The Wall Street Journal reported.

Before it went private, BMC had been fighting with activist investor **Elliot Management**, which didn't want BMC to stay independent.

# New Japanese Videogames Score in U.S.

BY TAKASHI MOCHIZUKI

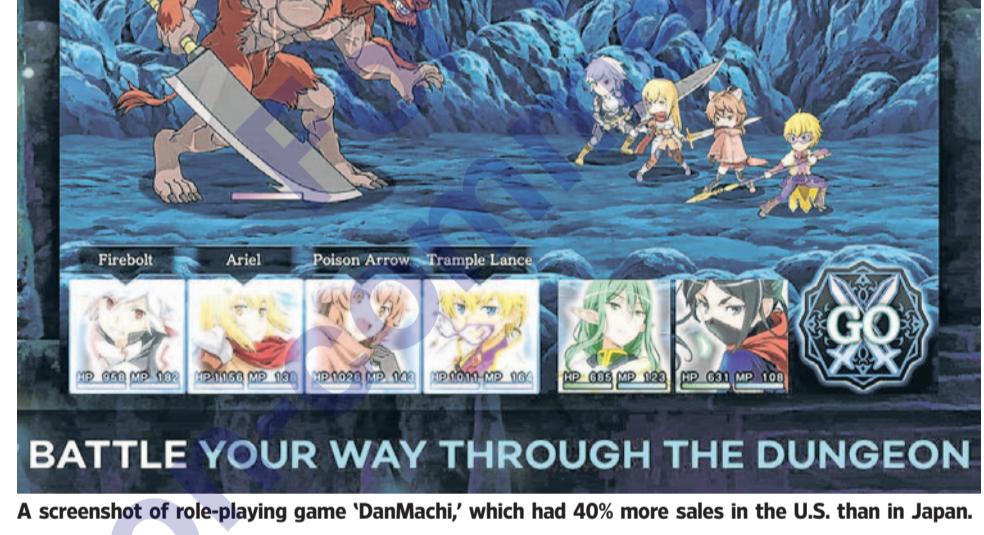
TOKYO—Japanese videogames are attracting a bigger U.S. fan base with growing appreciation for the distinctive look and story lines in the latest batch of games from the country's developers.

Gree Inc., a Tokyo-based smartphone game company, said in April that its "DanMachi" role-playing game generated 40% more sales in the U.S. than in Japan—the first time the U.S. market led the way for the 14-year-old company.

It was a surprise for investors because the game, which is based on a novel and animated television series set in a city and dungeon labyrinth, doesn't feature expensive computer-generated graphics. Also, Gree has repeatedly failed to create games that appeal to a U.S. audience.

"Such a success was unthinkable 10 years ago," said Serkan Toto, a Tokyo-based game consultant. "Japanese game companies are in a renaissance period."

DanMachi is just the latest videogame with a Japanese twist to be embraced by U.S.



A screenshot of role-playing game 'DanMachi,' which had 40% more sales in the U.S. than in Japan.

gamers. Capcom Co. has said its "Monster Hunter: World" game shipped 7.9 million copies in just over two months from late January, the biggest hit in the company's history. It topped the U.S. game charts in the first two months of the year, according to market research firm NPD Group Inc., and lifted Capcom's game rev-

enue for the year ended March 31 26% to ¥74 billion (\$676 million).

Another Japanese fighting game, "Dragon Ball FighterZ," led maker **Bandai Namco Holdings** Inc. to a 22% rise in U.S. revenue for the year ended March 31 to ¥79 billion.

Until now, a handful of established franchises, especially

those developed by **Nintendo** Co., have dominated made-in-Japan videogames. The broader range of companies currently finding success is targeting niches and offering an anime feel, rather than the photorealism style of top U.S. games.

Bandai Namco said it styled the way "Dragon Ball Fight-

erZ" characters move using elements similar to those of anime movies, instead of trying to fully simulate real human movement.

The U.S. version of Gree's "DanMachi" features the original cast speaking in Japanese, with an English translation provided in subtitles—a contrast with the usual practice of having Japanese dialogue revoiced by English-speaking actors.

**Sega Sammy Holdings** Inc. has done well with "Persona 5," in which characters with features drawn from Japanese manga comic books chase demons in Tokyo's Shibuya district.

Western game fans used to make fun of Japanese role-playing games, but they have begun to praise our making of stories and character designs," said Michihiro Sasaki, a general manager of corporate planning at **Square Enix Holdings** Co., whose new game "NieR: Automata" has been a positive surprise in the U.S.

It hopes to follow up with a planned Western release in September of "Dragon Quest XI," from a series that has been popular mostly in Japan.

# Allergan Recalls Taytulla Packs

BY AUSTEN HUFFORD

Allergan PLC is recalling nearly 170,000 sample packs of its birth-control treatment Taytulla after placebo and active capsules were placed out of order, potentially raising the risk of an unintended pregnancy.

The drugmaker said Tuesday the physician sample packs of Taytulla were designed to have 24 active birth control pills, followed by four placebo pills, taken daily over the course of 28 days.

Allergan, which attributed the issue to a packing error, said the four inactive pills were incorrectly placed at the start of the package. The company said it recently learned of the issue from a physician report and launched a voluntary recall of 168,768 packs.

Allergan said that oral contraceptive capsules taken out of sequence may place users at risk for contraceptive fail-



Oral contraceptives taken out of order increases pregnancy risk.

ure and unintended pregnancy. "The reversing of the order may not be apparent to either new users or previous users of the product, increasing the likelihood of taking the capsules out of order," the company said.

The affected lot of Taytulla sample packs, which were sent to health-care providers,

has been in circulation nationwide since August.

Allergan said it hasn't received any reports of unintended pregnancies as a result of the packaging error in the recalled lot.

Taytulla, also called ethinyl estradiol, gained Food and Drug Administration approval in 2013.

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## BUSINESS NEWS

# Investors Flood Digital-Token Offering

Startup block.one on pace to raise \$4 billion even though purpose of its ICO is unclear

By PAUL VIGNA

A startup company based in the Cayman Islands is on track to raise more than \$4 billion through a yearlong sale of digital tokens, the largest funding of its kind.

What buyers of the tokens still don't know: how the company, **block.one**, will use the bulk of the windfall from its initial coin offering.

If the company ends up raising that much by the offering's expected closing date, this coming Friday, it would be more than twice the size of the next largest coin offering—**Telegram Group Inc.** raised \$1.7 billion—and would be larger than all but one or two of the world's initial public offerings on stock exchanges so far in 2018.

That a little known startup

could raise so much money without a concrete plan for it speaks to trends in the topsy-turvy world of cryptocurrencies and views of the future of the online world.

The company didn't reply to a request for comment.

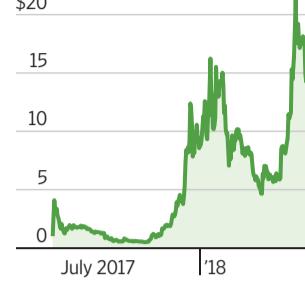
Virtual currencies like bitcoin and ether experienced a meteoric rise in 2017, drawing interest from everyday investors as well as Wall Street. That helped fuel a frenzy around initial coin offerings. These differ from virtual currencies in that the tokens are often tied to a product or service a company plans to develop or offer in the future.

Although prices of bitcoin and other cryptocurrencies crashed early this year, investors kept shoveling money into initial coin offerings. ICOs raised \$6.6 billion in 2017, and in 2018 they have raised about \$7.5 billion, according to research firm Token Report, a total that doesn't include block.one.

Some coin offerings have been exposed as scams, and

## Crypto Frenzy

How many U.S. dollars one EOS token buys



\*Estimate

Sources: CoinMarketCap (EOS price); CoinDesk (Telegram, Dragon, Filecoin, Tezos ICOs); WSJ analysis of company releases (Block.one ICO)

Select largest initial coin offerings since 2017

Block.one (EOS)*	\$4.2 billion
Telegram	\$1.7 billion
Dragon	\$320 million
Filecoin	\$260 million
Tezos	\$230 million

THE WALL STREET JOURNAL.

There is also hope that such platforms could vastly improve the future of online payments through the open-ledger blockchain technology that underpins bitcoin and other cryptocurrencies.

One formidable competitor is Ethereum, the platform that underpins the currency ether. It has been successful in some ways; it's the second largest virtual currency by market value behind bitcoin. But it has struggled to scale: Ethereum can process only about 15 transactions per second.

EOS and its rivals think they can beat Ethereum to mass adoption by creating systems that aren't as decentralized, and so can process more transactions per second.

The money raised in the coin offering gives block.one a war chest that dwarfs its newer rivals. Theoretically, the company could use the funds to support the software it is developing, also called EOS.

Yet block.one isn't clear about how exactly it will

spend the proceeds. The company plans to build a platform for hosting web applications; the first live version is set to be released in June. There's a twist, though: The company doesn't plan to develop the software after releasing it. It hopes to see others do that and has said it won't operate any public network built upon the EOS software.

To that end, block.one has pledged to invest more than \$1 billion in startups building on EOS. It hasn't said, though, what it would do with the remainder of the funds.

Block.one is expanding. Its website lists eight jobs for software engineers in Blacksburg, Va., where the company's chief technology officer, Dan Larimer, lives and works. The company also recently hired a new general counsel and a new chief financial officer. Both report to Brendan Blumer, the company's 31-year-old, Hong Kong-based CEO. None of the company's executives responded to requests for comment.

# Ship Lines Prepare for Renewed U.S. Pressure on Iran



Khang Island in Iran. The U.S. has given shipping lines until November to end operations in Iran.

## Former WPP CEO Sorrell Returns With New Venture

By NICK KOSTOV

Martin Sorrell, the former chief executive of advertising giant **WPP PLC**, has agreed to take the helm at **Derriston Capital**, a listed shell company he plans to use to acquire marketing and advertising businesses, according to people familiar with the matter.

Mr. Sorrell will invest £40 million (\$53.3 million) of his own money in the new venture, while a bevy of institutional and other investors have agreed to commit an initial £11 million to become shareholders in Derriston, these people said. Mr. Sorrell has secured nonbinding letters of support to raise further funds for acquisitions, one of these people said.

Cash shells are special-purpose acquisition companies that are used to provide a quick and easy route to market without having to issue a full prospectus or comply with



Martin Sorrell

listing rules. In 1985, Mr. Sorrell made a personal investment in a shell company called Wire and Plastic Products. He then used it to make a string of acquisitions, eventually stitching together the world's largest advertising holding company. Derriston was floated on the London Stock Exchange in December 2016 as a vehicle to undertake an acquisition within the medical-technology industry.

The deal will be a reverse takeover, with Derriston acquiring S4 Capital, a new entity established by Mr. Sorrell to launch his new venture, one of the people said. Although the mechanics of the deal weren't immediately clear, Mr. Sorrell will end up as the majority shareholder, at least initially, said the person. Derriston will then change its name to S4 Capital.

Mr. Sorrell referred questions to a spokesman, who declined to comment.

meddling with the makeup of the board, the complaint states. His longtime second in command, Joe Ianniello, also got a \$60 million golden parachute in his contract, which could be triggered if he didn't succeed Mr. Moonves as CEO.

The complaint also makes clearer the nature of the allegations of "bullying and intimidation" that Ms. Redstone and National Amusements had previously lodged against Charles Gifford, a director she had asked to quietly removed from the board.

In one case, the complaint alleges Mr. Gifford "acted in an intimidating and bullying manner, including on one occasion by grabbing [Ms. Redstone's] face and directing her to listen to him." Mr. Gifford later told her that he meant no offense, and "that was how he treats his daughters when he wants their at-

tention," according to the complaint.

The incident occurred at the Super Bowl last year in Houston, according to people familiar with the matter. A person close to CBS said Mr. Gifford doesn't recall the incident and only remembers a friendly gesture at the Super Bowl. Mr. Gifford referred calls for comment to CBS.

"Ms. Redstone's issue with Mr. Gifford is that he has always operated by an entirely different definition of what it means to be an independent director—namely to act in the best interest of all CBS shareholders," CBS said. "As a result of Mr. Gifford's steadfast belief in good corporate governance, it is unfortunate and revealing that NAI has resorted to baseless personal attacks that are clearly tied to the execution of Mr. Gifford's duties in this matter."

By COSTAS PARIS  
AND JOANNE CHIU

It will be months before new U.S. sanctions against Iran take hold, but global shipping operators are already pulling back from the big oil-exporting nation.

The world's two biggest shipping lines, Denmark's Maersk Line and Swiss-based **Mediterranean Shipping Co.**, said they were winding down general cargo shipments, while tanker owners said they plan to move their vessels to other oil-producing countries in the Middle East or West Africa.

Even though the U.S. is alone in imposing the new sanctions, "I don't think any shipping line that operates globally will be able to do business in Iran if the sanc-

tions arrive in full force, the way they are intended," said Soren Skou, chief executive of Maersk Line and parent company **A.P. Moller-Maersk A/S**.

Maersk and privately held MSC have been moving everything from electronics and household goods to food and heavy machinery to Iran.

Mr. Skou said Maersk's Iran operations are small, but with an Iranian population of 80 million, carriers heralded the lifting of earlier sanctions in 2016 as the opening of an important Middle East trade destination.

The Trump administration has given the shipping industry until early November to end operations in Iran. The sanctions also will affect ship-insurance premiums, lines of credit for moving cargo and

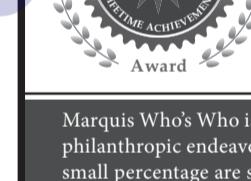
fuel suppliers for Iranian ships and shipments.

Pulling Iran off the service map for crude carriers will be a blow to the world's tanker operators. Shipowners in that sector have suffered from a glut of global capacity and now will see the world's fifth-biggest oil producer removed from their market.

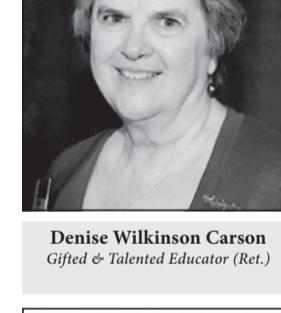
Iran accounts for 5% of global output and exported a record 2.6 million barrels of crude a day in April. The majority of Iran's oil goes to China, Japan, India and South Korea.

Shipowners in China, which currently buys roughly 650,000 barrels of Iranian crude a day, said they expect Iran's total daily crude shipments to drop by more than half.

## ALBERT NELSON MARQUIS LIFETIME ACHIEVEMENT AWARD 2017-2018 RECIPIENTS

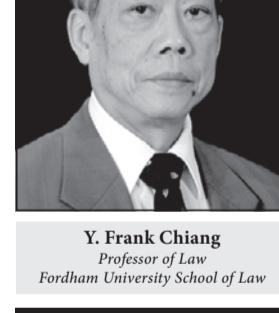


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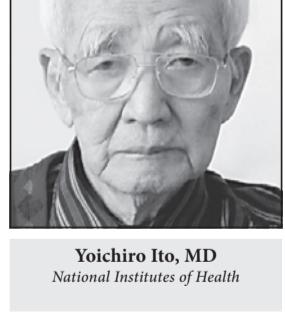
Secondary School Educator (Ret.)

New Canaan High School (CT)



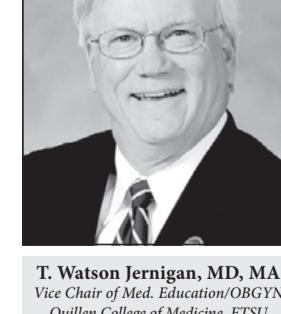
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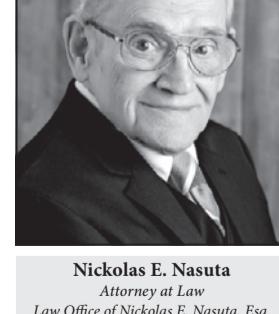
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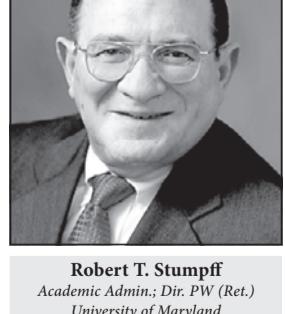
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2017-2018

# THE PROPERTY REPORT

## Firm Targets the Aging Boomer Cohort

Real-estate sector focusing on health care gains favor as the U.S. population ages

By KEIKO MORRIS

A Florida-based private-equity firm is doubling down on an investment strategy focusing on the graying of America.

Last week, Kayne Anderson Real Estate closed a \$1.85 billion real-estate fund, its fifth and largest yet, largely targeting senior housing and medical office buildings along with student housing. The investment vehicle, called the Kayne Anderson Real Estate Partners V, raised funds from a range of global investors, including pension funds, family offices and endowments. Family offices manage the fortunes of the wealthy.

"I think everybody is acutely aware, no pun intended, of the demographic trends in the sectors of health-care real estate," said Al Rabil, chief executive of the firm, which is a unit of **Kayne Anderson Capital Advisors LP**. Most commercial-property investors who buy office buildings, rental apartment buildings and shopping centers have traditionally shunned health-care-related real estate as too risky and complicated. But this nontraditional sector is gaining luster thanks to the aging of the baby-boom population, usually described as those born between 1946 and 1964.

This bulge in the population is expected to increase demands for both senior housing, which often includes independent and assisted-living programs, and medical office real estate. The shift toward per-

forming many medical procedures outside hospitals and releasing patients the same day also has benefited owners of medical office properties.

Demand for these property types is expected to be more resistant to the boom-and-bust cycle, analysts have noted. That adds to their appeal now with investors getting worried about how long the bull run in the commercial-property sector, now in its ninth year, will last.

"Senior-housing performance held up well during the downturn and had a nice cycle," said Michael Knott, a managing director at Green Street Advisors. "So that, coupled with the coming demographic boom, created a lot more interest in the space."

Investor interest is driving prices higher, particularly for medical office buildings, making it trickier for investors to reap the high returns that attracted them to the sector. The capitalization rate of medical office buildings, a common real-estate-industry metric for measuring value, fell by 0.63 percentage point in 2017, according to Green Street. Falling cap rates mean rising prices.

Also, popularity in the commercial-property sector often leads to new development. For example, the stock of senior housing increased 3.6% in 2016 and 3.7% in 2017, according to Green Street. In 2018, supply is expected to increase 4.7%, the firm said.

That new supply may counteract the rising demand or may even create downward pressure on rents and occupancies, some observers say.

Indeed, stock-market investors have become wary of the health-care real-estate sector. Historically, real-estate invest-



The Watermark at Brooklyn Heights will be converted into a high-end residence for seniors.

ment trusts that specialize in this kind of property have traded at a large premium compared with other real-estate categories.

But that has changed since the beginning of this year, the first prolonged stretch in which that has been the case for the health-care REIT sector. "That advantage has been wiped out in recent months," Mr. Knott said. "Even medical office, which was the favored son, is now valued at the largest discount to [net asset value] within the health-care sector."

Since the beginning of the year, the FTSE Nareit Equity Health Care Index has fallen 4.8% as of Tuesday, worse than

the 4.24% decline in the broader FTSE Nareit Equity REITs Index, according to Green Street. Meanwhile, the S&P 500 index has gained 1.4% in the same period.

Kayne Anderson has been able to steer clear of the pitfalls facing health-care-related property, Mr. Rabil said. In senior housing, the firm has partnerships with the top operators in the business and targets higher-end clients in areas that are constrained by supply, he said.

For example, in 2017 Kayne Anderson acquired the Watermark at Brooklyn Heights, a 16-story building from the Jehovah's Witnesses, which used it for housing. Kayne Anderson

is planning to convert it into a high-end senior residence with about 300 units, and such amenities as a swimming pool, spa and several dining rooms.

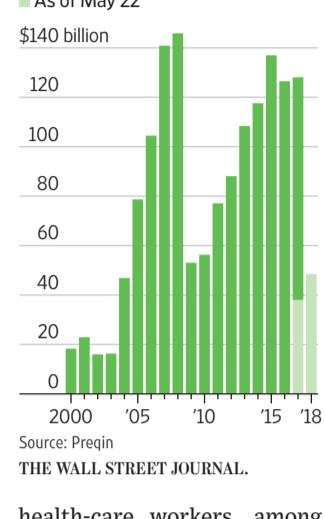
"We foresee no time, at least in my lifetime, that we will be in a supply-demand equilibrium from the senior-housing perspective," Mr. Rabil said.

The firm also is making improvements to a former Boston chocolate factory that had been converted into senior residences. The roof had been a smoking lounge. Kayne is revamping the space into a rooftop terrace with high-end touches.

Kayne Anderson also is investing in housing that targets

### Growing Up

After a dip in 2016, private-equity real-estate funds have been more successful in raising new money.



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health-care workers, among others. In Rochester, Minn., the firm is developing 372 rental apartments across from one of the Mayo Clinic's hospitals. The project, named Berkman, combines the firm's expertise in student housing, medical office and conventional rental housing that will target health-care workers in the area.

"Yes, the demographic trends are very positive," Mr. Rabil said, "but true outperformance will depend on operating capabilities and understanding the market and asset classes."

Kayne is closing the fund at a time when the number of private-equity real-estate funds is declining but the amount being raised is increasing. So far this year, 90 funds have raised \$48.2 billion, according to data provider Preqin. Last year during the same time, 123 funds raised \$38 billion.

## Need a Lunchtime Companion at Work? Check the Office App

By PETER GRANT

A new weapon is emerging in the amenities arms race among office landlords: mobile apps for tenants.

Consider CIBC Square, a pair of office towers being developed in downtown Toronto by a partnership of **Ivanhoé Cambridge** and Hines. It will be anchored by the world headquarters of **Canadian Imperial Bank of Commerce**. The 3 million square-foot complex, to be completed in 2023, will offer the bank and other tenants many of the standard amenities of top-grade office developments these days, such as a gym, conference center, food hall and elevated park.

But the landlord and bank also are developing a workplace app that will be given to most employees in the complex.

While its exact features haven't been determined, it will likely enable workers to do such things as book meeting rooms and fitness classes, change the lighting and temperature at their desks, book cars, order food and even arrange babysitters or find a lunch companion.

"We're not managing buildings anymore. We're five-star hoteliers," said Jonathan Pearce, executive vice president of North American leasing for Ivanhoé Cambridge, which is considering offering similar apps throughout its 35 million square feet of office properties.

"The app is the ecosystem that essentially brings all the amenities together."

Many of the world's largest landlords are realizing that.

Mobile apps have been rolled out, or are being developed or considered, by such giants as **Brookfield Property Partners LP**, **Blackstone Group LP**, **Jamestown** and **Tishman Speyer**.

Real-estate services firms also are getting into the workplace app. For example, **CBRE Group Inc.** has started to roll out an app in office buildings it manages that enables workers to do such things as order food, find colleagues or book meeting rooms.

**Workwell**, a tech startup with offices in New York and Paris, last year launched an "open platform" office app that

can be layered with whatever services landlords and tenants want to add. It is in use in about 20 buildings in France, including some owned by the country's biggest landlords.

"Basically, the idea is for a building to become a hub for services," said Paul Dupuy, Workwell's co-founder. "At some point, the landlord is going to be able to monetize all these services and create new revenue."

The evolution of office apps is part of a broader transformation of the office-space industry. Landlords and tenants have been redesigning the workplace to appeal to a younger workforce by adding new approaches to architecture, amenities and technology.

Workplace apps issued to employees increasingly are becoming the hub of the new workplace ecosystem. They range from those with a few features—such as getting through building security and booking a conference room—to those that alert employees to lectures and classes in the area based on their interests.

"We've always been leading with the app," said Shiva Rajaraman, chief product officer of **WeWork Cos.**, the giant in shared office space and a leader in workplace changes.

Tenants moving into modern office spaces often include apps as part of their amenities package. Meanwhile, landlords and real-estate management companies are using apps as a competitive advantage. CBRE is developing its app as part of a broader service, named **CBRE 360**, that helps tenants reimagine modern workplaces.

"Gyms are great and restaurants are important," said Andrew Kupiec, a former Zipcar Inc. executive recruited by CBRE to lead the effort. But increasingly, top talent is gravitating to employers that have "integrated social workforces" enabled by tools such as apps, he said.

App designers say they are sensitive to the need to limit the reach of big brother. For example, Workwell is designing its app so employees are anonymous and bosses "won't be able to know who ate lunch with whom," Mr. Dupuy said.



A self-driving electric vehicle has been operating in Las Vegas since November. Such transport could mean less need for parking space.

## Developers Hail Driverless Shuttles

By ESTHER FUNG

Six years after Nevada became the first state to allow driverless cars on public roads, real-estate developers and city planners around the country are stepping up efforts to court pilot projects.

In downtown Las Vegas, a driverless eight-passenger electric shuttle has ferried roughly 24,000 people since November, when it was first opened to the public. Frisco, Texas, is gearing up for a six-month pilot program starting in July that will offer driverless rides in an area including an office park and a sports and entertainment district that houses the headquarters of the Dallas Cowboys.

In Doraville, Ga., the developer of Assembly Yards, a mixed-use residential, office and retail project, is choosing between three autonomous vehicle companies to operate a driverless shuttle in the 165-acre project on the former site of a General Motors plant. "We want our development to push the boundaries of new transit solutions," said Matt Samuelson, chief operating officer of **Integral Group LLC**, the developer of Assembly Yards.

In the real-estate industry, interest in driverless vehicles

is being fueled by a simple fact: Success in developments often hinges on the density of a project.

Developers and property owners are angling to host autonomous vehicle trial programs in hopes that their rollout will lead people to rely on driverless ride-hailing options that **Uber Technologies Inc.** and **Lyft Inc.** are developing rather than owning private vehicles, freeing up space for homes, offices and other uses that produce more income than parking spaces. In traditional retail real-estate projects, five parking spaces are needed for every 1,000 square feet of built floor area.

"We're getting continued interest from cities, universities, corporate campuses, theme parks, a whole range of different venues," said Chris Barker, vice president of new mobility, communications and marketing at Keolis North America, the operator of the Las Vegas shuttle. Autonomous shuttles help to limit the number of vehicles and provide a last-mile connector to other transit nodes in the area, Mr. Barker said.

French autonomous vehicle technology company **Navya Inc.**, which manufactured the driverless shuttle operating in

Las Vegas and another one at the University of Michigan, said it plans to introduce 30 to 40 more shuttles in the U.S. this year.

What is interesting to us is the densification options it brings to us," said Jeff Edison, chief executive officer of **Phillips Edison & Co.**, which owns more than 340 grocery-anchored shopping centers across the U.S. "With driver-

less cars, we don't need that scale of parking," said Mr. Edison.

It is far from clear when driverless vehicles will be ready for widespread adoption. Plans to roll out driverless shuttles in Gainesville and Tampa in Florida were delayed after local governments determined that further testing was required and a vendor failed to meet contractual obligations.

These advances will impact renters, consumers, and businesses across the country and the globe, and affect what, how and where we build," said MetLife Investment Management in a recent report.

Setbacks included a fatal collision between a self-driving Uber vehicle and a pedes-

## BUSINESS NEWS

# Hacker Sentenced For Part in Yahoo Case

BY ROBERT McMILLAN

A 23-year-old computer hacker was sentenced Tuesday to five years in prison over charges stemming from the 2014 security breach at **Yahoo** Inc., a campaign federal authorities have alleged was orchestrated by Russian spies.

Karim Baratov, a dual Canadian-Kazakh national, had pleaded guilty to computer-hacking charges. He was also fined \$250,000.

Mr. Baratov is the only hacker convicted following a series of intrusions that led to the compromise of three billion user accounts at Yahoo, which since has been sold to **Verizon Communications** Inc.

In federal court Tuesday, prosecutors argued Mr. Baratov deserved a stricter 94-month sentence to deter further criminal collaboration with the Russian government. Mr. Baratov's attorney, Andrew Mancilla, said the government was "trying to make an example" of his client.

"The last 14 months have been a very humbling and an eye-opening experience," Mr. Baratov said ahead of his sentencing. "I did not know how much damage and trouble I had caused. There's no excuse for my actions."

Mr. Baratov wasn't believed to have been involved in the Yahoo hack itself but was a hacker-for-hire used as part of a broader information-gathering operation tied to Russia, according to prosecutors.

His specialty was breaking into web-based email accounts, said Elvis Chan, a supervisory special agent with the Federal Bureau of Investigation.

# Marketing Firm Near Gawker Deal

**Didit** aims to relaunch the site with news and 'good gossip' that it considers positive

BY JONATHAN RANDLE

Marketing firm Didit is close to acquiring **Gawker.com** and, if successful, intends to relaunch the blog known for publishing irreverent articles that were sometimes controversial, with a new editorial policy to only post content it considers to be positive.

Advisers liquidating the blog's former publisher have a deal to sell the website to Didit for \$1.13 million, an offer that is subject to higher offers at a potential auction, according to papers filed Tuesday in the U.S. Bankruptcy Court in New York. The agreement and terms of an auction must be approved by a judge. Based in Mineola, N.Y., Didit was founded in 1996.

Liquidators have tentatively set a July 12 date for the auction assuming they receive other qualified bids for the blog. Gawker ceased publishing new articles in August 2016, months after losing in court to professional wrestler Hulk Hogan whose \$140 million judgment against publisher Gawker Media LLC forced the company into bankruptcy. The case was settled in chapter 11 for \$31 million. The Hogan case concerned publishing excerpts from a video of a sexual encounter with the wife of a former friend.

Didit's vision for Gawker is radically different than that of the blog's founder Nick Denton, whose approach to adversarial journalism exposed the website to costly litigation. Gawker's archives include an early expose on the drug bazaar Silk Road and articles published in 2014 and 2015 detailing allegations of sexual



Hulk Hogan in court in 2016. Gawker ceased publishing that year after losing its case to the wrestler.

abuse against Bill Cosby and Harvey Weinstein. Mr. Denton wrote in Gawker's final post that "It was a matter of pride that Gawker ran stories that couldn't be published elsewhere."

Didit seeks to revive the blog with what it calls "Gawker for Good"—publishing what it considers positive news articles and "good gossip." The firm would donate half of the advertising and sponsorship revenue it generates from new Gawker articles to nonprofit organizations selected either by readers and people it partners with to develop content for the site, Didit co-founder Kevin Lee said in an interview with The Wall Street Journal.

"I think there is still a place for...good gossip. I don't think you need to run a click bait, salacious gossip site," Mr. Lee

said.

Mr. Lee, 53 years old, said he began developing his idea for the new marketing platform in September and launched a separate Didit-owned site called BriefMe.com to test the idea. He said he had been looking for existing sites that would be recognizable to readers and decided "on a lark" to place a bid for Gawker after previously looking into acquiring the local news websites DNAInfo and Gothamist after they were shut down last year.

Mr. Lee said he didn't expect he would get this close to acquiring Gawker when he initially considered bidding on the site and said he is interested in seeing if others will place bids on the blog.

Mr. Lee said he doesn't have experience in journalism but said if the bid for Gawker succeeds, he would hire people who did. Didit describes itself as a fully integrated marketing and communications firm.

"I do have concerns that it's not going to be easy, but on the flip side, nothing really fun in life is easy," Mr. Lee said. "It's more fun to take on challenges that make you think all the time."

The fate of Gawker is one of the last open questions in the publisher's nearly two-year-old bankruptcy. Liquidators began shopping the blog in the fall but the sale process was slowed after billionaire Peter Thiel revealed his interest in acquiring the site. Mr. Thiel secretly funded Mr. Hogan's legal case against Gawker. Mr. Hogan is entitled to 45% of the proceeds from the eventual sale of the Gawker site, according to his settlement.

Mr. Lee said he had been

concerned about Mr. Thiel's interest in Gawker as well as the involvement of lawyer Charles Harder who is representing plaintiffs in two defamation lawsuits against Gizmodo Media Group, a Univision Communications Inc. subsidiary that acquired the other Gawker Media blogs in 2016.

Mr. Harder in a September email to the Journal said "It would be the responsible thing to do for a new buyer to remove articles from Gawker.com that violate defamation laws, privacy laws or journalism ethics (Google 'SPJ Code of Ethics')," referring to the Society of Professional Journalists.

Didit has agreed to make a copy of the existing Gawker archive, court papers say. Mr. Lee said he believes it's important that a record of Gawker's existing stories are preserved, saying "we don't have the wherewithal to fight assaults on the archive."

Judge Stuart Bernstein earlier this month approved a standstill agreement between Mr. Thiel and Gawker Media. Mr. Thiel agreed to withdraw from the sale process and to provide the eventual buyer a legal release for articles in the Gawker archive. In exchange, lawyers representing the publisher dropped a potential legal case against Mr. Thiel.

Gregg Galardi, a Ropes & Gray LLP bankruptcy lawyer representing Gawker Media, said at a court hearing when the agreement was approved that the estate has received a handful of bids for the website. Assets for sale include the Gawker domain, social media accounts and nearly 200,000 published articles.

A group of former Gawker Media employees launched a crowdfunding campaign late last year to fund a bid for the site but fell short of their \$500,000 goal.

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Please take notice that Jones Lang LaSalle, on behalf of BREF IV Series A LLC, a Delaware limited liability company (the "Original Secured Party"), or its assignee (the "New Secured Party" and together with the Original Secured Party, individually or collectively as the context may require, the "Secured Party") offers for sale at public auction July 10, 2018 at 3:00 PM in the offices of Cleary Gottlieb Steen & Hamilton LLP, One Liberty Plaza, New York City, New York, 10006, in connection with a Uniform Commercial Code sale, (a) 100% of the limited liability company membership interests in Post Oak Realty Group, LLC (the "Post Oak LLC Interests", (b) the 99.5% limited partner interest in Post Oak Realty Investment Partners, LP ("Post Oak Senior Borrower"), which is the sole owner of the property commonly known as the "Park Towers" located at 1233 & 1333 West Loop South, Houston, Texas (the Post Oak LP Interests, and together with the Post Oak LLC Interests, the "Post Oak Interests"), (c) 100% of the limited liability company membership interests in Innova Realty Group, LLC (the "Innova LLC Interests"), and (d) the 99.5% limited partner interest in Innova Entertainment Investment Partners, L.P. ("Innova Senior Borrower"), and together with Post Oak Senior Borrower, the "Senior Borrower"), which is the sole owner of the property commonly known as the "Innova Theater and Retail" located at 3839 Weslayan Street and 3838 Norfolk Street, Houston, Texas (the "Innova LP Interests", and together with the Innova LLC Interests, the "Innova Interests"; the Innova Interests, together with the Post Oak Interests, the "Interests"). The Post Oak Interests are owned by 610 Investment Partners, L.P. ("Investment Partners") and the Innova Interests are owned by Weslayan Entertainment Investment Partners, L.P. ("Weslayan", and together with Investment Partners, the "Mezzanine Borrower"), each having its principal place of business at 13355 Noel Road, 22nd Floor, Dallas, Texas 75240.

The Original Secured Party, as lender, has made a loan (the "Mezzanine Loan") to the Mezzanine Borrower. In connection with the Mezzanine Loan, the Mezzanine Borrower has granted to the Original Secured Party a first priority lien on the Interests pursuant to those certain Pledge and Security Agreements. Prior to the sale described herein, the Original Secured Party will assign the Mezzanine Loan and related documents to the New Secured Party. The Original Secured Party and, following the assignment, the New Secured Party is offering the Interests for sale in connection with the foreclosure on the pledge of such Interests. The Mezzanine Loan is subordinate to a mortgage loan and other obligations and liabilities of the Senior Borrower or otherwise affecting the property.

Please take notice that there are specific requirements for any potential successful bidder in connection with obtaining information and bidding on the Interests, including but not limited to, execution of a confidentiality agreement and a requirement that each bidder must be a Qualified Transferee (as defined in that certain Intercreditor Agreement dated as of May 8, 2015 between the Original Secured Party and the senior lender (the "Intercreditor") and that each bidder must deliver such documents as required by the Intercreditor and the applicable governing documents relating to the Interests).

The Interests are being offered as a single lot, "as-is, where-is", with no express or implied warranties, representations, statements or conditions of any kind made by the Secured Party or any person acting for or on behalf of the Secured Party, without any recourse whatsoever to the Secured Party or any other person acting for or on behalf of the Secured Party and each bidder must make its own inquiry regarding the Interests.

The Secured Party reserves the right to credit bid, set a minimum reserve price, reject all bids (including without limitation any bid that it deems to have been made by a bidder that is unable to satisfy the requirements imposed by the Secured Party upon prospective bidders in connection with the sale or to whom in the Secured Party's sole judgment a sale may not lawfully be made) and terminate or adjourn the sale to another time, without further notice. The Secured Party further reserves the right to restrict prospective bidders to those who will represent that they are purchasing the Interests for their own account for investment not with a view to the distribution or resale of such Interests, to verify that each certificate for the Interests to be sold bears a legend substantially to the effect that such interests have not been registered under the Securities Act of 1933, as amended (the "Securities Act"), and may not be disposed of in violation of the provisions of the Securities Act and to impose such other limitations or conditions in connection with the sale of the Interests as the Secured Party deems necessary or advisable in order to comply with the Securities Act or any other applicable law.

All bids must be for cash, and the successful bidder must be prepared to deliver immediately available good funds within 24 hours after the sale and otherwise comply with the bidding requirements. Further information concerning the Interests, the requirements for obtaining information and bidding on the interests and the terms of Sale can be found at <http://www.parktowersandinnovauccforeclosure.com/>.

Kelly Gaines +1 212-812-5907; [kellog.gaines@am.jll.com](mailto:kelllog.gaines@am.jll.com)  
Brett Rosenberg +1 212-812-5926; [brett.rosenberg@am.jll.com](mailto:brett.rosenberg@am.jll.com)

## LIFE sciences

2018 REAL ESTATE DEVELOPMENT SYMPOSIUM

Tuesday, June 12, 2018

8:00 AM – 2:30 PM with reception to follow

The New York Academy of Sciences

250 Greenwich Street | New York, NY 10007

We invite you to the premiere Life Sciences Real Estate Development Symposium in New York City to examine the progress and potential that New York has for the life sciences.

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Kayla Jowski, [kjowski@bermangrp.com](mailto:kjowski@bermangrp.com) or 212.450.7300.

### NOTICE OF PUBLIC AUCTION OF MEMBERSHIP INTERESTS

Pursuant to that certain Mezzanine Loan Agreement dated January 8, 2016, as amended, restated, modified and/or supplemented from time to time (the "Loan Agreement"), by and between RNY Australia AC Mezz Borrower LLC, a Delaware limited liability company ("Debtor"), and Delphi CRE Funding LLC, a Delaware limited liability company ("Secured Party"), evidencing that certain loan (the "Loan") in the original principal amount of \$2,910,000.00, which Loan is also evidenced by that certain Mezzanine Promissory Note dated January 8, 2016 in the principal amount of \$2,910,000.00 in favor of the Secured Party and secured by, inter alia, that certain Mezzanine Pledge and Security Agreement dated January 8, 2016 made by Debtor in favor of Secured Party and related documents as amended from time to time (collectively, the "Loan Documents") being due in full and unpaid and in default, please be advised that the collateral (the "Collateral") as more particularly described below will be offered for sale to the highest qualified bidder by Secured Party at a public auction, in accordance with Section 9-610 of the Uniform Commercial Code in effect in the State of New York, on July 25, 2018 at 2:00 PM (Eastern Time) at the office of Kasowitz Benson Torres LLP, 1633 Broadway, New York, NY. Auction to be conducted by Mannion Auctions, LLC by Matthew D. Mannion, NYC DCA Lic. No. 143494

Collateral being sold:

- 100% of Debtor's limited liability company interests in RA 560 White Plains Road Owner LLC ("RA 560"), the owner of the property known as 560 White Plains Road, Tarrytown, New York, together with all limited liability company certificates evidencing the same, and all economic rights, control, consent, voting and other decision making rights and authorities and all other rights, privileges, authorities, power and options of any nature whatsoever arising from Debtor's interest in RA 560 as a member (and manager, if applicable) that may now exist or that may accrue or be issued or granted by RA 560 to Debtor;
- 100% of Debtor's limited liability company interests in RA 580 White Plains Road LLC ("RA 580"), the owner of the property known as 580 White Plains Road, Tarrytown, New York, together with all limited liability company certificates evidencing the same, and all economic rights, control, consent, voting and other decision making rights and authorities and all other rights, privileges, authorities, power and options of any nature whatsoever arising from Debtor's interest in RA 580 as a member (and manager, if applicable) that may now exist or that may accrue or be issued or granted by RA 580 to Debtor;
- 100% of Debtor's limited liability company interests in RA 6800 Jericho Turnpike LLC ("RA 6800"), the owner of the property known as 6800 Jericho Turnpike, Syosset, New York, together with all limited liability company certificates evidencing the same, and all economic rights, control, consent, voting and other decision making rights and authorities and all other rights, privileges, authorities, power and options of any nature whatsoever arising from Debtor's interest in RA 6800 as a member (and manager, if applicable) that may now exist or that may accrue or be issued or granted by RA 6800 to Debtor;
- 100% of Debtor's limited liability company interests in RA 6900 Jericho Turnpike LLC ("RA 6900"), the owner of the property known as 6900 Jericho Turnpike, Syosset, New York, together with all limited liability company certificates evidencing the same, and all economic rights, control, consent, voting and other decision making rights and authorities and all other rights, privileges, authorities, power and options of any nature whatsoever arising from Debtor's interest in RA 6900 as a member (and manager, if applicable) that may now exist or that may accrue or be issued or granted by RA 6900 to Debtor;
- 100% of Debtor's limited liability company interests in RA 55 CLB LLC ("RA 55"), the ground lessee of the property known as 55 Charles Lindbergh Blvd, Uniondale, New York together with all limited liability company certificates evidencing the same, and all economic rights, control, consent, voting and other decision making rights and authorities and all other rights, privileges, authorities, power and options of any nature whatsoever arising from Debtor's interest in RA 55 as a member (and manager, if applicable) that may now exist or that may accrue or be issued or granted by RA 55 to Debtor;

For information regarding the requirements to participate in or the terms of the sale, contact the Marketing Agent, Kurt Altavater at 415-772-0448 or [kurt.altavater@cbre.com](mailto:kurt.altavater@cbre.com). Secured Party reserves the right, in its sole and absolute discretion, to cancel the sale without notice, in its entirety, or to adjourn the sale to a future date.

The Collateral is being sold subject to any and all outstanding liabilities of RA 560, RA 580, RA 6800, RA 6900 and RA 55.

## PRIME BANK-OWNED DEVELOPMENT SITES

### ALGONQUIN, IL

120, 207 &amp; 299 RIVER RD

**2.66± ACRES OFFERED IN 3 LOTS  
(FOX RIVER FRONTAGE & 34 BOAT SLIPS)**



**Lot 1 - 0.70± Acres** - Single-family home & waterfront access easement with 2 boat slips (1 pier) included

**Lot 2 - 1.2± Acres** - Ready for development

**Lot**

## BIGGEST 1,000 STOCKS

**How to Read the Stock Tables**  
The following explanations apply to NYSE, NYSE Arca, NYSE American and Nasdaq Stock Market listed securities. Prices are composite quotations that include primary market trades as well as trades reported by Nasdaq BX (Formerly Boston), Chicago Stock Exchange, Cboe, NYSE National and Nasdaq (ISE).  
The list comprises the 1,000 largest companies based on market capitalization.  
**Underlined quotations** are those stocks with large changes in volume compared with the issue's average trading volume.  
**Boldfaced quotations** highlight those issues whose price changed by 5% or more if their previous closing price was \$2 or higher.

**Footnotes:**  
I-New 52-week high.  
J-New 52-week low.  
d—Indicates loss in the most recent four quarters.  
F—First day of trading.  
h—Does not meet continued listing standards.  
lf—Late filing.  
q—Temporary exemption from Nasdaq requirements.  
v—Trading halted on primary market.  
vi—in bankruptcy or receivership or being reorganized under the Bankruptcy Code, or securities assumed by such companies.

Wall Street Journal stock tables reflect composite regular trading as of 4 p.m. and changes in the closing prices from 4 p.m. the previous day.

Tuesday, May 29, 2018

Net

Stock Sym Close Chg

A B C

Stock	Sym	Close	Net	Stock	Sym	Close	Net
Stock	Sym	Close	Chg	Stock	Sym	Close	Chg
Alcoa	AA	47.30	-0.63	AEP	AEP	67.62	0.40
Alexanderson RE	ARE	124.39	0.89	AmerExpress	AXP	97.72	-3.38
AES	AES	12.41	...	AmericanFrgn	AFG	109.56	-1.37
Aflac	AFL	44.57	-0.77	Amherst	AMH	19.67	0.05
AGNC Inv	AGNC	19.17	0.08	Alkermes	ALKS	46.51	0.74
ANGI Homescng	ANGI	15.23	0.12	Alleghany	Y	564.59	-10.81
Ansys	ANSS	161.50	-0.73	Allegion	ALLE	78.27	-0.52
ASML	ASML	195.60	-5.50	Allegro	ALR	100.80	-0.96
ATT	T	32.33	-0.18	AlliantEnergy	LNT	41.00	-0.21
AbbottLabs	ABT	61.30	-1.07	Alimenta	ADM	42.12	-0.74
AbbVie	ABBV	99.47	-1.61	Alinta	ALL	94.24	-1.21
Abiomed	ABMD	387.40	-6.88	AllyFinancial	ALLY	26.06	-0.83
Accenture	ACN	153.54	-2.45	AlynchPharm	ALNY	100.06	0.08
ActavisBlz	ATVI	70.64	-0.24	Alphabet	C	GOOG	1066.32
AdobeSystems	ADBE	242.19	-1.37	AlmondBnd	AMLD	1068.07	-16.01
AdvanceAuto	AAP	123.96	-0.95	AlticeUSA	ATUS	18.97	0.49
AdmMicroDevcs	ADM	3.16	-0.18	Altisource	MO	55.73	0.10
Aegon	AEG	6.13	-0.39	Altria	ATHE	44.77	-0.10
Acera	AER	55.11	-0.15	AMerican	ANTM	229.29	-3.10
Aetna	AET	176.78	-1.76	AMerit	AMR	10.93	-0.26
AffiliatedMtrs	AMG	157.23	-6.10	Amgen	AMGN	177.44	-0.80
AgilentTechs	AVT	61.85	-1.30	Amico	AMK	67.00	-0.55
AgnicoEagle	AEM	44.99	1.06	Amherst	AMT	135.97	-0.36
AirProducts	APD	161.80	-3.20	Amphenol	APH	86.98	-0.46
AkamaiTech	AKAM	75.82	-0.69	Amplifire	AMP	136.27	-0.96
AlaskaAir	ALK	60.57	-1.30	AmpliFi	AMPL	100.05	-0.99
Albermarle	ALB	93.03	-1.79	AmpliFi	AMPL	100.05	-0.99

Alcoa AA 47.30 -0.63 AEP AEP 67.62 0.40

Alexanderson RE ARE 124.39 0.89 AmerExpress AXP AXP 97.72 -3.38

AES AES 12.41 ... AmericanFrgn AFG AFG 109.56 -1.37

Aflac AFL 44.57 -0.77 Amherst AMH AMH 19.67 0.05

AGNC Inv AGNC 19.17 0.08 Alkermes ALKS ALKS 46.51 0.74

ANGI Homescng ANGI 15.23 0.12 Allegian ALLE ALLE 78.27 -0.52

Ansys ANSS 161.50 -0.73 Allegro ALR ALR 100.80 -0.96

ASML ASML 195.60 -5.50 AlliantEnergy LNT LNT 41.00 -0.21

ATT T 32.33 -0.18 Alimenta ADM ADM 42.12 -0.74

AbbottLabs ABT ABT 61.30 -1.07 Alinta ALL ALL 94.24 -1.21

AbbVie ABBV ABBV 99.47 -1.61 Alitta ALLA ALLA 94.24 -1.21

Abiomed ABMD ABMD 387.40 -6.88 AllynchPharm ALNY ALNY 100.06 0.08

Accenture ACN ACN 153.54 -2.45 Alphabt C ALR ALR 100.80 -0.96

ActavisBlz ATVI ATVI 70.64 -0.24 AlmondBnd ALML ALML 1068.07 -16.01

AdobeSystems ADBE ADBE 242.19 -1.37 Altona ALTA ALTA 18.97 0.49

AdvanceAuto AAP AAP 123.96 -0.95 AlticeUSA ATUS ATUS 19.21 -0.30

AdmMicroDevcs ADM ADM 3.16 -0.18 Altisource MO ALTN MO 55.73 0.10

Aegon AEG AEG 6.13 -0.39 Altisource MO ALTN MO 55.73 0.10

Acera AER AER 55.11 -0.15 Altria ATHE ATHE 44.77 -0.10

Aetna AET AET 176.78 -1.76 Altria ATHE ATHE 44.77 -0.10

AffiliatedMtrs AMG AMG 157.23 -6.10 Ambidts AMB AMB 10.10 -0.24

AgilentTechs AVT AVT 61.85 -1.30 Amico AMK AMK 67.00 -0.55

AgnicoEagle AEM AEM 44.99 1.06 Amherst AMT AMT 135.97 -0.36

AirProducts APD APD 161.80 -3.20 Amphenol APH APH 86.98 -0.46

AkamaiTech AKAM AKAM 75.82 -0.69 Amplifire AMPL AMPL 52.02 1.17

AlaskaAir ALK ALK 60.57 -1.30 AmericaMovil AMOV AMOV 15.55 -0.63 Amptargroup ATPR ATPR 93.31 -0.77

AltaGas AMTG AMTG 16.00 -0.53 AmericaMovil AMOV AMOV 15.55 -0.63

AltaGas AMTG AMTG 16.00 -0.53 Amptargroup ATPR ATPR 93.31 -0.77

Albemarle ALB ALB 93.03 -1.79 AmeriFi AMPL AMPL 100.05 -0.99

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## BIGGEST 1,000 STOCKS

Continued From Page B10																							
Stock	Sym	Close	Net Chg	Stock	Sym	Close	Net Chg	Stock	Sym	Close	Net Chg	Stock	Sym	Close	Net Chg	Stock	Sym	Close	Net Chg	Stock	Sym	Close	Net Chg
Fluor	FLR	48.39	-0.14	IllinoiToolWks	ITW	44.02	-3.41	M&T Bank	MTB	171.74	-7.34	OGE Energy	OGE	34.47	0.08	Progressive	PGR	61.71	-0.64	SS&C Tech	SNV	50.03	-0.17
FomentoEconMex	FMX	81.95	-1.33	ImperialOil	IMO	32.25	0.66	MGM Resorts	MGM	31.30	-0.15	OneOKE	OKE	66.30	0.41	Prologis	PLD	64.31	-0.10	SIVB Fin	SIVB	306.99	-12.47
FootLock	FL	54.56	-1.18	Incyte	INCY	67.06	-1.37	MKS Instrum	MKS	113.70	1.10	OccidentalPetrol	OXY	81.83	-0.07	Prudential	PRU	94.97	-5.05	SABR	SABR	24.16	0.21
FordMotor	F	11.44	-0.07	IngersollRand	IR	88.84	-0.97	MLPX	MLPX	35.65	0.10	PublicStorage	PSA	209.85	1.36	PublicServiceEnt	PPF	119.96	-2.34	SAGE Therap	SAGE	151.82	-3.51
Fortinet	FTNT	59.93	-0.44	Ingredion	INGR	113.75	0.15	MSCI	MSCI	158.88	-0.46	QurateRetail	QRTB	21.00	-0.01	QurateRetailA	QRTEA	20.87	-0.24	Sanofi	SNY	37.85	-0.43
Fortis	FTS	32.15	-0.23	Intel	INTC	55.32	-0.12	Macerich	MAC	55.32	0.57	QurateRetailA	QRTB	17.01	-0.38	PrudentialFin	PRU	47.86	-2.52	SantoriniCons	SCH	19.09	-0.55
Fortive	FTV	74.02	-1.49	InteractiveBrks	IBK	74.07	-3.71	Macy's	M	34.83	0.70	Ralcorp	ORI	21.04	-0.17	PublicStorage	PSA	124.36	-0.51	SageTherap	SAGE	126.88	-1.08
Fortune	FBHS	56.80	-0.70	ICE	ICE	69.82	-1.04	MadisonSqGarden	MSG	263.23	-2.34	RidgeGroup	PGH	30.68	0.21	QurateRetailA	QRTB	17.01	-0.38	Salesforce.com	CRM	126.88	-1.08
Franko-Nevada	FNV	70.37	-0.71	InterContinental	IHG	63.96	-1.51	Magnalint	MGLN	68.48	-0.67	RidgeGroup	PGH	30.68	0.21	RidgeGroup	PGH	30.68	0.21	Sandoz	SSL	36.27	-0.75
FranklinRcs	BRB	32.83	-1.20	IBM	IBM	141.22	-0.24	Managlnt	MGA	63.29	-1.07	RidgeGroup	PGH	30.68	0.21	RidgeGroup	PGH	30.68	0.21	Schlumberger	SLB	68.07	-0.53
FreeportMcMoRan	FCX	16.65	-0.43	IntlFlavors	IFF	124.11	-1.28	Marinette	MAR	134.55	-3.42	RidgeGroup	PGH	30.68	0.21	RidgeGroup	PGH	30.68	0.21	Shabu	SCH	55.14	-2.16
FreseniusMed FMS	FMS	49.71	-0.75	Interpublic	IP	52.94	-1.19	ManufLifeFin	MFC	18.56	-0.64	RidgeGroup	PGH	30.68	0.21	RidgeGroup	PGH	30.68	0.21	Shaw	SHW	154.22	-3.07
G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	WEX	WEX	174.08	-3.30
GGP	GGP	20.50	-0.05	IntuitiveSurgical	ISRG	454.63	-1.93	Markel	MKL	111.05	-23.63	RELEX	RELEX	21.32	-0.34	Synopsis	SNPS	87.78	-0.54	WPP,Carey	WPP	66.61	0.83
Gallagher	AJG	65.80	-1.82	InvitHealth	INRH	21.88	0.06	MarketAssess	MKT	210.94	0.39	RELX	RELX	21.94	-0.27	Synopsis	SNV	53.42	-0.98	Twitter	TWTR	34.04	0.41
GamingLeisure	GLPI	35.02	0.04	IQYI	IQYI	23.08	0.29	McDonalds	MCD	102.95	-0.49	RPM	RPM	51.23	-0.30	Sysco	SY	65.15	0.13	Telus	TU	35.14	-0.16
Gap	GPS	28.29	0.14	IronMountain	IRM	32.36	0.27	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
GardnerDenver	GDI	32.61	-0.27	IsraelChemicals	ICL	4.05	-0.15	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
Garmen	GRMN	60.44	-0.12	ItauUnibanco	ITUB	11.49	-0.75	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
Gerdau	GBT	13.05	0.41	Intuit	INTU	196.70	-0.39	MarathonOil	MRO	20.68	-0.03	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
GeneralDynamics	GD	201.81	-0.31	InvitHealth	INRH	21.88	0.06	MarathonOil	MRO	20.68	-0.03	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
GeneralElec	GE	14.18	-0.45	InvestmentCorp	IGP	105.93	-4.73	Markel	MKL	111.05	-23.63	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
GeneralMills	GIS	42.48	-0.16	InvestmentCorp	IGP	105.93	-4.73	MarketAssess	MKT	210.94	0.39	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
GeneralMotors	GM	37.38	-0.92	J&J	J&J	122.04	-0.32	MatchGroup	MGXIM	58.87	-0.31	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
Genentech	GNTX	23.22	-0.27	JacobsEngg	JEC	63.30	-0.03	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
GenuineParts	GPC	90.36	-1.12	JardineMatheson	JMH	10.99	-0.03	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
GoldmanSachs	GS	227.03	-7.98	JonesLang	JLL	136.41	-6.66	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
Goodyear	GT	24.59	-0.60	JonesLang	JLL	136.41	-6.66	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
Graco	GGG	45.62	-0.29	JonesLang	JLL	136.41	-6.66	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
GrafeTechInt'l	GTE	18.45	-0.64	JonesLang	JLL	136.41	-6.66	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
Grainer	GWW	302.92	-6.90	JonesLang	JLL	136.41	-6.66	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
GreatPlainsEner	GX	33.66	0.29	JonesLang	JLL	136.41	-6.66	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16
Grifols	GRFS	21.81	-0.33	JonesLang	JLL	136.41	-6.66	McDonalds	MCD	102.95	-0.49	RSPM	RSPM	43.39	-0.77	Telus	TU	35.14	-0.16	Telus	TU	35.14	-0.16

## MARKETS DIGEST

## EQUITIES

## Dow Jones Industrial Average

**24361.45** ▼ 391.64, or 1.58%  
 High, low, open and close for each trading day of the past three months.

Trailing P/E ratio 23.95 20.46  
 P/E estimate \* 16.31 17.85  
 Dividend yield 2.22 2.34  
 All-time high 26616.71, 01/26/18

&lt;/

## COMMODITIES

WSJ.com/commodities

## Futures Contracts

## Metal &amp; Petroleum Futures

	Contract	Open	High	Low	Settle	Chg	Open interest
	Open	High	low	Low	Settle	Chg	Open interest
<b>Copper-High (CMX)</b> -25,000 lbs;\$ per lb.							
May 3.0730	3.0800	3.0560	<b>3.0520</b>	-0.0150	434		
July 3.0810	3.1135	3.0300	<b>3.0625</b>	-0.0150	133,429		
<b>Gold (CMX)</b> -100 troy oz;\$ per troy oz.							
May ...	... 1298.70	-4.60	2				
June 1299.00	1306.10	1291.40	<b>1299.00</b>	-4.70	83,331		
Aug 1305.70	1311.30	1296.60	<b>1304.10</b>	-4.90	275,947		
Oct 1310.20	1316.00	1303.00	<b>1310.20</b>	-5.00	10,906		
Dec 1316.40	1323.00	1309.90	<b>1316.70</b>	-5.00	78,221		
Feb'19 1322.40	1328.10	1316.20	<b>1323.00</b>	-5.10	11,810		
<b>Palladium (NYM)</b> -50 troy oz;\$ per troy oz.							
June 976.80	984.00	968.00	<b>972.30</b>	-4.50	3,871		
Sept 971.60	983.40	967.00	<b>971.00</b>	-4.70	18,556		
Dec 973.00	978.90	967.10	<b>967.10</b>	-4.60	402		
<b>Platinum (NYM)</b> -50 troy oz;\$ per troy oz.							
June 904.50	904.70	904.50	<b>903.80</b>	4.60	17		
July 901.00	910.50	899.90	<b>905.90</b>	4.60	71,690		
<b>Silver (CMX)</b> -5,000 troy oz;\$ per troy oz.							
May 16.400	16.400	16.400	<b>16.305</b>	-0.176	184		
July 16.530	16.530	16.310	<b>16.373</b>	-0.173	139,885		
<b>Crude Oil, Light Sweet (NYM)</b> -1,000 bbls;\$ per bbl.							
July 67.23	67.55	65.80	<b>66.73</b>	-1.15	516,813		
Aug 67.12	67.42	65.72	<b>66.62</b>	-1.16	244,395		
Sept 66.80	67.08	65.40	<b>66.27</b>	-1.18	256,664		
Oct 66.34	66.61	65.03	<b>65.87</b>	-1.19	180,482		
Dec 65.73	66.00	64.39	<b>65.21</b>	-1.15	295,198		
Dec'19 61.09	61.53	59.92	<b>60.95</b>	-0.66	176,336		
<b>NY Harbor Usld (NYM)</b> -42,000 gal;\$ per gal.							
June 2.1989	2.2052	2.1969	<b>2.1859</b>	-0.0239	24,648		
July 2.1942	2.2003	2.1647	<b>2.1808</b>	-0.0244	140,697		
<b>Gasoline-NY RBOB (NYM)</b> -42,000 gal;\$ per gal.							
June 2.1637	2.1731	2.1297	<b>2.1441</b>	-0.0373	28,857		
July 2.1592	2.1690	2.1233	<b>2.1371</b>	-0.0372	173,845		
<b>Natural Gas (NYM)</b> -10,000 MMBtu;\$ per MMBtu.							
June 2.945	2.968	2.838	<b>2.875</b>	-0.064	5,145		
July 2.967	3.000	2.864	<b>2.903</b>	-0.060	311,472		
Aug 2.982	3.016	2.884	<b>2.923</b>	-0.060	101,265		
Sept 2.969	2.998	2.870	<b>2.909</b>	-0.058	172,794		
Oct 2.973	2.999	2.876	<b>2.915</b>	-0.055	147,288		
Jan'19 3.177	3.212	3.102	<b>3.136</b>	-0.051	107,985		

## Contract

## Open High hilo Low Settle Chg Open interest

## Agriculture Futures

<b>Corn (CBT)</b> -5,000 bu;cents per bu.							
July 408.75	410.00	397.50	<b>400.00</b>	-6.00	788,746		
Dec 427.50	428.75	416.50	<b>419.00</b>	-6.00	531,009		
<b>Oats (CBT)</b> -5,000 bu;cents per bu.							
July 249.25	254.00	243.75	<b>244.00</b>	-4.75	3,698		
Dec 261.00	261.00	251.00	<b>251.25</b>	-6.50	1,065		
<b>Soybeans (CBT)</b> -5,000 bu;cents per bu.							
July 104.25	104.90	102.88	<b>103.50</b>	-11.00	384,623		
Nov 105.00	106.50	103.75	<b>104.50</b>	-11.00	265,547		
<b>Soybean Meal (CBT)</b> -100 tons;\$ per ton.							
July 381.60	387.60	377.60	<b>380.20</b>	-10	213,703		
Dec 379.60	382.70	375.80	<b>377.90</b>	-70	106,862		
<b>Soybean Oil (CBT)</b> -60,000 lbs;cents per lb.							
July 31.30	31.46	31.04	<b>31.21</b>	-13	229,764		
Dec 32.09	32.26	31.85	<b>32.01</b>	-12	115,168		
<b>Rough Rice (CBT)</b> -2,000 cwt;\$ per cwt.							
July 115.66	115.50	113.50	<b>114.60</b>	-10.50	5,721		
Sept 114.40	114.00	112.50	<b>112.60</b>	-17.50	2,776		
<b>Wheat (CBT)</b> -5,000 bu;cents per bu.							
July 547.50	554.00	531.50	<b>535.60</b>	-6.50	245,892		
Sept 564.00	570.75	548.50	<b>553.50</b>	-6.25	111,962		
<b>Wheat (KC)</b> -5,000 bu;cents per bu.							
July 566.00	574.75	553.75	<b>556.50</b>	-7.50	132,592		
Sept 584.00	592.75	571.75	<b>574.50</b>	-8.00	61,983		
<b>Wheat (MPLS)</b> -5,000 bu;cents per bu.							
July 645.25	649.50	623.50	<b>628.00</b>	-16.25	30,996		
Sept 650.25	654.50	631.50	<b>635.75</b>	-13.00	13,990		
<b>Cattle-Feeder (CME)</b> -50,000 lbs;cents per lb.							
Aug 145.000	145.600	144.050	<b>144.975</b>	.050	26,286		
Oct 144.325	144.975	143.500	<b>144.375</b>	.050	6,127		
<b>Cattle-Live (CME)</b> -40,000 lbs;cents per lb.							
June 104.650	104.700	102.850	<b>103.125</b>	-1.525	46,678		
Aug 102.475	102.675	100.800	<b>101.450</b>	-8.50	165,049		
<b>Hogs-Lean (CME)</b> -40,000 lbs;cents per lb.							
June 74.600	76.000	74.600	<b>75.675</b>	1.475	28,011		
July 77.850	79.525	77.675	<b>78.850</b>	1.300	75,283		
<b>Lumber (CME)</b> -110,000 bd ft;\$ per 1,000 bd ft.							
July 614.30	614.30	595.20	<b>609.10</b>	9.80	5,035		
Sept 595.60	599.60	584.60	<b>593.10</b>	8.50	950		
<b>Milk (CME)</b> -200,000 lbs;cents per lb.							
May 15.17	15.19	15.17	<b>15.17</b>	...	3,776		
June 15.79	15.87	15.72	<b>15.76</b>	.09	3,828		

## Contract

## Open High hilo Low Settle Chg Open interest

## Interest Rate Futures

<b>Treasury Bonds (CBT)</b> -10 metric tons;\$ per ton.							
July 2,545	2,589	2,48					

## BANKING &amp; FINANCE

# Exchanges Blast SEC Rebate Plan

By ALEXANDER OSIPOVICH

Two of the biggest U.S. stock-exchange operators have accused the Securities and Exchange Commission of exceeding its legal authority with a proposal to limit the rebates they pay traders to attract stock orders.

The attacks show that Nasdaq Inc. and Cboe Global Markets Inc. may sue the SEC to block the proposal, called the Transaction Fee Pilot, some observers said. Representatives of Nasdaq and Cboe declined to comment when asked if they plan to pursue legal action.

The two-year pilot program, which the SEC proposed in March, has riled big U.S. exchanges because it would undermine a key part of their businesses: a widely used system of fees and rebates called "maker taker," in which exchanges pay rebates for some orders and charge fees for others.

The pilot is effectively an experiment to see how weakening

or eliminating maker taker for some stocks, while leaving others untouched, will affect the U.S. stock market.

Under maker taker, exchanges pay rebates to traders for posting new orders to their markets, while charging them fees when they execute against orders already posted on the exchange.

Critics say the maker-taker system creates unnecessary complexity and harms investors by encouraging brokers to send their clients' orders to the exchange that pays the biggest rebate rather than the one that gives clients the best result.

The big U.S. stock exchanges say the problem is overblown. They argue that rebates benefit the investing public by encouraging more traders to quote prices for stocks on public exchanges and to compete with other traders to post the best price.

Nasdaq and Cboe both said the Transaction Fee Pilot amounted to unlawful government price controls on the fees

they can charge traders. The accusations came in a pair of letters to the SEC posted on the agency's website on Tuesday, although the letters were dated Friday, the deadline for submitting comments on the SEC's proposal.

## 40%

Stock-trading volume handled by Nasdaq and CBOE

only be deployed in order to address a grave market crisis," Cboe said in its letter.

An SEC spokeswoman declined to comment on Nasdaq and Cboe's accusations.

"The letters lay out a very clear threat to the SEC: If you go forward, we are going to consider suing you," said Tyler Gellasch, executive director of the Healthy Markets Association, a group representing large investors that has supported the SEC's pilot.

Together, Nasdaq and Cboe handle nearly 40% of U.S. stock-trading volume. The New York Stock Exchange, the largest U.S. exchange operator, said in a blog post dated Friday that the pilot program would cost investors at least \$1 billion a year. Although the fees charged by exchanges would drop under the pilot, quoted stock prices would get worse, eliminating the benefit to most investors, the NYSE said.

It isn't unprecedented for exchanges to hint that they may sue the SEC. Nasdaq said in a

2016 letter that the SEC would be breaking its own rules if it allowed upstart rival IEX Group Inc. to become a full-fledged stock exchange. IEX won approval, but Nasdaq never sued over the decision.

Under current rules, exchanges' fees are generally capped at 30 cents per 100 shares—which also effectively sets the maximum rebates they pay for trades.

Under the SEC's pilot program, all exchanges would be required to test trading on three groups of stocks with trading fees set lower than current rates. The idea is that lowering the fees would also compel the exchanges to lower rebates, since exchanges make money on the difference between the fee and the rebate.

For one sample of stocks, the maximum trading fee would be 15 cents per 100 shares. Another group would have trading fees set at 5 cents per 100 shares. In a third group, exchanges would be prohibited from paying any rebates.

# Accounting Watchdog's Enforcer To Leave

By MICHAEL RAPORT

The enforcement director of the board that oversees U.S. audit firms is stepping down, the latest in a string of long-time senior staff members to leave the regulator as a new chairman and board members consider potential changes in its direction.

The Public Company Accounting Oversight Board on Tuesday said that Claudio Modesti, its director of enforcement and investigations, will exit this month after 14 years. Mr. Modesti's announced departure follows those from other staff, including the board's chief auditor and its head of inspections.

Last month, the PCAOB said it would take a fresh look at its organization and direction. Chairman William Duhnke and the other four board members are all new to the PCAOB, which was founded 15 years ago to make sure auditors conduct rigorous, impartial audits of public companies.

In a speech this month, Mr. Duhnke said that the board would look at whether the design of its programs still meets its needs, and that "substantial opportunities exist for us to improve our policy-making and our external engagement."

In particular, Mr. Duhnke signaled the board was discussing possible changes to its



**Under PCAOB Chairman William Duhnke, the board is weighing changes.**

process for inspecting audit firms to gauge the quality of their audits. Among the ideas being considered, he said: tailoring inspections more to the circumstances of individual audit firms and focusing inspections more on broad issues across audit firms.

Mr. Modesti said in a statement that it had been "the greatest honor and privilege of my professional career to be a part of the PCAOB."

In addition to Mr. Modesti, other departures from the PCAOB that were announced recently include Martin Baumann, the board's chief auditor, who heads its development of the standards that audit firms must follow; Helen Munter, its director of registration and inspections; Gordon Seymour, its general counsel, and Nirav Kapadia, its information technology director.

A PCAOB spokeswoman said the board is "evaluating its accomplishments, operations and future strategic direction." The board "appreciates the many contributions of our dedicated staff and their support of the current and prior boards," she said.

Acting directors are running the departing staff members' divisions until permanent directors are appointed.

Accounting-industry observers have been watching to see whether Mr. Duhnke, who took office in January, will go in a different direction from his predecessor, James Doty, who was PCAOB chairman since 2011. Mr. Doty emphasized efforts to require auditors to disclose more information to investors, and he sometimes faced pushback from the Big Four audit firms and staff members at the Securities and Exchange Commission, which oversees the PCAOB.



Accessories retailer Charming Charlie emerged from bankruptcy with a \$35 million asset-backed loan from PNC Financial.

RICHARD B. LEVINE/NEWSCOM/ZUMA PRESS

## LOANS

Continued from page B1

loans that are, for instance, secured by a business's inventory or energy reserves and typically would have to be paid back first in the event of a bankruptcy. Around 2013, terms started loosening a bit, the OCC said.

In late 2016, banks' commercial-loan growth slowed sharply for reasons that still aren't clear. The annual growth rate was 1.3% at the end of 2017, down from 12% three years earlier.

Eager for loan growth to fuel

profits, banks since then have been loosening standards further to attract business, the OCC said. They are extending interest-only periods, allowing borrowers to draw down bigger portions of the value of collateral and relaxing covenants meant to protect from losses, the agency said. Many large banks are also lowering rates over their cost of funds, according to the Federal Reserve.

The developments appear to have revived commercial-loan growth, which has risen to a 3% annual rate as of mid-May.

But regulators are clamping down. The number of outstanding Matters Requiring Attention, or MRAs—citations the

OCC gives when it wants a bank to modify its practices—involving underwriting commercial loans rose 24% from the first quarter of 2017 through the first quarter of 2018, the agency said. MRAs involving banks making exceptions to their typical policies governing commercial lending rose 45% over that same period.

Business-loan rates are generally pegged to benchmark interest rates, which are rising. Eventually, that "could affect affordability of current debt service requirements or refinancing ability," the OCC said.

Banks aren't necessarily diving back into the riskier categories of business loans that they gave up after the crisis. Instead, they are becoming more aggressive in making the types of loans they consider safe, recent lending practices show. The shift is turning up in businesses in industries that banks were recently wary of, like retail and energy.

In 2016, nonbank lender Encina Business Credit started operating with a business strategy of making asset-based loans to distressed companies that banks shied away from.

Bill Kearney, senior managing director at the firm, said in the past year banks are increasingly outbidding Encina and other nonbank lenders on loans to struggling retailers.

—Soma Biswas

contributed to this article.



Actress/singer Liz Elias, right, at a rue21 in Miami

# Banks Take the Brunt of Troubles Afflicting Italy

By BEN EISEN

Investors reprised an old trade as they eye trouble in Italy: Sell U.S. bank stocks.

Morgan Stanley fell 5.8%, leading the way lower Tuesday as JPMorgan Chase & Co. sank 4.3% and Citigroup Inc. dropped 4%.

The KBW Nasdaq Bank Index fell 3.9%, pushing it into the red for the year. The S&P 500's financial sector dropped 3.4%, by far the worst performing of the 11 sectors in the index, which declined 1.2%.

The drop in U.S. bank stocks came alongside a 4.6% fall in German lender Deutsche Bank AG, a 3.7% slide in Swiss bank Credit Suisse Group AG, and a 3.6% decline in U.K. bank Barclays PLC.

It is a familiar market reaction: Nearly every time trouble has emerged in Europe in recent years, the knee-jerk reaction has typically been to sell U.S. bank stocks. It happened during the height of the eurozone crisis in 2011 and 2012,

and again in early 2016 amid worries about slowing global growth. This time, the fears revolve around Italy, amid concerns about a new vote that could bolster anti-eurozone forces, after Italian President Sergio Mattarella blocked the formation of a euro-skeptical coalition government on Sunday.

Markets in the U.S. were closed Monday for the Memorial Day holiday.

There is little sign that U.S. banks are overexposed to Italy. Instead, the most recent trou-

bles are reigniting fears of a "doom loop," in which debt-heavy governments such as Italy's weigh on the banking sector, which in turn weakens the government in a self-reinforcing cycle.

One sign of that: The difference between some short- and long-term U.S. government-bond yields shrank Tuesday as Treasury yields posted their biggest one-day decline in years. A flattening, or narrowing, yield curve tends to signal a downbeat view on economic

growth, and it also shrinks the differential between what banks earn from borrowing short term and lending long term, which can erode banks' profit margins.

Additionally, bank stocks have run up sharply in recent years, with the S&P 500 financial sector rising 20% in both 2016 and 2017. That makes them vulnerable to this type of pullback.

◆ Heard on the Street: Banks fear the 'doom loop' ..... B16

## MARKETS

# Euro Again at Center of Financial Unrest

**Italy's political turmoil**  
revives worries about  
the future of the  
common currency

BY GEORGI KANTCHEV

It all feels so familiar. Europe shakes global markets, the euro falls against the dollar and government-bond yields in Italy and Spain rocket higher.

In a lot of respects, we have been here before. The euro was at the heart of repeated financial-market meltdowns earlier this decade, exacerbated by high levels of debt, bank runs and bailouts and sclerotic economies.

Italy's political crisis this week revived simmering concerns about the future of the common currency in an era of populist politicians, rising euroskepticism and diverging economies. This time isn't exactly the same as before, but there are lots of reasons to dust off the history books.

On Sunday, Italian President Sergio Mattarella blocked the formation of a euroskeptic coalition government consisting of the antie establishment 5 Star Movement and League parties, which have flirted openly with the idea of pulling Italy from the common currency. Analysts expect the turmoil to lead to new elections, most probably in the fall.

With investors worrying that a new vote could strengthen the hand of anti-eurozone forces, the country's two-year bond, which offered a negative yield as recently as two weeks ago, exploded to as high as 2.69% Tuesday. Italian



Crowds in Athens in 2012 protesting against government cutbacks. Austerity plans had sparked strikes and riots in the streets.

It will be enough."

It was. The speech showed that the ECB meant business and soon after, it began buying unlimited eurozone government bonds from investors to reduce their yields. The reaction in eurozone government-bond markets was rapid. Yields on the bonds of the most-fragile economies began to fall: Spanish and Italian 10-year bond yields fell 1.5 percentage points over the rest of 2012.

Fears about the euro flared up again in 2015 as the left-wing Syriza party took control of Greece amid rumblings about a return to the drachma. In the summer, voters overwhelmingly rejected European Union bailout terms in a referendum, while clashes raged in the streets.

Greece defaulted on some of its debt, and had to stomach capital controls and violent protests in central Athens. Later that year, Greece agreed to a third bailout, worth €86 billion (\$100 billion), which imposed further spending cuts on the country.

The euro dropped to multi-year lows in 2015 and flirted with parity against the U.S. dollar a year later.

The fear of chaos created by even one country's exit proved to be a powerful glue holding the eurozone together during its debt crisis. Since then, there has been a flurry of changes meant to bind it still tighter, most notably, closer and more consistent supervision of banks and tougher fiscal rules, though these remain unfinished projects.

Greece is also finally within striking distance of freeing itself from the burden of bailouts, the latest of which expires in August.

stocks slipped and the euro fell to its lowest level against the dollar since July 2017.

A fracturing of the common currency, though still unlikely at this stage, would be a calamitous event for financial markets. A new election in Italy is expected to become a de facto referendum on the country's membership of the euro.

If one country exits from the currency area, others could quickly follow as levels of euroskepticism have risen on the continent in the past decade.

Widespread capital controls would be needed to prevent destabilizing rushes of money from countries deemed likely to have a weak posteuro currency to those expected to have a strong one. Huge swaths of financial plumbing, including derivatives markets and common banking systems, would need to be disaggregated.

At the turn of the decade, a crisis in a few highly indebted small economies—Greece, Portugal, Ireland and Spain—turned into a threat to the

survival of Europe's common currency and a menace to the global economy. Austerity plans in Greece sparked strikes and riots in the streets.

In 2010, eurozone member countries set aside deep resistance to paying for each others' debts and bailed out Greece and then Ireland. The next year came Portugal. And in following years, Spain, for its banks, and Cyprus.

The euro shed more than a fifth of its value in 2010. But markets felt the bailouts

weren't durable. The euro plunged again in 2011 as fears spread that troubles in smaller Spain and Portugal would spread to much larger Italy. Italy's 10-year bond yield spiked above 7%, too expensive for the highly indebted nation to afford.

In 2012 came an inflection point. European Central Bank President Mario Draghi, in a now famous speech in July that year, said that "within our mandate, the ECB is ready to do whatever it takes to preserve the euro and believe me:

## In Europe, Currencies Reel From Italy's Woes

BY IRA JOSEBASHVILI

The euro fell to its lowest level against the dollar in nearly a year as a political crisis in Italy sparked worries over the future of the eurozone.

Late Tuesday in New York, the common currency was down 0.7% at \$1.541, its lowest level since July 2017.

The euro's weakness weighed on a broad range of European currencies. The dollar was up 1.1% against the Norwegian krone and 1.5% against the Swedish krona. It rose 1.5% against the Polish zloty, while also notching 1.4% gains against the Hungarian forint and Czech koruna.

Italian President Sergio Mattarella on Sunday blocked the formation of a euroskeptic government, reviving long-standing European fears that Italy, with €2.3 trillion (\$2.67 trillion) in debt and the bloc's third-largest economy, could exit from the eurozone.

Many fear that the events over the weekend will play into the popularity of the anti-establishment League and 5 Star Movement parties heading into the late summer election, which could ultimately be seen as a referendum on the euro, said Omer Esiner, chief market analyst at Commonwealth Foreign Exchange, in a note to clients.

The WSJ Dollar Index, which measures the U.S. currency against a basket of 16 others, was up 0.3% to 87.56.

### AUCTION RESULTS

Here are the results of Tuesday's Treasury auctions. All bids are awarded at a single price at the market-clearing yield. Rates are determined by the difference between that price and the face value.

### 13-WEEK AND 26-WEEK BILLS

#### 13-Week

Accepted bids \$135,366,467,100 \$130,205,366,400

\*noncomp \$826,697,500 \$697,415,400

\*foreign noncomp \$1,000,000,000 \$741,000,000

Auction price (rate) 99.520986 98.973722

(1.89%) (2.03%)

Coupon equivalent 1.931% 2.080%

Bids at clearing yield accepted 83.43% 75.95%

Cusip number 912796W3 912796Q6

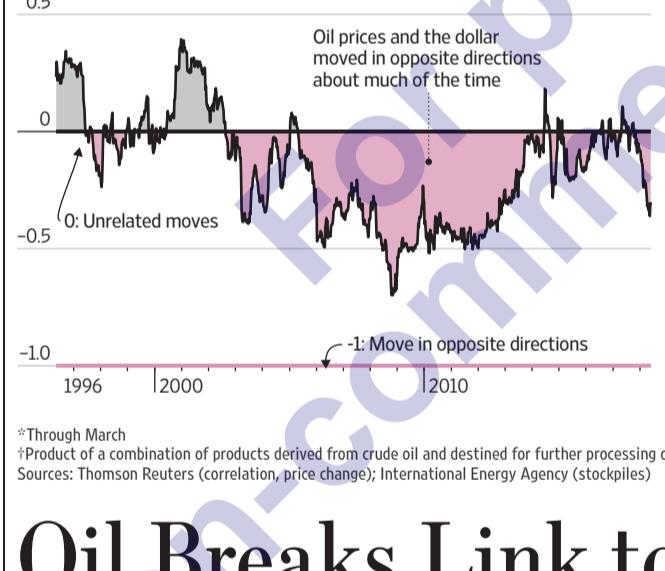
Both issues are dated May 31, 2018. The 13-week bills mature on Aug. 30, 2018; the 26-week bills mature on June 29, 2018.

The bills, dated May 31, 2018, mature on June 28, 2018.

### Shifting Dynamics

For years, market dogma held that a strong dollar was sure to push down oil prices. But lately the currency has risen alongside a strong oil-price rally, reflecting declining stockpiles and supply concerns.

### Correlation between Brent crude-oil futures and ICE U.S. Dollar Index



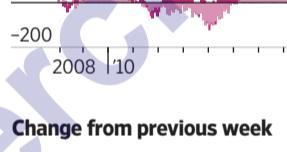
\*Through March

†Product of a combination of products derived from crude oil and destined for further processing other than blending in the refining industry

Sources: Thomson Reuters (correlation, price change); International Energy Agency (stockpiles)

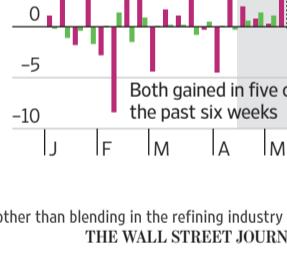
### OECD inventories compared with five-year average\*

Oil products Crude oil natural-gas liquids



### Change from previous week

Brent crude-oil futures prices ICE U.S. Dollar Index



Both gained in five of the past six weeks

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THE WALL STREET JOURNAL

weren't durable. The euro plunged again in 2011 as fears spread that troubles in smaller Spain and Portugal would spread to much larger Italy. Italy's 10-year bond yield spiked above 7%, too expensive for the highly indebted nation to afford.

In 2012 came an inflection point. European Central Bank President Mario Draghi, in a now famous speech in July that year, said that "within our mandate, the ECB is ready to do whatever it takes to preserve the euro and believe me:

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In 2012 came an inflection point. European Central Bank President Mario Draghi, in a now famous speech

## MARKETS

## Treasurys Jump Amid Concerns About EU

Investors are watching whether money will be pulled from banks in Italy, other hot spots

By DANIEL KRUGER

U.S. government bonds rallied Tuesday, sending the yield on the benchmark 10-year Treasury note to its biggest one-day decline since the aftermath of the Brexit vote, as political turmoil in Italy fueled concerns about the stability of the European Union.

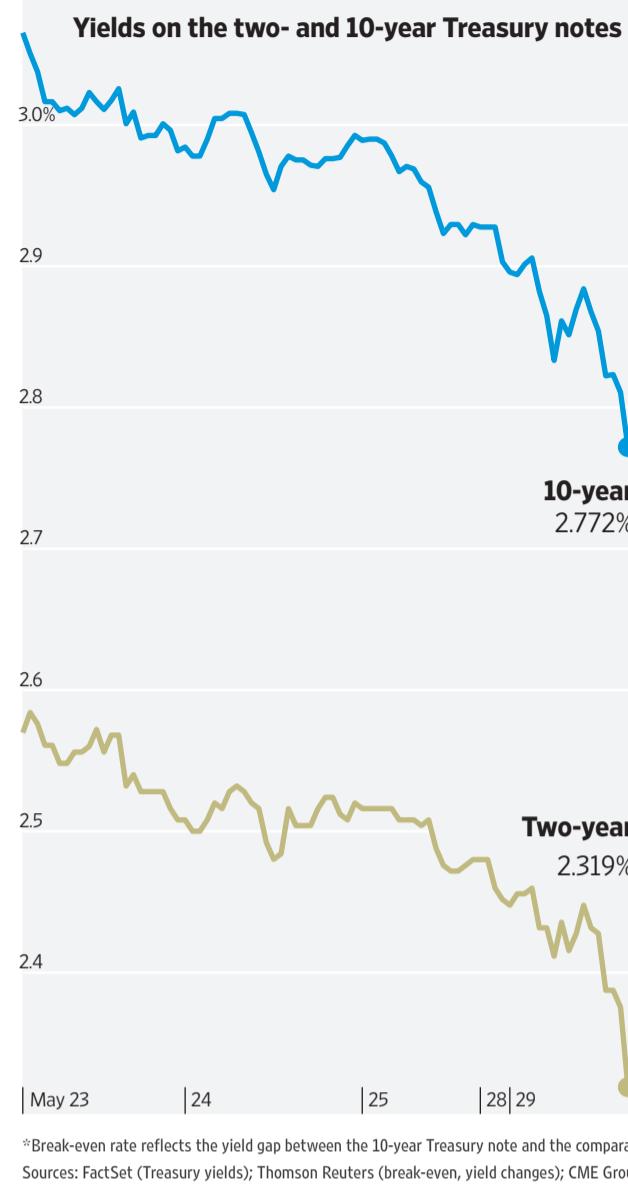
The 10-year yield fell to 2.772% from 2.931% Friday, its biggest single-session decline since June 24, 2016. Yields, which fall as bond prices rise, have posted their biggest four-session slump since November 2011. The 30-year yield fell below 3% to 2.971%, its lowest closing level since April 2.

Yields fell after Italy's president, Sergio Mattarella, on Sunday blocked the formation of a euroskeptic government, reviving longstanding European fears that Italy, with €2.3 trillion (\$2.67 trillion) in debt and a sluggish economy, could trigger a new existential crisis in the eurozone.

The 10-year yield had climbed above 3% this year to its highest levels since July 2011, boosted by expectations for an acceleration in the pace of growth and inflation, along with tax cuts and a surge in government spending that have increased borrowing and the supply of new bonds.

"Italy is a big deal," said Donald Ellenberger, head of multisector strategies at Federated Investors.

Though the risk of Italy leaving the European Union or abandoning the euro currency remains small, he said, investors now need to consider the possibility that people will pull money from banks in Italy and other trouble spots and move those assets to Germany or



\*Break-even rate reflects the yield gap between the 10-year Treasury note and the comparable inflation-protected security.

Sources: FactSet (Treasury yields); Thomson Reuters (break-even, yield changes); CME Group (rate increases)

other safer places.

A full-blown return to runs on Italian debt that threatened the survival of the eurozone in 2011 and 2012 isn't visible so far, with analysts and investors saying that this time the concerns are primarily political rather than economic. The yield on the Italian 10-year bond posted its biggest one-day surge in more than five years Tuesday, rising to 3.04% from 2.682%

Monday. That is its highest close since May 2014, although far from a crisis-era peak of more than 7% in late 2011.

Yet the moves in Italy underscore some of the difficulties the European economy has had in sustaining the growth rate it achieved last year. Those difficulties have increased concerns that global growth will slow, and eventually hinder the pace of the U.S.

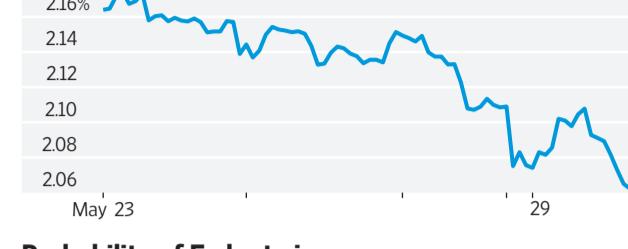
expansion—worries reflected in federal-funds futures, which investors use to bet on central bank policy.

Late Tuesday, those suggested that the probability of four Federal Reserve rate increases this year had fallen to 13% from 51% a week ago, according to CME Group. The chances that the Fed raises rates two times or fewer rose to 47% from 8% during the week.

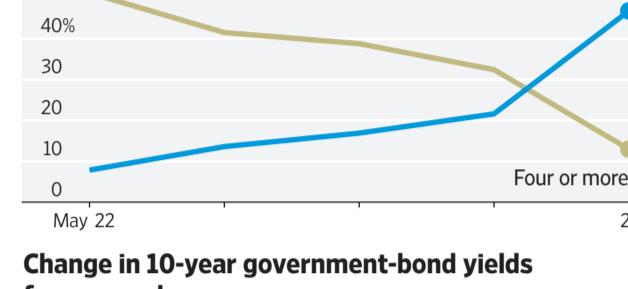
The yield on two-year Treasurys, which typically moves in line with expectations for Fed interest-rate policy, fell to 2.319% from 2.480% Friday, the biggest drop since March 18, 2009, the day the Fed announced its round of Treasury-bond purchases under its quantitative-easing program.

Investors also are looking to see how Fed Chairman Jerome Powell approaches the con-

## Ten-year break-even inflation rate\*



## Probability of Fed rate increases



## Change in 10-year government-bond yields from a week ago



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cerns about how Italian turmoil affects Europe and the global economy.

"The Fed has to send a clear message that they want to slow down" the pace of rate increases, said Jack McIntyre, who manages global bond portfolios with Brandywine Global Investment Management. While Mr. Powell's predecessor, Janet Yellen, was known for factoring concerns about the global economy into rate decisions, "Powell has given mixed signals," Mr. McIntyre said.

At the same time investors are focusing on the Italian political situation, the foundation for global growth is being rattled by rising concerns about policies that could impede trade.

The Trump administration caught Chinese officials off-guard Tuesday morning, sending a message that the U.S. was moving forward with its threat to apply tariffs on Chinese imports and other moves to restrict Beijing from accessing sensitive U.S. technology. That follows last week's announcement that the administration is pushing to impose new tariffs on auto imports, which could lead to slower growth by inviting retaliatory moves from Germany, Japan and South Korea.

"That can't be good for U.S. economic growth," said Andrew Brenner, head of global fixed-income at NatAlliance Securities. With the problems in Italy appearing persistent, yields on 10-year U.S. government debt may continue to fall as low as 2.65%, he said.

Events in Europe also threaten to overshadow significant data releases later in the week, particularly Friday's nonfarm-payrolls report, investors said. Though the labor market has been the most consistent sign of strength in the U.S. economy, gains in workers' wages haven't kept pace with the decline in the unemployment rate, which fell to 3.9% in April, the lowest since 2000.

## HEARD ON THE STREET

FINANCIAL ANALYSIS & COMMENTARY

WSJ.com/Heard

Email: heard@wsj.com

## Salesforce Doesn't Need Help to Grow

Buying growth is an expensive proposition for software companies these days. Luckily for **Salesforce.com**, it seems to be managing just fine on its own.

The cloud-software company reported \$3 billion in revenue for the fiscal first quarter ended April 30. That was a record and an increase of 22% from the same period a year ago when adjusted for exchange rates. Those results don't reflect the inclusion of MuleSoft, the acquisition of which Salesforce closed just days after the reporting period ended.

The MuleSoft acquisition was pricey in a number of ways: At \$6.5 billion, it was the largest deal that Salesforce has undertaken to date. At an enterprise value of 16 times forward sales, it also commanded more than twice the valuation the company paid in its pickup of Demandware less than two years prior. Desirable cloud deals don't come cheap these days, of course; a group of more than 50 cloud stocks tracked by KeyBanc Capital Markets has jumped by an average of 35% this year.

But the deal may have worried investors about what other moves the acquisitive company may be contemplating.

That explains why Tuesday's results were met with a sigh of relief. Salesforce shares rose in after-hours trading following the results. The company's forecast for the current quarter also exceeded Wall Street's expectations and they imply that 20%-plus revenue growth will continue through the year without help from MuleSoft. Those kinds of numbers are enough to give even a big cloud some additional lift. —Dan Gallagher

## Haven Bonds Reflect Global Pain

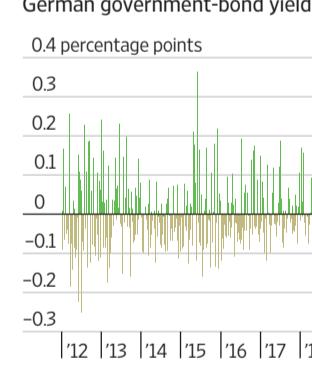
## Crossover

Total returns on government bonds in 2018



Source: FactSet

Weekly change in 10-year German government-bond yield



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racked up its biggest fall since mid-2012, when the eurozone sovereign-debt crisis was still raging, according to FactSet. Ten-year U.S. Treasury yields have fallen well below 3% again.

Instead they have been falling rapidly. The 10-year German bund yield Tuesday morning briefly dipped below 0.20% before backing up to 0.28%. It has more than halved in the past two weeks, and last week alone

indicator of market stress—has now risen above 2.75 percentage points, its widest since 2013.

In the U.S., the move may put renewed focus on the flattening of the Treasury yield curve, another potential sign of economic distress, since short-dated yields should be supported by expectations of further Federal Reserve rate in-

creases.

Worries that Italy could cause the eurozone to fragment also are pushing up the dollar, adding further momentum to a move that has already caused turmoil in emerging markets. The euro has fallen to its lowest since July, below \$1.16.

Along with the currency, bond-market returns have flipped, likely wrong-footing investors. German bonds are now up 1.3% on the year, while Italian bonds are down 3%. Treasurys gained 0.8% last week, their best performance so far this year.

Italian bonds and stocks are just the latest in a string of risk-seeking trades that have run into trouble in 2018. It may be some small relief that haven bonds are now providing an offset. However, it is also a sign that the benign conditions that prevailed for investors until recently are under heavy fire. The market ride is set to get bumpy.

—Richard Barley

## OVERHEARD

They moved fast for their age, but not fast enough to evade police. Two brothers allegedly broke into the window of a jewelry store in a harbor-front shopping mall in Hong Kong, snapped up \$688,000 worth of jewels and took off in just 27 seconds, the South China Morning Post reported.

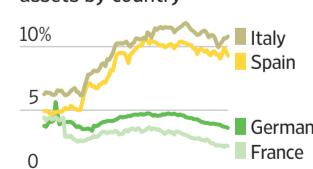
There have been a series of smash-and-grab robberies at Hong Kong's many jewelry stores recently. But probably by younger men. Police say the two men are brothers aged 60 and 55.

Three old friends attempt a bank robbery in the original version and the remake of the movie "Going in Style," but they had led law-abiding lives. In Hong Kong, the older brother, Ho Tung-shing, was sentenced to 17 life terms in 1993 for a robbery spree, the SCMP reported, but was released after 25 years when sentencing laws changed. A life sentence would probably be shorter now.

## Bank Investors Fear Return of the European 'Doom Loop'

## Unhappy Returns

Bank exposure to government bonds as a share of total assets by country



Source: European Central Bank

according to IHS Markit, a data provider. That is worse than the performance of bank stocks: The Stoxx Europe 600 Banks index lost about 3%, according to FactSet.

For UniCredit and Intesa Sanpaolo, Italy's two biggest banks, the cost to protect against default has more than doubled in the past two weeks, according to IHS Markit, with the biggest rises coming Tuesday. Spain's Banco Santander is enduring a similar ride.

Among French banks, which saw a sharp spike in early trading, investors were likely looking for a cheap and readily tradable hedge against the extreme risk of a eurozone breakup. With

Italian and Spanish banks, which have been hardest hit, there are real risks on their balance sheets: a hefty exposure to their own governments' debt.

As government bonds are sold and drop in value, that is a hit to profits for these banks. It also is an unwelcome reminder of the "doom loop," the vicious spiral of previous crises in which debt-laden eurozone governments both hurt national banks' profitability and are too weak to stand behind them.

In Italy, government bondholdings are nearly 11% of bank assets. In Spain they are more than 9%, while in France and Germany they are just 2.2% and 3.6%,

respectively. These figures from the European Central Bank cover all government bondholdings, but national domestic bonds tend to make up the vast majority of what banks own.

Investors are fearful that banks once again get dragged down by political decision making that further weakens individual countries' financial positions or threatens their membership of the euro. That would likely mean economic pain and rising bad loans.

Italy is a long way from turning its back on the eurozone, but bank-bond investors and shareholders aren't ready to show its politicians much patience.

—Paul J. Davies

# CYBERSECURITY

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THE WALL STREET JOURNAL.

Wednesday, May 30, 2018 | R1

Follow  
The Experts  
An Online  
Conversation  
**DETAILS, R2**

## What Keeps CIOs Up at Night?

Pretty much everything—including how to measure the actual security risks, who has access to the system and whether business partners can be trusted



BRIAN STAUFFER

**I**T IS A WONDER THAT CHIEF information officers and chief information security officers sleep at all. Cybersecurity threats are relentless, they're getting stronger, and they're coming from more directions than ever. Just this past January, revelation of the Spectre and Meltdown computer-chip flaws exposed security weaknesses in the very foundations of computing infrastructure.

What's more, the consequences of a breach can be disastrous, with staggering losses of customer data and corporate secrets—followed by huge costs to strengthen security, as well as the threat of regulatory scrutiny and lawsuits.

With that in mind, we asked CIOs and CISOs what keeps them up at night. Here's what they had to say.

### HOW EXPOSED ARE WE, ANYWAY?

Companies have mountains of data about vulnerabilities and hack attempts, but probably the most fundamental question is the most difficult one to answer: How much danger do we *really* face?

Quantifying the risks is crucial as companies make decisions about how to manage some risks. But it's extremely hard to accomplish in a way that boards and top executives can understand. One problem is that there aren't widely accepted metrics

for measuring the health of a company's defenses. Guidance from bodies such as the National Institute of Standards and Technology can help, says Mathew Newfield, chief information security officer at Unisys Corp. But IT systems and business risks are different for each company, so all security executives have to come up with metrics that make sense for their particular companies.

Microsoft Corp. CISO Bret Arsenault ranks the company's top enterprise-information risks on a scale of 1 to 15 so that the board has a coherent view of his team's security priorities. Risks such as addressing a

gap in Microsoft's supply chain might increase between meetings if the security team learns that hackers can exploit a vendor's technology, he says. But a running list gives boards a reliable reference point, he says.

"There's a consistent way for the board to look at all those risks," he says.

Companies can use information from security-rating firms such as **SecurityScorecard** to benchmark themselves against industry averages, but the data doesn't give senior leaders or the board a full picture, says Liane Pelletier, a director at logistics firm Expeditors International of Washington Inc. and telecommunications firm AT&T International Inc.

Ms. Pelletier, a former executive at telecommunications providers Sprint and Alaska Communications, says two other numbers tell her about the health of security at her companies.

First, she monitors the percentage of the company's software that is the latest version available. The figure shows how effective the company's patching procedures are, she says. Patches fix vulnerabilities that can be exploited by hackers. She also tracks the speed of detection of a significant intrusion, expecting the time to improve steadily and compare well with industry averages published by Carnegie Mellon University.

"The most horrifying thing is to find an incident and find it's been going on for nine months," she says. "What a sick feeling in your stomach."

—Jeff Stone, Kim S. Nash and Adam Janofsky

### WHO CAN ACCESS WHAT?

As cyberattacks proliferate, one of the biggest tech vulnerabilities is getting clearer: employees logging into corporate systems remotely, sometimes from their own devices.

Knowing that more employees are working outside the office, attackers are increasingly targeting vulnerable points beyond corporate walls.

As such, controlling access to networks and managing user accounts is poised to become a "key cyberspending area for 2018 and beyond," says Daniel Ives, chief strategy officer and head of technology research at GBH Insights, a technology market-research firm.

One approach is a strategy called zero trust, where users are given access to sections of apps or data, rather than entire networks, by going through strict identity-authentication measures.

So, for instance, human-resources employees wouldn't get access to sales data when they log on—as opposed to the system many companies use now, where a single sign-on gives employees access to everything on the network.

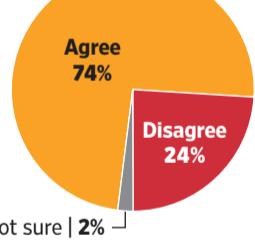
Another security strategy seeing a lot of innovation is multifactor authentication, which uses biometrics, such as fingerprint scanners and facial-recognition tools, to recognize users, says Garrett Bekker, a security analyst at 451 Research.

Developers are also working with Please turn to the next page

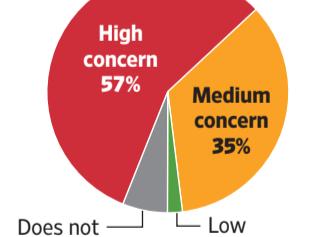
### Under Pressure

Corporate senior technology decision makers say they feel the weight of investors' concerns about cybersecurity

Investors increasingly hold senior executives accountable for a cyber incident



How concerned are corporate investors about corporations protecting themselves from cybercrime?



Source: 250 senior technology decision makers surveyed by Booz Allen Hamilton in March and April 2018

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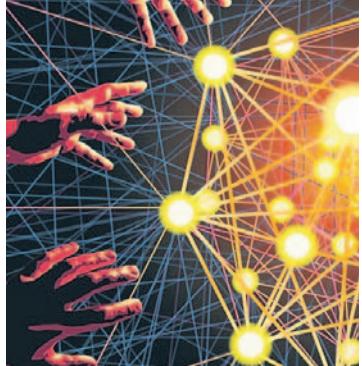
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Paving the way for girls, R10

## JOURNAL REPORT | CYBERSECURITY

# What Keeps CIOs Up at Night?

*Continued from the prior page*  
behavioral biometrics, which uses analytics to measure how workers interact with a device—how they hold it, how they type on the keys, how they use the cursor—to identify them and flag anomalies.

—Angus Loten

## CAN WE TRUST OUR PARTNERS?

It is tough enough for security executives to worry about security issues at their own companies. But very often they have to worry about safeguards at other firms, too.

The vendors that provide a company with everything from heating and air-conditioning units to human-resources software in the cloud could give hackers an open door to corporate data.

About 36% of companies don't apply the same or higher security standards to their partners as they use internally, according to a survey from Accenture published in April of 4,600 corporate-security professionals at companies with more than \$1 billion in annual revenue.

Executives should negotiate the right to audit a vendor's cybersecurity practices on a regular basis, says Ms. Pelletier of Expeditors International and ATN.

When negotiating with third parties, companies should nail down "cures," such as financial compensation should the vendor expose the company's data, she says.

Even if a firm doesn't get all it asks for during the negotiations, the vendor's response to the demands can provide useful insight into its security practices.

Vendors may provide assurances or details about their security architecture, helping security executives assess how the vendor operates on a daily basis. On the flip side, vendors might retreat from the discussion, potentially a bad sign for future business relationships.

"These are tough negotiations," Ms. Pelletier says. "Their reaction is better than nothing. It's better than going in blind."

—Steven Norton and Kim S. Nash

## WHO'S ATTACKING AND WHY?

Threats from criminal groups, nation-states, activists and independent digital malcontents have converged, making it harder to tell who is going after a company's data and what their motive is, says Jeanette Manfra, the top-ranking cybersecurity official at the Department of Homeland Security.

Knowing who is involved in a cyberattack can help companies understand the breadth of systems affected by an incident, from where the next attack might come or what information attackers are seeking, all factors in providing better security.

Cyberattacks involving ransomware attributed to North Korea and Russia last year halted operations at global organizations including FedEx Corp., A.P. Moller-Maersk, Merck & Co. and the U.K. National Health Service.

Further complicating the picture: Foreign intelligence sources are suspected of collaborating with civilians to launch attacks, a worrisome model that is "more and more prevalent," says John Brennan, former director of the Central Intelligence Agency, who recently joined the advisory board of cybersecurity companies SecureAuth Corp. and Core Security SDI Corp.

This makes understanding the intent of a cyberattack even more difficult, especially when a wide range of corporations, municipalities and government agencies may have been targeted, says Ms. Manfra, creating potentially incendiary situations between many different layers of governments and enterprises.

It is a problem that many security executives are already observing, says Golan Ben-Oni, chief information officer of telecommunications company IDT Corp.

Escalations aren't just happening between nation-states, but also between individuals from rival countries or factions, fueled by a proliferation of government-created hacking tools made available on the web.

In one incident last year, an attacker compromised a workstation within IDT. The company was able to trace the incident to an attacker in Russia but was unable to get further information about who sponsored the individual or why, says Mr. Ben-Oni.

"We can never really know with 100% assurance that it is actually the nation-state actor who we want to believe" it is, he says.

—Kate Fazzini

## WILL THE GOVERNMENT GIVE SECURITY CLEARANCE?

Businesses critical to the infrastructure of the U.S., such as finance, energy, oil and gas, need staff with government security clearances so they can view classified cyberthreat information from federal agencies. This, in turn, helps companies to be better prepared to fight attacks and able to collaborate in real time with government officials when an attack is under way.

But the timeline for getting a security clearance has more than doubled in the past three years, according to the U.S. Of-

formation is one key for companies to defend themselves."

—Kate Fazzini

## WHAT DO WE HAVE TO DISCLOSE?

The fear underlying data breaches is that information will get out involuntarily. Now directors and senior executives are wrestling with how much they have to tell each other and the investing public after new guidance from the Securities and Exchange Commission. The SEC now expects companies to disclose more detail in their quarterly and annual financial statements about procedures and controls for managing cyberrisks.

That includes descriptions of how they determine the severity of security gaps and incidents, and how senior executives and the board communicate about cybersecurity, as well as specifics about how the board handles its oversight of cyberrisk.

"The SEC wants to burn it into the heads of leadership in a company that 'You own this,'" says David Fontaine, CEO of corporate-investigations firm Kroll Inc. and parent company Corporate Risk Holdings LLC. The SEC's February statement updates the agency's last major guidance related to cybersecurity, issued in 2011.

Already, boards devote more time to cybersecurity matters than in years past, calling in the heads of technology and cybersecurity regularly for committee and full-board meetings.

The SEC's guidance brings a quandary to the boardroom, says Paula Cholmondeley, a director at Bank of the Ozarks Inc. and Terex Corp., which makes construction equipment. The guidance gives companies latitude in the details of what they disclose. So they must decide how best to give shareholders a sense of the processes and controls in place to deal with cybersecurity risks—without revealing too much to tip off criminals.

"You're walking a fine line," she says. "It is such a complex and layered issue, it's not clear to me how to do it."

—Kim S. Nash

## HOW WILL SECURITY AFFECT MY PAY?

There's an idea starting to emerge in the business world that hits top executives right in the wallet: tying compensation to cybersecurity goals.

In April, the board of Equifax Inc. said it would evaluate the performance of the CEO and four other executive officers in part by how well the company meets objectives in fixing its cybersecurity program. Equifax recently outlined steps to address problems after a breach that exposed personal data for 147.9 million U.S. consumers.

Under the compensation plan, the executives' bonus won't rise if they hit certain marks, but it will fall if they miss.

For one, executives will be judged on how well the company progresses in adopting best practices from the National Institute of Standards and Technology, a government body that devised guidance for cybersecurity readiness. Each executive also must meet individual cybersecurity goals, according to filings with the SEC.

A similar idea was floated at Verizon Communications Inc. earlier this month by an investment group that wanted the company to study linking senior executives' pay to cybersecurity metrics. Verizon's Yahoo unit saw all three billion of its user accounts breached in 2014, before the telecommunications company acquired it last year.

The board recommended against adopting the idea, saying in part that there isn't necessarily a correlation between the actions of executives and the prevention of security incidents. The proposal was voted down.

—Kim S. Nash

Source: Accenture survey of 4,600 security professionals in 15 countries at companies with annual revenue of \$1 billion or more, conducted in February 2018

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CEO/Executive committee  
27%  
Board of directors  
11%  
Chief financial officer  
13%  
Chief operating officer  
3%  
Chief information security officer/  
Chief security officer  
11%  
Chief information officer  
35%

2017

32%

27%

12%

11%

9%

6%

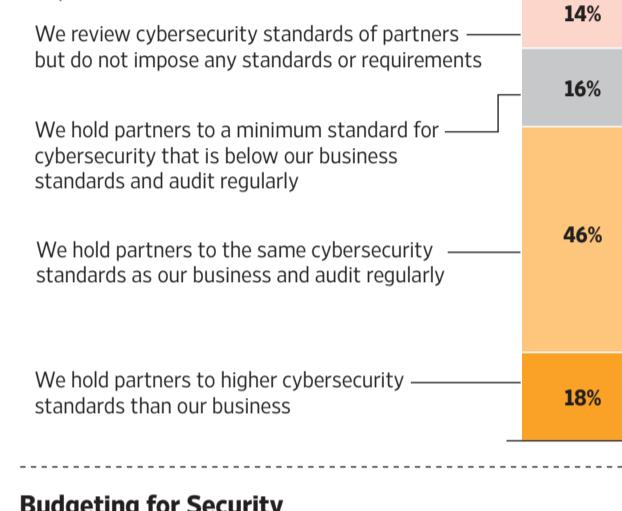
2018

## Plenty of Concerns

Among the many cybersecurity issues executives deal with are vulnerability to attacks through business partners and dealing with boards of directors on budgeting

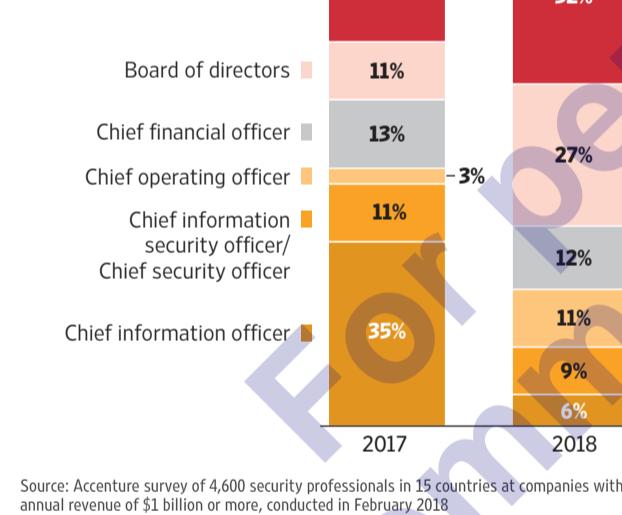
## Working With Others

The degree to which business partners are held to cybersecurity standards



## Budgeting for Security

How high in the organization security professionals have to go for budget approval



Source: Accenture survey of 4,600 security professionals in 15 countries at companies with annual revenue of \$1 billion or more, conducted in February 2018

THE WALL STREET JOURNAL.

# The Anatomy of a Phishing Attack



BY CHRIS KORNELIS

Cyberattacks on companies continue to grow more prevalent, sophisticated and dangerous. Organized criminals steal banking records, terrorists launch ransomware attacks, and state actors slip into information systems and go quiet until they see an opportunity to exploit their presence.

Earlier this year, the World Economic Forum reported that cyberbreaches recorded by businesses almost doubled in five years from 68 per business in 2012 to 130 per business in 2017.

To carry out these breaches, attackers deploy a mix of patience, technology and know-your-target social-engineering techniques.

Shawn Moyer, a founding partner at **Atredis Partners**, uses hackers' tricks on behalf of his clients to test their security practices and find weaknesses before they can be exploited. Here, he walks us through how the bad guys plan and execute an attack that takes advantage of one of the weak points of any corporate cybersecurity system: a company's employees.



## STEP 1: Surveillance

The hacker looks for a way into a company's computer system through an employee. Common targets are new employees, including executives, who often are more susceptible to emails or other communications from hackers disguised as legitimate company business. Another favorite target is IT staffers who have wide access to a company's data. Hackers can find potential targets and their contact information from multiple sources, from scanning news reports of executive turnover to searching the rosters of Little League baseball teams for parents' email addresses.



## STEP 2: Attack

Once a target or targets are identified, the hacker sends the bait: Often it's a phishing email containing a link or document for the recipient to click on. Or it might be an official-looking DVD with instructions to be run on company computers.



## STEP 3: Once Inside

When the recipient clicks on the link or document, or the DVD is opened, a hidden software program is launched. Depending on the type of attack, the program can:

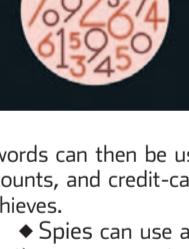
- ◆ Allow the hacker to collect information from individual infected

computers.

- ◆ Give the hacker access to the company's entire computer network.

- ◆ Lock infected computers, denying their users access to the company network.

- ◆ Use infected computers as part of a network for launching hacking attacks outside the company.



## STEP 4: The Payoff

- ◆ Attackers can transmit user-names and passwords along with any other sensitive information gleaned from infected computers back to the hackers' computers, often disguised in the company's own outbound web traffic. Passwords can then be used to unlock their owners' financial accounts, and credit-card numbers can be sold to identity thieves.

- ◆ Spies can use access to individual computers or the entire company network to steal corporate secrets, monitor internal communications or embarrass employees by publishing emails and other sensitive information.

- ◆ Hackers who lock up computers demand a ransom to restore access to the company network.

- ◆ Networks of hijacked computers, called botnets, can be used to send out spam or launch denial-of-service attacks, in which they bombard a website or computer system with so much traffic that it can't operate.

Mr. Kornelis is a writer in Seattle. He can be reached at [reports@wsj.com](mailto:reports@wsj.com).

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- ◆ A column about the vulnerability of the U.S. power grid, by Jason Bordoff (@JasonBordoff), a former special assistant to President Obama, and professor of professional practice in international and public affairs and founding director of the Center on Global Energy Policy at Columbia University.

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## JOURNAL REPORT | CYBERSECURITY

# How Firms Can Create A Cybersafe Culture

Employees know hackers are gunning for them. Yet they still keep falling for their tricks.



BY STUART MADNICK

AS TECHNICAL defenses against cyberattacks have improved, attackers have adapted by zeroing in on the weakest link: people. And too many companies are making it easy for the attackers to succeed.

An analogy that I often use is this: You can get a stronger lock for your door, but if you are still leaving the key under your mat, are you really any more secure?

It isn't as if people aren't aware of the weapons hackers are using. For instance, most people have heard of, and probably experienced, phishing—emails or messages asking you to take some action. ("We are your IT dept. and want to help you protect your computer. Click on this link for more information.") Although crude, these tactics still achieve a 1% to 3% success rate.

Then there are the more deadly, personalized "spearphish" attacks. One example is an email, apparently sent from a CEO to the CFO, that starts by mentioning things they discussed at dinner last week and requests that money be transferred immediately for a new high-priority project. These attacks are increasingly popular because they have a high success rate.

The common element of all these kinds of attacks: They rely on people falling for them.

## Too much information

Such gullibility, unfortunately, is a self-inflicted wound, the result of a cyberculture where people are willing to share all kinds of information and try new things all the time. There are lots of good things about that, but also much that is dangerous. So now is the time for companies and institutions to change that culture. It won't be easy, and it will take some time. But it's crucial if we want our companies and information to be safe from cybertheft. We have to start now, and we have to do it

right.

Unfortunately, most of the things companies are doing simply don't work. In our studies, we have found that such typical initiatives as distributing fliers about cybersecurity, sending people to a one-time training class, or asking them to view a 30-minute video are pretty much worthless. People do them, but they don't retain enough information and they don't change their behaviors.

To understand what does work, it's helpful to learn from some prior successful efforts to change our culture. A good example is smoking.

When the U.S. Surgeon General came out with his report in 1964 outlining the dangers of smoking, things didn't change immediately. Photos of lungs blackened by smoking, though disturbing, had little impact, with responses like, "It is my body, leave me alone." Over time, though, what had more impact regarding smoking was society's reaction. It is not just about you, but about the others that your action affects. It's about how your smoking damages your family.

## Out of curiosity

To better understand how far we have to go in creating a cybersafe culture, consider this: If you were taking a tour through a nuclear plant, and there was a big red valve with a sign on it that said "Do not touch," how many of you would turn it? None, I would guess. But in a phishing test conducted at a major financial-services firm, one of the test emails actually said: "This is a Phishing Test. Clicking the link below will cause harm to your computer." At least one executive clicked it! When asked why, he said, "I was curious to see what it would do."

To me, that is pretty strong evidence that people are generally unaware of the dangers that they expose themselves, and their organizations, to on a regular basis.

So, how do we go about creating a cybersafe culture? What are the key elements? My colleague, Dr. Keri

Pearlson, our executive director, and the rest of our Cybersecurity at MIT Sloan research team have interviewed many companies working toward just such a culture. Here's a look at approaches and actions that we have found most effective.

### ◆ Get everyone involved:

This seems like such a simple concept. But most companies aren't there yet. At too many companies, cybersecurity is still seen as a technology issue, or the responsibility of the IT department or, at best, management. But cybersecurity requires the active efforts and cooperation of everyone in the business.

### ◆ The need for leadership:

Having said that, individual motivation doesn't appear automatically or magically. There needs to be strong attention and support from top management and a clearly designated manager and team who are responsible to help develop, support and sustain the cybersecurity culture.

### ◆ Passive solutions:

These are things that require minimal, or even no, conscious action from the employee, such as segregating the network used by personal devices, such as your smartphone, from the corporate network, or requiring two-factor authentication to connect to the corporate network.

Another tactic: Filter emails and put suspicious emails in a separate folder. In this way, it highlights the fact that employees should make sure they know who the email is from and what the attachment is before they open it.

### ◆ Active reminders:

Culture is not a once-a-year, or once-a-month, event. It must be continuous and integrated into daily life.

At the entrance of many factories, for instance, you will see a sign, such as: "542 days since last industrial accident." Do you want to be the person to reset that number to zero?

But have you ever seen a sign at a data center or office that said: "5 minutes since last successful cyberattack"? Probably not, but you

should. Companies should regularly remind workers how many attempted cyberattacks their organization had today, and how many were successful, and if things are getting better or worse.

Along those lines, companies should implement phishing tests, whereby potentially dangerous emails are sent to employees to see who will fall for them, with feedback to the careless employees, and reminders that suspicious emails or events should be reported.

Simulations of cyberattacks, similar to fire drills, can significantly increase awareness and understanding of the complexities of an attack.

Another active reminder is a note added to each email that someone receives that says, "This email has an attachment. Be sure you know who it is from before you open it. We don't want to aid a cyberattack."

What's more, we need to make sure people understand that this isn't just about them. It's about everybody they work with. I recently observed a large poster on the scaffolding of a construction site near my office. It was of a worker holding a photo of his family. The caption was, "I know why safety is important." The point is: His family relies on him, and he owes it to his family to be safe at work. That was the same message that finally got through to smokers. And that's the same message that we need to get through to employees about cybersecurity dangers. Companies have to make it clear that clicking on just that one phishing email can open up the entire information system to the bad guys, shutting down many other systems, or worse, holding the systems for ransom.

◆ Engaging and fun: This is where there are the most opportunities for both creativity and benefits. Most companies are effective at conducting market research to understand their customers and how to influence them. But they aren't nearly as diligent about understanding their employees.

Yet understanding what motivates their specific employees is key in finding the most effective cybersecurity strategies. We have seen engaging and funny videos and songs that connect with employees, as well as badges for "responsible cyber-defenders." What may be hokey for one company can be highly effective in another one. In one organization, there is a "cybersecurity superhero" who travels around the company and personifies and promotes the organization's commitment to cybersecurity.

◆ It's a team effort: It is hard to change the culture of a single individual or have an immediate impact on an entire large organization. That's why the group—however defined—is so crucial.

Using the smoking example, having the spouse repeatedly say, "Please do not smoke, you are endangering me and the children," provides significant impact. Similarly, having a colleague talk about how a careless employee is putting the rest of the group in danger of cyberattacks puts a lot of peer pressure on the employee to change his or her behavior.

We have seen companies run periodic phishing tests where the results of the overall group, as well as individuals, are posted—with recognition rewards for the most cy-

## Lost in Translation

Understanding cybersecurity risks at work doesn't always prevent risky behavior, as these responses from surveyed employees in the U.S. show

**82%**

I have read and understood my company's policies regarding data privacy and information security

Opening any email on my work computer is safe

**46%**

Percentage who say they have ever done the following

**23%**

Sent or received an important or confidential work file via email without password protection

**18%**

Downloaded software onto your work computer that was not approved by your IT department

**15%**

Shared your network password with a work colleague

Source: Willis Towers Watson survey of 2,073 employees in the U.S., conducted March 2017

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bersecure groups. Do you want to be the one who lowers the score for your group?

Another example is to have a "cybersecurity moment" at the beginning of each team meeting where the group briefly talks about a way to be secure or discusses a recent incident—to raise awareness and promote cybersecurity behaviors.

We have found it's also crucial that each team has a cybersecurity leader who brings and shares skills and ideas back to the rest of the team.

◆ Measurement and accountability: Best practices need to be built into the regular daily work processes, not just be afterthoughts. Success stories, such as those emerging from group activities, should be highlighted, publicized and encouraged.

As is often said, "if you cannot measure it, you cannot manage it." There need to be ways to measure the organization's cybersecurity level—and how it is changing over time. Cybersafety effectiveness needs to be a valued part of everyone's skill set and incorporated explicitly into performance and bonus reviews.

For instance, employees who repeatedly fail a phishing test can be disciplined or even terminated. Nothing changes behavior faster than rewards and consequences.

In the end, it's crucial that support and enthusiasm for increasing cybersecurity be visible at every level of the organization, from top executives and middle management to the individual. It needs to be integrated into how employees are trained, managed and rewarded. It needs to be a way of life.

**Dr. Madnick is a professor of information technologies, MIT Sloan School of Management, and a professor of engineering systems, MIT School of Engineering. He can be reached at reports@wsj.com.**

# A Cybersecurity Pioneer Looks Back—and Ahead

Andreas Lüning has been warning about the dangers of computer viruses for three decades

BY CHRIS KORNELIS

threats he sees coming. Edited excerpts follow:

**WSJ:** When did you first encounter a computer virus?

**MR. LÜNING:** It was in 1987. At the time there were two different German countries. There was no internet. Every computer user had a collection of floppy disks sorted in some plastic box near their computer.

To me, that is pretty strong evidence that people are generally unaware of the dangers that they expose themselves, and their organizations, to on a regular basis.

So, how do we go about creating a cybersafe culture? What are the key elements? My colleague, Dr. Keri

partner, Kai Figge, found out about this virus and my small program, the idea was born to create real software that could be used to detect and delete viruses. We called it the AntiVirusKit, and it came out late summer 1987.

**WSJ:** Since computers at that time weren't connected, what was motivating the person who created the virus?

**MR. LÜNING:** The idea of the programmer was just to find out how far he could go and have something that influenced computers. I don't think there was any criminal intent behind it like today.

At the same time as the Atari ST, there was another gaming system called the Commodore Amiga. Some of the viruses would start flickering the screen or start crashing the computer. From my perspective now, many of these viruses were written just to show each other, fans of the systems, that the other system was bad. So,

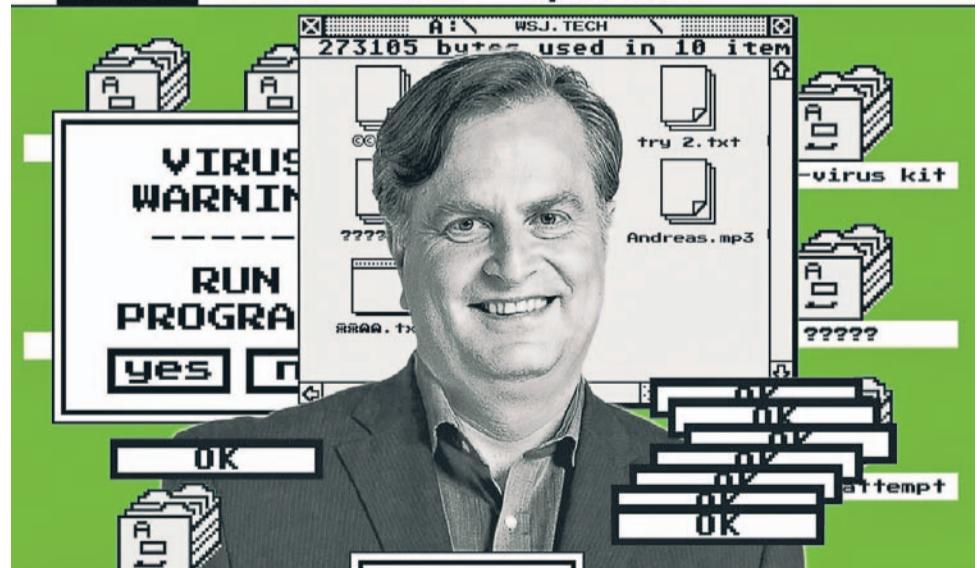
the Atari fans wrote viruses to compromise the Amiga, and Amiga fans tried to compromise and crash Atari ST.

I had read about computer viruses on a more theoretical level, but finding one on my own system made me feel uncomfortable. There was something going on and it wasn't [in my control].

I wrote a program for detecting the virus code on a disk and restoring the original content. As soon as my

data or tries to accumulate money or even processing time for cryptocurrencies, you won't see this virus on your computer. There is no ambulance car driving from left to right. There is no siren coming out of the speakers. They will work in the background and do everything to keep what they do in the background. From the vision perspective, you have no chance to see if your computer is affected by something.

**Dr. Madnick is a professor of information technologies, MIT Sloan School of Management, and a professor of engineering systems, MIT School of Engineering. He can be reached at reports@wsj.com.**



Andreas Lüning | You don't have to have deep technical understanding for building up malware.' SELMAN DESIGN

**WSJ:** When did the computer viruses go from being silly to dangerous?

**MR. LÜNING:** It was in the late '90s. There was the first ransomware. There was also a computer virus named Love Letter that was attached to emails and the subject said something like: Love Letter For You (ILOVEYOU). And everybody opens it and starts the script and it overrides files, like JPEGs, with garbage. So, if you had some JPEGs on your computer, they were lost.

**WSJ:** What are the biggest threats that you see coming?

**MR. LÜNING:** Today, criminal-minded people don't need to be hackers. They can exploit things on the dark net and find ready-to-use, clickable things for creating ransomware. You don't have to have deep technical understanding for building up malware nowadays.

**WSJ:** What does the public still not understand about viruses and cybersecurity?

**MR. LÜNING:** The speed. People can't see or get an awareness of what computers can do in milliseconds.

If you get a good computer virus that tries to steal

data or tries to accumulate money or even processing time for cryptocurrencies, you won't see this virus on your computer. There is no ambulance car driving from left to right. There is no siren coming out of the speakers. They will work in the background and do everything to keep what they do in the background. From the vision perspective, you have no chance to see if your computer is affected by something.

**Mr. Kornelis is a writer in Seattle. He can be reached at reports@wsj.com.**

## JOURNAL REPORT | CYBERSECURITY

# Software Bugs Have a Bounty on Their Heads

An increasing number of companies are paying cash rewards for anyone who can find flaws in their software

BY ROBERT MCMILLAN

PROGRAMMERS KNOW that it's nearly impossible to write complex software without making a mistake. While most software glitches are merely annoying, serious security bugs can give hackers a back door into any program.

But how to find the bugs? Lately a growing list of companies are paying cash rewards to outsiders who can find them. It's a strategy that can be a great help in keeping companies safe—but it also can expose them to greater danger if it isn't done the right way.

Netscape Communications Corp. was one of the first to take the bug-bounty approach. Back in the mid-1990s, it offered T-shirts, coffee mugs and cash rewards to hackers—or researchers, as they're sometimes called—who found bugs in its Navigator web browser. Today, there are several thousand companies that give hackers a way—sometimes paid—to report their bugs, according to **HackerOne Inc.**, a firm that administers bug-bounty programs for many of these companies.

The market for bug-bounty services is small in financial terms—likely totaling less than \$100 million a year—but it is growing quickly, with

away you're probably going to have mishaps," he says.

#### Plenty of pitfalls

There are several ways companies can go wrong by rushing into bug-bounty programs, says Katie Moussouris, chief executive of **Luta Security Inc.**, which advises companies on bounties. One mistake is not having systems set up to ensure that reported bugs are triaged and fixed. That can create ill will among bug finders, and the longer bugs go unfixed after being exposed, the greater the chance that they will become widely known, exposing the company to cyberattacks.

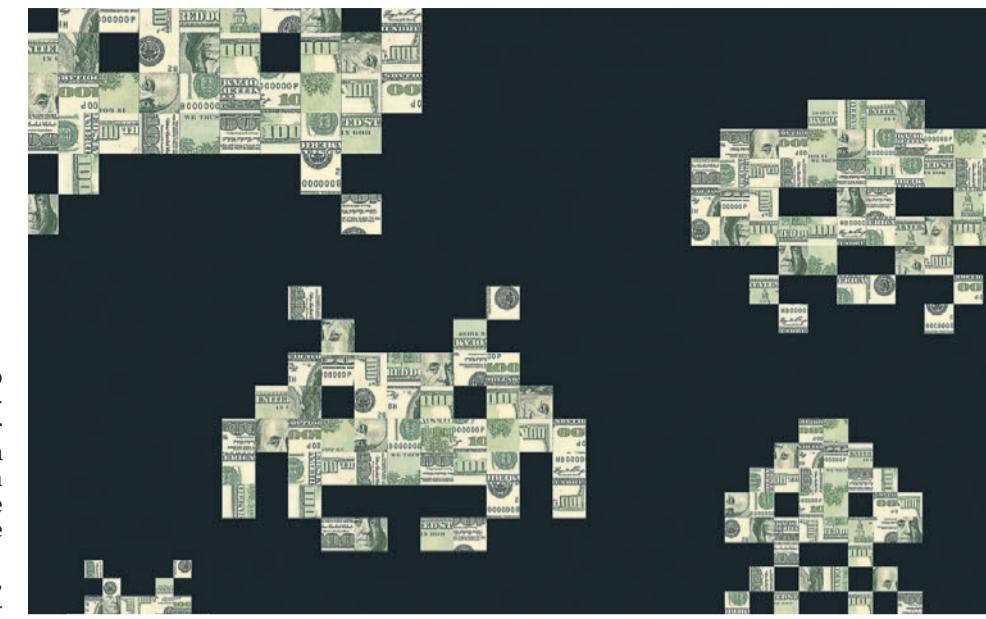
Another mistake is setting bug bounties too high, which can make IT staffers feel underpaid and make hiring new staff harder—after all, why not simply earn a living off bounties? And companies can go wrong if they don't set appropriate legal parameters for

hackers, flexible enough so that hackers don't feel in danger of being prosecuted for hunting bugs, but tough enough to discourage them from exceeding their mandate and trying to profit from the weaknesses they discover.

Often, Ms. Moussouris says, companies are better off hiring a company that specializes in finding bugs—known as a penetration testing firm—to examine its networks for vulnerabilities under the safety umbrella of a nondisclosure agreement.

#### Things go wrong

One prominent example of how not to run a bug-bounty program: Last year, the ride-sharing company Uber Inc. was called before Congress to explain why it had paid an unnamed hacker or hackers \$100,000 via its bug-bounty program to destroy sensitive information they had downloaded that was connected to



SELMAN DESIGN

57 million Uber accounts.

That payout was 10 times the maximum advertised bug reward available under Uber's bug-bounty program at the time, and it sent a dangerous message to hackers looking to find flaws in Uber's systems, says Ms. Moussouris. The message? "If you break the rules and download all of our customers' data, we'll pay 10 times the price," she says.

In his testimony before Congress last year, Uber's chief information security officer, John Flynn, acknowledged that the \$100,000 payoff was a mistake. Last month, Uber re-

vised its bug-bounty program so that it more clearly spells out what hackers can and cannot do. "We don't want people to make extortionist threats or abuse the program in any way," Mr. Flynn said in an interview for this article.

But legal restraints can present their own problems, says Amit Alezari, a University of California, Berkeley doctoral candidate who has written about bug bounties. Some companies publish contradictory and poorly written legal terms that discourage security researchers from participating in their program, Ms. Alezari

says—by saying in part, for example, that hacking the company's products is not permitted. And most programs don't include legal protections for hackers as they do their security work, she says. "While they're inviting hackers to test their systems, they're not providing them with the adequate legal incentives to protect them," she says.

**Mr. McMillan** is a Wall Street Journal reporter in San Francisco. He can be reached at [robert.mcmillan@wsj.com](mailto:robert.mcmillan@wsj.com).



GM cybersecurity executive Jeff Massimilla advocates a 'walk before you run' strategy.

companies like **HackerOne**, **Bugcrowd Inc.** and **Synack Inc.** vying to set up programs, says Craig Lawson, an analyst with technology-industry research firm Gartner Inc. Recently the clients for bounty services have spread outside of Silicon Valley. Over the past two years, **General Motors Co.** and the U.S. Defense Department, for example, have begun testing the waters.

#### Moving slowly

When GM began its program in early 2016, the company didn't immediately pay cash for bugs, avoiding some potential pitfalls. Companies that pay bug bounties say it's easy to make a misstep with payments—either overpaying, or offending hackers by offering too little, or getting into disputes over whether something a hacker found merits a payment at all. "We didn't want to get a bad image with the research community and we really wanted to act with them in an appropriate way," says Jeff Massimilla, a GM cybersecurity executive.

GM's first step was to give hackers a way to report the bugs they were finding directly to the company's security team. Having that reporting system in place sent the message to hackers that the company was serious about security, says Mr. Massimilla. Two years later, General Motors is beginning to pay hackers for information on bugs, and the company considers its public bug-finding efforts a success. The program has helped the company fix more than 700 bugs so far, submitted by more than 500 hackers world-wide.

GM's bug-bounty initiative is available to a select group of researchers that GM has built relationships with over the past two years. Throughout the program, the company made a conscious decision to move gradually, Mr. Massimilla says. He calls it a "walk before you run" strategy. "If you try to start running right

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## JOURNAL REPORT | CYBERSECURITY

# It's a Good Time to Find a Cybersecurity Job

There is a big gap between demand and supply. No degree required.

BY JOHN SIMONS

So, you want a job in cybersecurity? Now is a good time to be looking.

Thousands of information-security jobs are going unfilled as the industry in the U.S. struggles with a shortage of properly trained professionals. The current demand for cybersecurity workers is outpacing supply by so much that by 2022, North America will have 265,000 more data-security jobs than skilled workers, a 2017 report by consultants Frost & Sullivan projected.

This mismatch is surprising given the relatively high pay the field offers. Median starting salary for a data-security analyst is \$121,000, according to a survey by the staffing and risk-consulting firm Robert Half International Inc. For an information-systems security manager, it's \$137,000.

## Training can wait

An important takeaway for potential job seekers who want to apply but think they lack the credentials: Companies are willing to provide training and educational assistance to people with the right mix of ambition and talent.

Indeed, degrees aren't required to get a foot in the door, insiders say.

What matters more is whether candidates demonstrate knowledge of computer networks, programming and critical thinking, says Ryan Sutton, a technology recruiter and Northeast U.S. district president for Robert Half. "There are just not enough

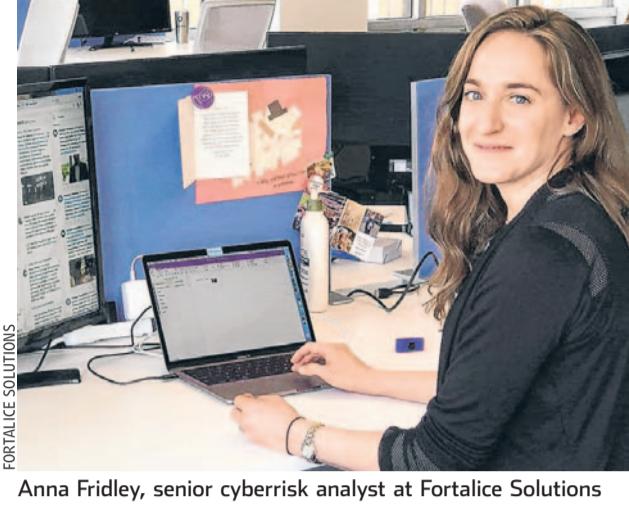
certified professionals out there to fulfill the needs," Mr. Sutton says.

Given the cybersecurity talent shortage, hiring managers suggest that college grads apply for roles in cybersecurity and, once hired, ask their new employer to help fund their pursuit of certificates. Such certifications tend to be necessary to get ahead in the field.

A poll of 250 senior technology decision makers conducted by Booz Allen Hamilton in March and April found that about half offer to pay for professional certifications as incentives for new cybersecurity hires. And more than a third offer to pay for education at colleges or boot camps.

The Computing Technology Industry Association, or CompTIA, has three information-security certificates that are widely recognized by industry hiring managers. The association offers a general course on its website for would-be cybersecurity analysts that covers network security, compliance, threats and vulnerabilities, security for applications, data and host computers, identity management, and cryptography. It also offers a certificate for advanced security practitioners, and a third for intermediate-level professionals who are tasked with running penetration tests on computer networks.

More advanced credentials include the Certified Information Systems Security Professional, or CISSP, which is administered by the International Information System Security Certification Consortium, a nonprofit that



Anna Fridley, senior cyberrisk analyst at Fortalice Solutions

specializes in training and accreditation. The certification is endorsed by the U.S. Defense Department and the National Security Agency. It requires five years of relevant work experience and a passing grade on a six-hour exam. The certification must be renewed every three years.

A variety of training providers offer online and classroom test preparation for all of these certifications.

## Online help

To help tech-savvy types beef up their cybersecurity skills, the U.S. Department of Homeland Security has created an online resource where job seekers can find information about career training and jobs, at [nics.us-cert.gov](http://nics.us-cert.gov). Organizations such as the nonprofit group NPower help veterans and minorities from underserved communities with technology training and job-search assistance.

Even amid the current shortage of qualified candidates, however, certifications aren't everything. Daniel Miessler, director of client advisory services at IOActive Inc., a Seattle-based cybersecurity services company, says job candidates who get his attention often demonstrate an ability to think like malicious hackers. They also tend to have deep knowledge in programming, networks or system administration. And his ideal interviewee can show examples of their work online.

"Instead of saying, 'I'm good at [the programming language] Python,' say, 'Check this out. I made it with Python,'" Mr. Miessler says. "If you're making claims without showing a project, it's assumed you have empty skills."

Building employee skills is a priority at FireEye Inc., in Milpitas, Calif. The enterprise cybersecurity firm offers training and educational pro-

## Making the Move

What cybersecurity professionals value most in their background

Did you start your career as an IT professional Yes 77% No 23%

As a former IT professional, which of the following were most helpful when you moved on to a career as a cybersecurity professional?

Networking and/or other infrastructure knowledge and skills	57%
IT operations knowledge and skills	52%
Gaining experience with different types of tech and/or apps	51%
Collaboration between IT and business units*	31%
An understanding of how IT organizations work	30%
Knowledge and skills around supporting end-users	25%
Programming knowledge and skills	22%
Working with IT product and services vendors	13%

Note: three responses accepted \*On business initiatives, processes and strategic planning  
Source: Survey by Enterprise Strategy Group and the Information Systems Security Association of 343 cybersecurity professionals and ISSA members conducted in August and September 2017 THE WALL STREET JOURNAL.

grams for its 3,000 employees, including in-person and online courses. Lectures and seminars address technical and soft skills such as leadership and emotional intelligence. Financial assistance for outside training is available as well.

While credentials and other skills catch recruiters' eyes, personal networking also can be critical.

Anna Fridley, a 36-year-old senior cyberrisk analyst who spends her days hunting hackers at cybersecurity consultancy **Fortalice Solutions LLC**, got her first big break in the industry, she says, thanks to a woman in her knitting circle.

A decade ago—with an undergraduate math degree from Wellesley College and a mas-

ter's in library science from the University of Texas—she was struggling to find a job.

Ms. Fridley eventually went back to school and got a master's degree in high-tech crime investigation from George Washington University.

But what really helped her career in cybersecurity, she says, was a friend who shared her love of knitting and happened to work in the field.

"I asked her to meet for coffee," Ms. Fridley says. "She later said, 'My office has an opening. Come take our test and submit your resume.'"

**Mr. Simons is a reporter for The Wall Street Journal in New York. He can be reached at [john.simons@wsj.com](mailto:john.simons@wsj.com).**

# Are Huawei and ZTE a Real Threat?

Cybersecurity experts say the U.S. has some reason to worry

BY STU WOO

THE U.S. government's remarkable campaign against **Huawei Technologies Co.** and **ZTE Corp.**, which has involved a series of actions aimed at limiting the Chinese manufacturers' business in the U.S. and elsewhere, is rooted in a cybersecurity fear.

Huawei and ZTE are the world's No. 1 and No. 4 makers of telecommunications equipment, such as the cellular-tower electronics that wireless carriers need. Washington worries that the Chinese government could order the companies to tap the products they make to spy, disable communications or launch other cyberattacks. Among other steps, the Trump administration has banned U.S. suppliers from selling components to ZTE, a move that could shut down the company, though U.S. and Chinese officials are negotiating a reprieve for ZTE.

Huawei and ZTE say the concerns about them are unfounded. But is the threat real?

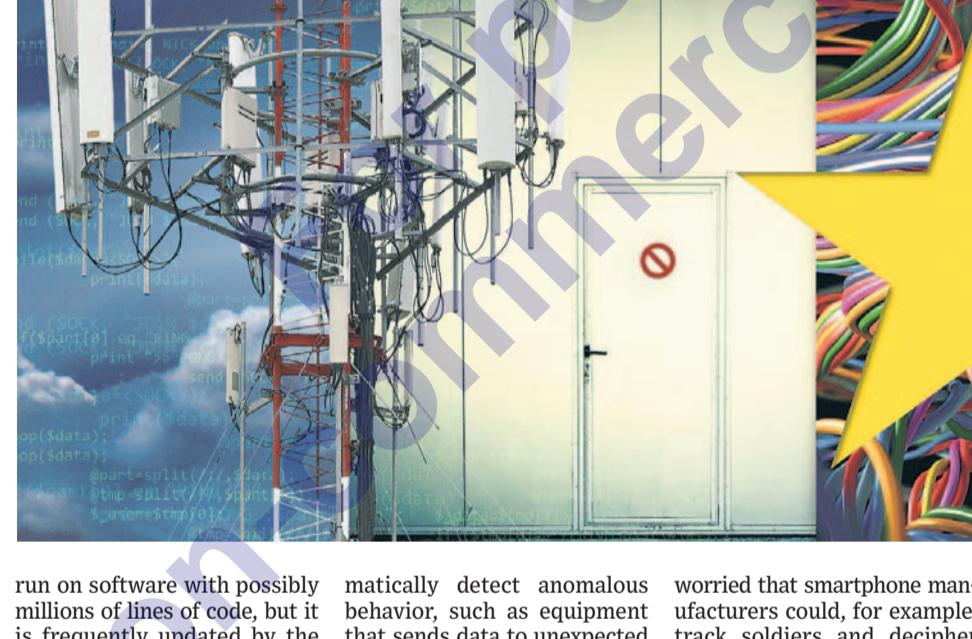
Telecommunications cybersecurity experts say yes—with caveats. A manufacturer could easily disable telecom equipment that it made, but using the equipment to spy would be difficult. And any incursion would be quickly detected and would work only once.

## How systems work

To better understand the risks, and their limitations, first consider how mobile-phone calls work. Suppose someone in Seattle uses a cell phone to call someone in Miami. After the caller dials, the phone connects to a nearby cellular tower. That tower is connected to wires, which are connected to a giant network of wires across America that zap the call to a cellular tower near the person in Miami. Then the tower will beam the call to that person's phone.

Huawei and ZTE, along with Finland's **Nokia Corp.**, and Sweden's **Ericsson AB**, are four major manufacturers of cellular-tower equipment. Typically, antennas on the tower are connected by wires to electronics in a shed at the tower's base. Those electronics are basically computers with complex software that zap a call (or Google search or whatever people do on their mobile phones that use the internet) to the correct destination.

Not only do the electronics



## THE SMART WAY TO SET UP SECURITY QUESTIONS

BY KATIE BINDLEY

A goldfish named Jerry. No hacker is ever going to get past the security-question armor that is your first and only pet's name, right?

Wrong.

Websites often use personal questions to reset your account if you forget your password, or as an additional layer of security to verify that it is really you logging in. What many people may not realize, however, is that much of the information being requested either isn't so private or can be easily guessed. What's more, security questions and answers are often among the information compromised in security breaches, because many websites store them in plain text.

"In many of the data breaches that I have seen where a password might have been cryptographically hashed, [meaning a representation of the password is stored, but not the password itself], very often security questions and answers are not," says Troy Hunt, an independent security researcher and creator of [haveibeenpwned.com](http://haveibeenpwned.com), a website that lets users see if their accounts have been affected by a data breach.

It can be years before websites even know they've been hacked, says Mr. Hunt. And since different websites tend to ask the same types of security questions, you may be facing a real problem if your answer gets out.

"You're not going to remember all the places you've used your dog's name," Mr. Hunt says.

If you're wondering what is so terrible about security questions asking for your mother's maiden name or where you were born, consider this: How many places might a piece of information like the city in which you were born or a family name be floating around online right now? Facebook?

Twitter? Your work bio?

Even if the answer to a verification prompt or a security question isn't publicly available, it is still often one of only so many likely answers. For example, if asked to identify their favorite color, how many people will go the extra mile and say cerulean rather than blue? Unless they are hard-core "The Devil Wears Prada" fans, it's likely the latter. Your first car? Not much harder for a bad actor to crack. "It's probably not going to be Ferrari or Porsche," says Mr. Hunt.

In its 2017 digital-identity guidelines, the National Institute of Standards and Technology, which is part of the U.S. Commerce Department, recommended that organizations not verify the identity of customers by prompting them to choose memorized secrets matching specific types of information (such as, "What was the name of your first pet?").

Perhaps with security in mind, some websites have come up with security questions that are more involved and harder to answer, such as what year did you meet your spouse? But security professionals say that doesn't actually do much for users, besides tax their brains to come up with harder-to-remember answers. "There are no industry standards that I've ever seen that recommend making [the questions] more complicated," says security researcher Kenneth White. If anything, "you're revealing more personal information," he says, which could make you even more vulnerable should the information get out.

What about making up fake answers to security questions? The problem with that strategy is people tend to use the same fake answer over and over again on different sites, or they pick something a lot of other people went with, too, Mr. White says. For example, when asked to name their favorite movie, many people just go with "movie," he says.

There is, however, at least one way to make knowledge-based authentications safer, Mr. White says. Treat security questions just like regular passwords, and use a password manager to generate unique, secure answers such as a string of phrases and numbers that you likely wouldn't come up with on your own.

"My answer to what was your favorite movie or first school is a long text string of gibberish," says Mr. White.

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run on software with possibly millions of lines of code, but it is frequently updated by the manufacturer remotely, experts say. That makes it nearly impossible for a wireless carrier or a government to detect whether there is a "back door" that could allow the manufacturer to remotely switch off a tower's electronics, or send data to somewhere it shouldn't go.

"When you're dealing with millions of lines of code, there's always going to be a vulnerability," says Darien Huss, a researcher at Sunnyvale, Calif.-based cybersecurity firm **Juniper Networks Inc.**, which is based in Sunnyvale, Calif., and competes with Huawei and ZTE in the telecommunications market.

Inserting a back door that would allow a manufacturer to remotely shut off cellular-tower electronics, or all the related equipment, would be easy—and potentially devastating. Studies show it takes about five days to recover from an infrastructure cyberattack, says Simon Church, a general manager at Denver-based cybersecurity firm **Optiv Security Inc.** and a former security executive at Vodafone Group PLC, the British-based wireless carrier.

"The doomsday scenario is turning off network communications," Mr. Church says. "You turn off traffic lights—that's five days. You turn off the subway system—that's five days."

It would be much more difficult for a telecom-equipment manufacturer to spy. Most wireless carriers use sophisticated software that can automatically

detect anomalous behavior, such as equipment that sends data to unexpected places. In addition, some organizations, such as the U.S. military, heavily encrypt their communications, so anyone who intercepts that data might find it indecipherable anyway.

## Insider needed

"Getting data would be nearly impossible without a cooperating insider," says David Mihelcic, a former Defense Department cybersecurity expert who is now federal chief technology and strategy officer for **Juniper Networks Inc.**

Smartphone manufacturers own and frequently update the core software on their devices. "Could they have the capability that's tapping into a call or recording a call?" says Kevin Riley, chief technology officer of **Ribbon Communications Inc.**, a telecommunications-focused cybersecurity firm based in Westford, Mass. "Absolutely. They own that software."

## Evasive detection

While a wireless carrier could easily detect whether a smartphone manufacturer is tapping every call and sending data to somewhere it shouldn't go, it would be much harder to detect if the manufacturer only occasionally tapped a call, Mr. Riley says.

The other cybersecurity threat that mobile phones present is their manufacturer could turn them into weapons that could cripple a cellular network. As Mr. Riley says, "You can weaponize a handset and turn it into a bot that generates a lot of traffic, so the cellular-tower equipment becomes massively congested."

**Mr. Woo is a reporter for The Wall Street Journal in London. He can be reached at [stu.woo@wsj.com](mailto:stu.woo@wsj.com).**

# Blockchain Could Be the Security Answer. Maybe.

The technology has the potential to solve a lot of cybersecurity problems

BY NIR KSHETRI

ONE OF THE most promising cybersecurity tools that exists today is something many people have heard about but few fully understand: blockchain technology.

Commonly associated with bitcoin and other cryptocurrencies, blockchain has the potential to solve many cybersecurity problems and provide a built-in defense against cyberattacks. Before that can happen, however, it has to overcome some serious limitations.

But first, what is blockchain, exactly? Put simply, blockchain is a digital record of transactions that is stored on thousands or even millions of computers around the internet. Because blockchain's distributed ledger network involves no centralized control over data, it can't easily be tampered with, and once a record is posted, it can't be changed.

To make sure only authorized users have access to the information, blockchain systems use cryptography-based digital signatures to verify identities. Users sign transactions with a "private key," which is generated when a

exchanged and stored on insecure systems. The problems with passwords are well known: If they are too weak, they can be compromised; if they are strong, they can be hard to remember. We also have too many of them, stored in too many different places.

Weak passwords pose a particular problem for the rapidly growing Internet of Things, where connected devices come shipped with simple default passwords that people either don't—or can't—change.

With IoT security a growing concern, a group of technology and financial companies—including **Cisco Systems Inc.**, appliance maker Bosch, Bank of New York Mellon, cybersecurity company Gemalto and three blockchain startups—last year began working together to create a blockchain-based IoT security standard. They developed a protocol that allows users to bind together multiple kinds of weaker identities—such as serial numbers, QR codes and UPCs—into stronger cryptographic identities.

The widespread use of blockchain would allow device makers to securely distribute updates and patches, even if a device changes ownership (since all that information is stored in the blockchain). Because each device has a cryptographically protected identity, manufacturers can be sure they're communicating with the right device.

## Personal Data

Improving the safety of personal data online is another area where blockchain shows promise. Today, third parties such as health-care providers and financial institutions collect and store personal information, and consumers have little control over who can access it or with whom it is shared.

With blockchain, a patient's entire medical record is stored in a ledger and encrypted with the patient's private key. Changes in the patient's condition are communicated to the ledger with the patient's authorization and securely shared with various providers.

The ledger includes an audit trail and data are timestamped, allowing the patient to know who made what changes and when. Health-care providers can see the patient's data with his or her permission, but they can't store it.

Another weakness associated with centralized identity-management systems is data manipulation, and here again, blockchain could provide an answer. One example that has received attention from the blockchain world is the problem developing countries have with land-title fraud, where corrupt officials alter property records to benefit themselves or in exchange for bribes.

With blockchain, when a property changes ownership, the technology can register time, location, price, parties involved and other relevant information. Government agencies, law firms and accounting firms can authenticate the title information as it is entered, and government agencies, courts and law-enforcement agencies can inspect documents to enforce compliance with know-your-customer and anti-money-laundering policies. Blockchain also prevents illegitimate access to data, and the owner retains ultimate control.

## Hurdles to be cleared

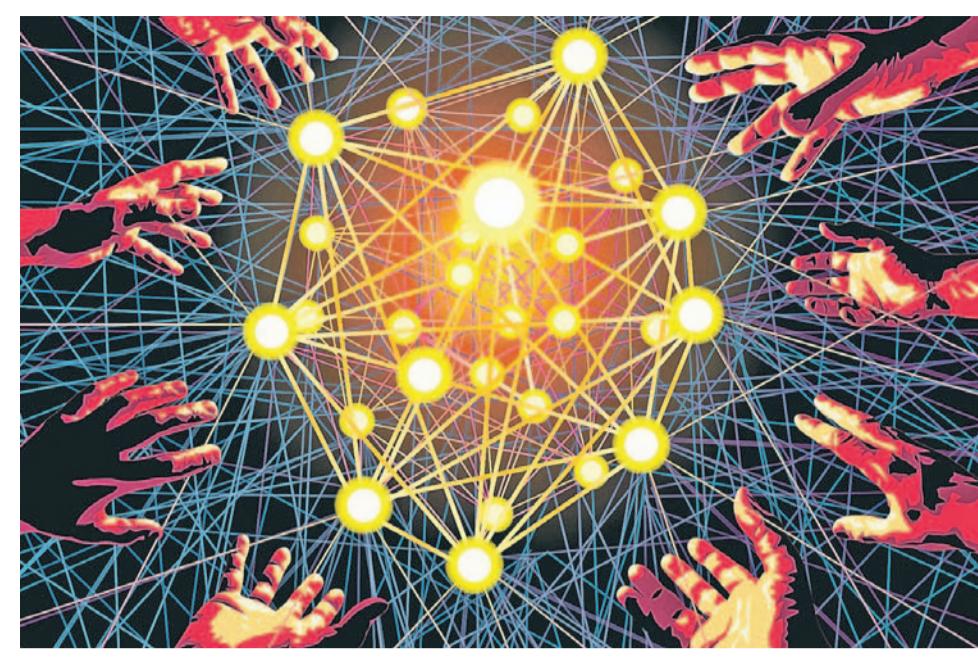
Still, before blockchain can be deployed widely as a cybersecurity tool, several challenges need to be addressed.

One concern is that most blockchain networks run the same code, so if a hacker finds a vulnerability, the entire system could be at risk. (To be sure, few "mission-critical bugs" have been found so far.)

Ensuring that data is accurate when it is entered into the blockchain ledger also presents a challenge. This can be especially problematic in the case of land registries in developing countries, where it can be difficult, even absent corruption, to determine the legitimate owner of a piece of land in the first place.

Companies that make cheap IoT devices, meanwhile, operate on small profit margins and have little incentive to incorporate blockchain in their devices. Most IoT devices also have low memory and processing power, and even lightweight blockchain technologies may require more than most IoT devices can handle.

To overcome these limitations, blockchain innovators need to increase research efforts to make it feasible to connect billions of IoT devices, while technology companies need to develop user-friendly security applications. Pressure from regulators and consum-



DANIEL HERZBERG

ers is critical. If it is clear that their products won't sell unless they're more secure, small manufacturers will step up.

When it comes to land titles and others assets, blockchain

projects are more likely to succeed if the governments or others who implement the system are seen as fair and impartial and the process itself is transparent and participatory.

Finally, key decision makers need to have a clearer understanding of the benefits of blockchain in cybersecurity—and communicate them to consumers and organizations.

## An additional two billion people will need housing by 2030.

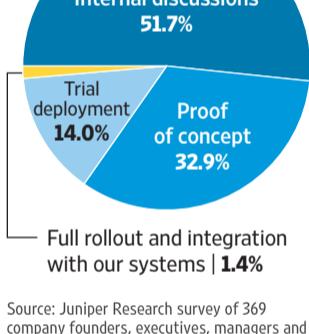
Over that same time period, the global middle class will increase to nearly five billion people. Add to that the fact that interest rates are always in motion and it's no wonder businesses and individuals turn to CME Group to help manage their risks and navigate fluctuating borrowing costs. That, in turn, enables lenders and property developers to keep pace with population growth. This is how the housing industry can find solutions that make shelter more accessible around the world. This is how the world advances. Learn more at [cme.com/finance](http://cme.com/finance).

 CME Group



## Blockchain at Work

Among companies surveyed last June, 39% said they were considering deploying or in the process of deploying blockchain technology. Those 39% were at the following stages of development:



Source: Juniper Research survey of 369 company founders, executives, managers and IT leaders, conducted in June 2017

THE WALL STREET JOURNAL.

user creates an account. The private key, typically a very long and random alphanumeric code that is next to impossible for hackers to guess, is known only to the person who controls the account.

Using complicated algorithms, blockchain systems also create "public keys" from private keys to make it possible to share information. Public keys are known to the public. For instance, a bitcoin wallet address is a public key and others can send bitcoin payments to that address. However, only the person who has the private key can spend the bitcoin in the account.

Blockchain's key features—decentralization, immutability and cryptography-based authentication—are what make it such a powerful cybersecurity tool. A user's identity can't be forged because only he or she has the private-key proof of identity. Third parties can be given limited access to records, while blockchain's built-in audit trail means there is complete documentation of the creation, modification and deletion of records.

One of the problems blockchain has the potential to solve is the way identity and access management is handled online. Identity and access management involves making sure that information on computer networks about an individual or an asset is accurate—that I am who I say I am, or the file is really what it claims to be. It also describes the various actions users are authorized to perform or the information they are allowed to access.

Current identity-management techniques rely mainly on passwords, which are often

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# Encryption Is Necessary. It's Also Tricky

Organizations that enhance security with encryption find that it requires a lot of trade-offs

BY SARA CASTELLANOS

AS THREATS from hackers and online thieves grow apace, more companies are seeking refuge in encryption—the science of turning messages and data into gibberish for anyone who doesn't have a key.

Once limited to the most secret of secrets, encryption increasingly is being used to secure websites, protect confidential data stored in the cloud and guard credit-card numbers as they travel over financial networks.

Locking data away with encryption keeps it safe, but it comes with trade-offs. For one thing, companies can't easily perform analysis or machine learning on encrypted data. So at a time when artificial intelligence and real-time data analysis is crucial for competitive advantage, executives must decide what to encrypt and for how long. In addition, turning on encryption results in increased financial costs and performance impacts.

## Public and private

Classic encryption techniques use a single key shared by both the writer and the reader, and that method is still in use today. In the 1970s, though, mathematicians devised a more sophisticated method that was made easier with computers, called public key cryptography. This scheme allows people to exchange en-

crypted messages without sharing a secret key first. A combination of both methods now underlies encryption for communication over the internet.

Website encryption has become widespread as Google and makers of other web browsers push sites to adopt encryption-based security.

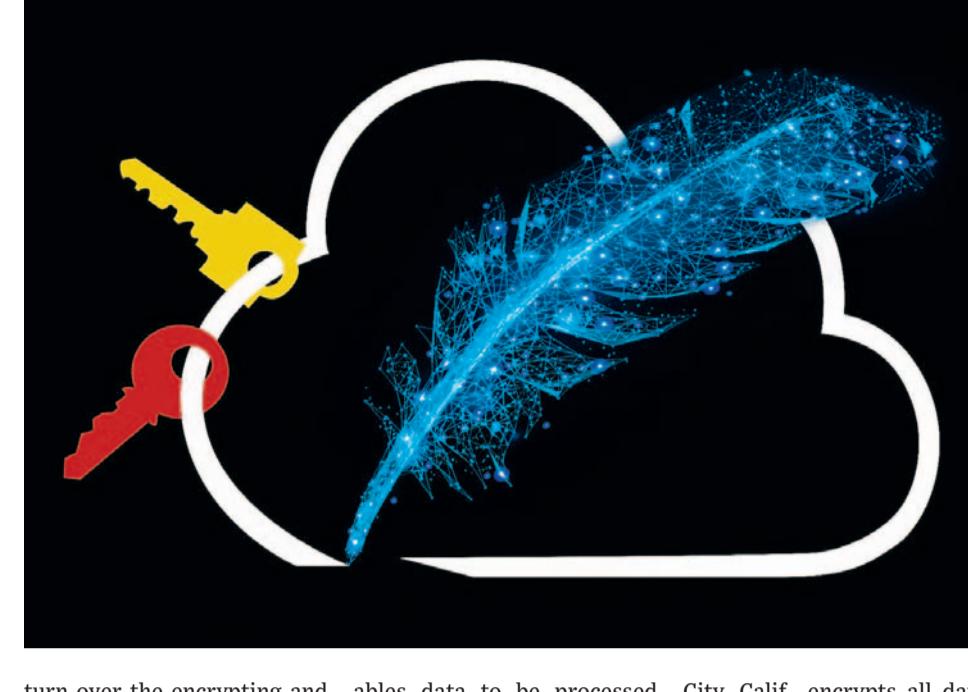
When it comes to corporate data, however, encryption is still "pretty limited," says Avivah Litan, cybersecurity analyst at Gartner Inc. Only about a third of all sensitive corporate data stored in cloud-based applications is encrypted, according to a 2016 survey by security company Gemalto Inc. of about 3,500 IT staff world-wide.

## No silver bullet

The reasons for this are varied. Like everything else when it comes to cybersecurity, encryption isn't a silver bullet. Hackers can gain access to keys, making encryption worthless. And, before encrypted data can be searched or analyzed, it has to be decrypted first, requiring a company's computers to work harder than usual.

When encryption is on by default, applications could be as much as 7% slower, which results in increased time and money spent on processing costs, says Rohan Kumar, corporate vice president of Azure Data Group, a division of Microsoft Corp.'s cloud service.

To minimize the effect on time and cost, a company can



ANASTASIJA VASILJEVIĆ

turn over the encrypting and decrypting of data to dedicated hardware so that the core processors can operate at full capacity for other purposes.

Despite performance impacts, encryption is still turned on by default in major components of the services offered by Azure, because so much is at stake for customers.

"Overall, the policy we've taken is that security trumps everything else," Mr. Kumar says.

Microsoft and other companies are experimenting with ways to more efficiently analyze encrypted data and allow AI algorithms to do their work on it.

New York-based startup Inpher Inc., for example, has developed technology that en-

ables data to be processed while it remains encrypted, allowing machine learning and analytics to be run without ever exposing the data, says co-founder and Chief Executive Jordan Brandt.

Analyzing encrypted information without revealing any secret information means that organizations such as financial-services and health-care companies can share confidential data to gather more useful insights on larger data sets, Mr. Brandt says.

## Optional layer

Some cloud-services providers have developed new encryption models designed to give business customers more options when it comes to how their data is encrypted. Box Inc., a cloud content manager with headquarters in Redwood

City, Calif., encrypts all data with its own encryption keys and gives customers the ability to encrypt data with their own encryption keys, adding another layer of security. Both keys are required to decrypt the data.

"We had to find ways to make it so that our customers didn't necessarily have to fully trust us," says Joel de la Garza, formerly security officer at Box and now an operating partner at Andreessen Horowitz, the venture-capital firm based in Menlo Park, Calif.

Like most cloud-service providers, Box needs to balance demands for security against ease of use of its products. The company encrypts all sensitive data, such as financial records or personally identifiable information like

Social Security numbers. But encrypting all data, such as folder and file names, isn't practical, says Mr. de la Garza, because the customers want to search and access that data quickly.

"Cryptography is basically a game of 'How can I provide enough security without making my users run away screaming in anger?'" Mr. de la Garza says.

## On- and off-network

At St. Louis-based Emerson Electric Co.'s Automation Solutions division, encryption is also used in communications that flow to and from critical infrastructure systems, supplied to manufacturers, which can place a burden on the bandwidth of the customers. To lessen the impact on the systems of the customer, encryption is applied based on the risk level of the transmission.

Data that remains on the secure network, for example, isn't encrypted. Data is encrypted in cases where it traverses the internet to send control commands and other important information to geographically distributed facilities.

"You'd encrypt to make sure that the command that's being sent is the data you want to send," says Peter Zornio, chief technology officer of Emerson Automation Solutions, the division that supports critical infrastructure customers.

**Ms. Castellanos is a reporter for The Wall Street Journal in New York. She can be reached at [sara.castellanos@wsj.com](mailto:sara.castellanos@wsj.com).**

# Companies Struggle to Stay On Top of Security Patches

BY ADAM JANOFSKY

SEVERAL COMPANIES have suffered more than \$100 million in lost revenue over the past year due to a common and frequently overlooked cybersecurity issue: outdated software.

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Sophisticated hacks and targeted attacks such as the WannaCry attack in May 2017, the NotPetya attack one month later and the breach reported by credit-monitoring firm Equifax Inc. in September highlight how difficult it can be for corporations to stay on top of security updates.

And as companies incorporate countless sensors, appliances and other internet-connected devices in their networks, the patching problem is only going to get worse.

"It takes our customers months to get our patches through their ecosystem. Why? It's hard," said Oracle Corp. Co-Chief Executive Mark Hurd at the company's Cloud-World event in February. "They sit on different operating systems and different servers, there are different versions—I can go on and on."

## 'A big deal'

Companies haven't made significant investments in information technology in recent years and are using outdated computers and applications, Mr. Hurd said, describing the problem as "a big deal" that few take seriously. Cybersecurity experts say good patching programs require companies to invest heavily in monitoring systems and new computers and sometimes to painstakingly remove devices from the open internet. Even then, one mistake can have devastating consequences.

That was apparent last May when the WannaCry ransomware hit dozens of health-care organizations across England. Some hospitals had to record information using pen and paper and find manual work-arounds for a variety of tasks,

according to a report from the U.K.'s National Audit Office.

The attack spread by exploiting a known vulnerability for which Microsoft Corp. had issued a patch months earlier. Organizations and individuals using out-of-date systems were susceptible to the attack, Microsoft said.

Weeks later, consumer-goods company Reckitt Benckiser Group PLC, pharmaceutical firm Merck & Co. and shipping giant A.P. Moller-Maersk A/S reported losses totaling about \$130 million, \$135 million and \$300 million, respectively, after the NotPetya ransomware made servers and computers unusable, causing delays and lost sales. That attack spread using the same vulnerability as WannaCry.

The defense contractor Raytheon Co. has a team of about five people who manage rollouts of new patches and monitor whether customers are updating computers and servers, says Chief Information Security Officer Jeff Brown. When the team learns of a new patch, they assign a priority level to it—low, medium, high or critical—which sets a time frame for when it must be installed.

"If it's a critical patch and it's a server that's [exposed to] the internet, the time frame for completing that patch can be measured in single-digit hours," says Mr. Brown, adding that there are about three or four critical patches each month. When a time frame ends, the team scans for any unpatched devices and notifies system administrators directly that they need to install the update, he says.

The goal is for about 95% of the devices to be patched within a few days, Mr. Brown says. The remaining 5% usually consists of people on vacation who aren't using their desktops, and servers that can't run the patch because they have a unique configuration or have applications that won't work if the patch is installed.

"You're never going to get to 100% patched—it's a worthy goal, but it's never going to happen," Mr. Brown says.

After the WannaCry and NotPetya attacks, government officials, including former White House homeland security adviser Thomas Bossert, urged companies to update their systems.

At some companies, servers and computers can be taken

offline for an hour for updates without causing harm. But hospitals, power plants and other organizations that rely on constantly running devices have little choice but to run some outdated software, cybersecurity specialists say. In fact, issuing a patch when one becomes available can cause complications for other systems.

"Patching has a risk of breaking things," says Michael Daly, chief technology officer for cybersecurity and special missions at Raytheon. This can be as simple as a font change that makes part of a webpage unavailable, or the use of a different encryption mechanism that causes application failure, he says.

In 2000, Raytheon created a lab to determine whether patches could be installed without creating wider issues. After a patch is released, testers at the lab have about one day to analyze how it will affect applications running on computers and servers. If a patch is particularly critical, the company may push it out without testing it, coming back and making any fixes that come up.

## Connected devices

Another challenge is the sprawling number of devices on corporate networks. In recent years, companies have incorporated connected devices such as thermostats, refrigerators and cameras in the so-called Internet of Things.

Richard Soley, chairman and chief executive of Object Management Group, which develops standards for securing IoT devices, says businesses eventually will find ways to automatically update these devices when it is necessary. But factors such as limited storage capacity, cost and the sheer number of devices mean that manufacturers now approach security as an afterthought.

"When it's a \$15 device, who can really blame them?" says Mr. Soley. "Once it's out the door, they don't want to think about it anymore."

Until companies can automate their patching, Mr. Soley suggests they disconnect devices from the internet whenever possible. Otherwise, companies should separate the devices as much as possible from the open internet, he says.

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Alexa,  
Just How  
Secure Are  
You?



BY MATTHEW KASSEL

YOU MAY THINK of your virtual assistant as a kind of trusty companion, giving out weather forecasts, recipes, news and all sorts of ephemera on request.

But these devices also pose a host of security risks that render users vulnerable to hacks, eavesdropping, data siphoning and other threats that might not be immediately apparent. That danger was highlighted Thursday when Amazon.com Inc. said one of its Echo home speakers mistakenly recorded a private conversation and sent it to someone in the owners' contact list. Amazon, confirming a report by a local television station in Seattle, said the device misunderstood pieces of a conversation as commands.

While there's no way to ensure that such devices as Amazon's Alexa or Google's Home are completely safe, there are steps that can help protect your privacy. Such measures are increasingly important: According to a Gallup poll released in March, some 22% of U.S. adults use voice-activated assistants, a number that is certain to keep rising.

Here are some tips to help keep your device as secure as possible.

## ◆ Never buy secondhand.

While prices can be steep for new devices, it's generally a bad idea to seek out deals on used smart speakers, says Candid Wueest, a cyberthreat researcher at Symantec Corp. The device could easily be manipulated, he says, into a remote eavesdropper on your house.

## ◆ Don't defer to the default settings.

Pay attention to your device's default settings and be conscious of the information you allow it to access. In many cases, you may be unknowingly putting your privacy at risk. For example, connecting your device with your calendar, enabling remote management

from the web or linking a third-party account like a music streaming service can expose you to additional vulnerabilities. Going through this process "might feel a little tedious," says Mr. Wueest. "But you should do it."

## ◆ Use a separate router.

Connect your device with a Wi-Fi router that is different from the one you normally use at home. It will act as a firewall, says Pam Dixon, executive director of the World Privacy Forum. To be sure, many routers carry hidden subscription fees and are hard to install, she says. As an alternative, you can create a guest network with a strong password on your home router—and also use that network for other internet-connected devices such as lightbulbs, door locks or thermostats.

## ◆ Be careful what you say—or hit mute.

Make a habit of checking your voice recordings from time to time to be sure your device isn't picking up more than you think—either through a hardware defect or because you've accidentally activated the microphone, which is triggered by wake words like "Alexa" or "OK, Google." In most cases, you can go into the cloud and delete your recordings, though you should check your device's privacy rules because they can vary. Deleting re-

cordings may slightly degrade the performance of your assistant, which learns more about you as you interact with it. But you may have good reasons to pare them down. "There are personal risks," says Ms. Dixon. "I can imagine that there have been divorces over this."

## ◆ Use voice profiling.

For certain functions like on-demand shopping, you may want to make sure that your speaker only takes commands from your voice, though the technology isn't perfect. Another wrinkle is that this introduces a biometric voice print to the cloud, which could be stolen, experts say. You can set up multifactor authentication along with a spoken password to better protect your private data.

## ◆ Don't buy one at all.

"That is my personal solution," says Bruce Schneier, a cybersecurity expert who lectures on public policy at Harvard University. For Mr. Schneier, the real threat to our privacy is companies like Google and Amazon, which are also vulnerable to hacks and whose privacy policies can be vague and hard to decipher. (Google and Amazon both say they are committed to privacy.) Although regulations recently went into effect in the European Union that will make data collection more transparent, it isn't yet clear how all companies in the U.S. will be affected. Meanwhile, Mr. Schneier says, it comes down to trust: "As far as security is concerned, you're at the mercy of the company."

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# Should Companies Let Employees Use Social Media While at Work?

Social-media use has become the norm in the U.S., with around 7-in-10 Americans now using platforms like Facebook, Twitter and Instagram to connect with others, share news and information or be entertained, according to the **Pew Research Center**.

For many people, it's a part of daily life: Roughly three-quarters of Facebook users and 60% of Instagram users visit these sites at least once a day, Pew data show.

It isn't surprising, then, that social media has permeated the workplace, creating a dilemma for security-conscious companies: Should they allow employees to use their personal accounts while on the job for pro-

fessional or even personal reasons? Or do the risks outweigh the benefits?

Some say companies can't be successful today unless they accept some level of social-media risk. And the best way to manage that risk isn't by banning social media at work but by developing policies, training and support to help employees engage wisely.

Others say letting employees use personal accounts at work is a recipe for trouble. Social-media sites can collect extensive insights about users through data mining and psychometric profiling, they say, and that is incompatible with the privacy and corporate-confidentiality obligations many firms have.

## YES

### Having a Restrictive Workplace Carries Its Own Risks

BY ALEXANDRA SAMUEL



WHEN I FIRST began helping companies use Twitter and Facebook more than a decade ago, every organization started with this question: How can we use social media without compromising our security and privacy obligations?

Today, most businesses recognize that a branded social-media presence is an essential part of marketing and customer service, even if it comes with some risks.

The same kind of risk/benefit assessment applies to the use of personal social-media accounts by employees.

While it is true that companies can reduce risk if they ban personal social-media use during business hours, discourage employees from making any online references to their work and maybe even ban personal smartphones from the workplace, that is a terrible idea for the same reason companies now embrace social-media marketing: You can't be a successful company in the social-media era unless you accept some level of social media-related risk.

When it comes to employees' personal Twitter, Instagram, LinkedIn or Facebook accounts, there are three kinds of posts that worry companies.

The first is employee posts that are directly tied to the business.

Many marketing teams will ask employees to share company news through their personal accounts as a way to inexpensively amplify the brand's voice and give employees a sense of ownership. Many salespeople, researchers and other professionals also rely on LinkedIn and Twitter to identify prospective customers, make new contacts and build relationships. Closing the door to this kind of social-media use, just because it's taking place in personal accounts, removes a crucial part of employees' tool kit.

The second category of personal social-media use is work-related but not part of the employee's job.

It's hard to be effective on social media if you sound like a corporate mouthpiece, which

is why even security-conscious companies should not only allow—but encourage—employees to build strong professional presences in which they share industry news, reflections on business trends or tips about how to work effectively.

People who share such things online develop strong networks that can help them in their day-to-day work, and become more valuable employees because they are constantly learning.

The third (and trickiest) type of employee post is personal updates that are posted during the workday.

Why would a company allow employees to post selfies from their desks or vent on Facebook about family issues? For the same reason that companies pay for gym memberships and fruit bowls: Happy, healthy employees are easier to retain and better at their jobs.

In 2018, using social media is part of how many of us stay healthy and happy. It's far healthier for employees to take a 10-minute mental break to watch a kitten video, check in with a favorite Facebook group or post a few photos on Instagram than to use that same 10 minutes to smoke a cigarette outside or gossip in the hallway. It is also far healthier for employees to use social media with the support and guidance of a corporate team that can raise their awareness of the more insidious aspects of social-media use (like the way personal data is aggregated and turned into ad targeting).

The senior leadership team needs to balance the risk of a data leak with the risks of losing their best employees; to balance the potential cost of a privacy infraction with the potential cost of missing revenue targets because they've hampered their salespeople with overly restrictive social-media rules.

Are there associated risks with allowing or encouraging social-media use? Sure. There also are security risks associated with accepting credit cards or leaving your office blinds up. But we accept those risks because they're part of doing business and being a humane employer.

Companies should develop social-media policies, training and support teams to manage any increased risk. But at the end of the day, companies have to decide what kind of business culture they want: a culture of risk management and control? Or a culture of openness and empowerment?

They shouldn't delude themselves that only the latter has risks.

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## NO

### The Result Could Be Accidental Disclosure And Oversharing

BY SABINO MARQUEZ



WHILE SOCIAL MEDIA is certainly a valuable marketing and customer-service tool, encouraging employees to use their private social-media accounts at work—whether for professional or personal reasons—can present material risks to an organization's security and privacy commitments.

Unlike other business software that employees may use, social media bites back. If there's one thing we've all been reminded of in the recent Facebook-Cambridge Analytica data-sharing coverage, it's that no one can trust social-media platforms to operate as if they have any duty to protect users' privacy. The social-media ecosystem has shown capable of providing astonishing insights based on data mining and psychometric profiling, and the uses of these insights aren't always transparent.

It is precisely because the targets of these activities may include employees (and everyone in their social networks) that organizations should closely scrutinize the benefits of any initiative encouraging the use of individual social-media accounts in the workplace. This type of exposure is incompatible with the mission of a security-conscious company.

Does your organization have contractual, statutory, market, insurance or compliance criteria that require data security and privacy-risk management?

Many firms do, and they often stem from agreements with customers, regulators, vendors or other outside parties with which the company does business. If an organization has such obligations, letting employees use personal social-media accounts at work likely contravenes the corporate duty to reduce risks to data security and privacy.

I'm not suggesting that companies stop using social media to generate sales leads, or as branding and customer-care tools. However, encouraging social-media use beyond these specific teams, or outside of corporate channels, poses two major risks to the business.

First, encouraging employees to use personal social-media accounts at work vastly increases the chances of accidental disclosure of

protected information. It isn't enough to publish a policy or a code of conduct and hope people will follow it; keeping confidential data safe requires a sustained governance, monitoring and enforcement effort. That might mean implementing monitoring controls so aggressive they would be a profound invasion of employee privacy.

Second, the more employees use their own social-media accounts, the larger a company's "attack surface"—that is, the more opportunities adversaries have to extract confidential data through social channels. Every detail employees share on social media makes it easier for an adversary to manipulate them into exposing confidential information. Notably, every detail about internal departmental and company operations shared by employees (perhaps over the chat feature of a business social network) may expose internal processes and methods that a company might want to keep confidential. Professional meetups, forums and conventions are appropriate venues for discussing professional best practices; Facebook and Twitter aren't.

Social media is designed to encourage oversharing. LinkedIn uploads personal address books (containing entire corporate directories). Photos or videos uploaded to Facebook can be analyzed via artificial intelligence to identify faces, brands, text, floor plans, wall hangings, documents or whatever else might have value. "Private messages" sent through social messenger services can be accessed by third parties.

And that's just if nothing goes wrong; even without a data breach, social-media users are routinely profiled, targeted and then distracted or manipulated by advertisers (and by the social network itself).

Companies can mitigate some of these risks by developing strong social-media policies. IT teams can monitor data flow to ensure confidential data doesn't leave through social channels, and social-media managers can monitor social content to ensure quality, message discipline and act as first responders in the event of a data leak. However, these strategies are time- and cost-intensive and can only reduce—not eliminate—the risk to privacy and corporate-confidentiality obligations.

Social media belongs in the enterprise, but it belongs as an outbound marketing activity performed by trained professionals who are accountable to the same requirements and commitments as any other department handling protected data assets.

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# It's Time to Consider a Password Manager

Everything you need to know—including what to do if you just refuse to use one

BY KATHERINE BINDLEY

TAKING CARE OF more things online has made life easier, whether it's reordering paper towels or viewing the results of medical tests.

But many of the added conveniences we've grown accustomed to come with their own annoyance: another password to remember.

Remembering dozens of different 14-character passwords isn't realistic. But coming up with only a few passwords—or just one—and reusing them is a terrible idea from a security standpoint.

It might be time to consider a password manager.

"As long as you're using one of the well-known, reputable password managers, you are better off than using a smaller number of passwords everywhere," says Lorrie Cranor, director of the CyLab Usable Privacy and Security Laboratory at Carnegie Mellon University.

A password manager is a vault of sorts that keeps all your passwords in one place. Your master password serves as a key that unlocks access to all your other passwords. When you download a password manager, it will import passwords you already use and offer to generate new—

and most likely stronger—passwords for you. It will then save those passwords in the vault and can fill them in for you when you log in to websites and apps.

Cybersecurity experts say that while password managers aren't zero-risk, they're a good line of defense that keeps you from being low-hanging fruit—unlike people who are, for instance, storing their passwords in draft emails, using common words as passwords or using the same passwords across multiple sites.

And in case you're wondering, saving your passwords to your browser is an option, but password managers take you to a new level of security and convenience.

There's no one-size-fits-all formula for choosing a password manager or how you use it—and that includes whether or not you should be using one—but there are some best practices:

#### Pick a Veteran

When it comes to technology, people generally want the newest, shiniest products. This shouldn't be your criterion for cybersecurity products.

"In the password business, you want steady, really mature, solid, battle-scarred veterans that have seen all kinds of attacks and have survived,"

says Kenneth White, security researcher at the Open Crypto Audit Project, a nonprofit that focuses on promoting software security and strong cryptography.

"You really don't want version 1.0," he says.

The three most widely recommended password managers have been at it for years: Dashlane since 2012, LastPass from LogMeIn Inc. since 2008 and 1Password from AgileBits Inc. since 2006.

Their costs vary. Dashlane is free for one device and \$3.33 a month for unlimited devices. LastPass has a free version for unlimited devices, and its memberships start at \$2 a month, with benefits including priority tech support. 1Password starts at \$2.99 a month for unlimited devices.

All three password managers offer the option to also store other sensitive information, like credit-card numbers and passport information. They also alert you to security breaches that might affect you.

While password managers generally let you sync passwords across your devices (phone, laptop, iPad, etc.), this requires them to handle your encrypted vault of passwords in the cloud, posing a security risk that experts generally consider to be very small.

#### Generate New Passwords

When you download a password manager onto your phone or install it on your computer, it can import the passwords you saved in your browser and evaluate their level of strength—including how many times you've reused them. But experts say you shouldn't stop there.

"A lot of people when they start using a password manager, they simply use it to store all of their bad passwords and reused passwords, and that's not good enough," says Dr. Cranor. She recommends using the password generator that all managers have built in.

Password managers offer the option to change your passwords for participating websites without you having to visit the sites. In cases where a site doesn't allow remote password updates, you can go to it and use the manager to generate a safer password. "It's a painful and slow process," says Dr. Cranor. "If it's too overwhelming, every day change three or four passwords."

#### Auto Login Caution

With some password managers, you get the option for a browser extension that collects your login information and auto-fills forms. It can log

you in automatically when you visit a site. This is a huge convenience, but this type of software plug-in has been the source of vulnerabilities in the past.

"A lot of people who are really hard-core security researchers would say, 'I wouldn't touch that stuff,'" says Mr. White. "It adds a whole lot of other avenues for bad guys to get in and mess with."

Mr. White says that if you want to be "super safe," you could avoid plug-ins or extensions, and just copy and paste your passwords from your manager to sites you visit. But if that deters you from using the password manager, it's not worth the added caution, he says. "For most users I think that's probably an acceptable risk," says Mr. White.

#### A Simple Alternative

When using a password manager, all of your password eggs are in one basket—an encrypted basket, but still.

"I can't stand on a soapbox and recommend everyone use these things," says Cormac Herley, a principal researcher at Microsoft Research. That's partly because getting password managers to work seamlessly across different devices can be a problem, he says. But also, he says, "If you allow a

password manager to upload all of your information to the cloud, that now represents a centralized target that wasn't there before. If the people who wrote your password manager made a mistake it can be catastrophic."

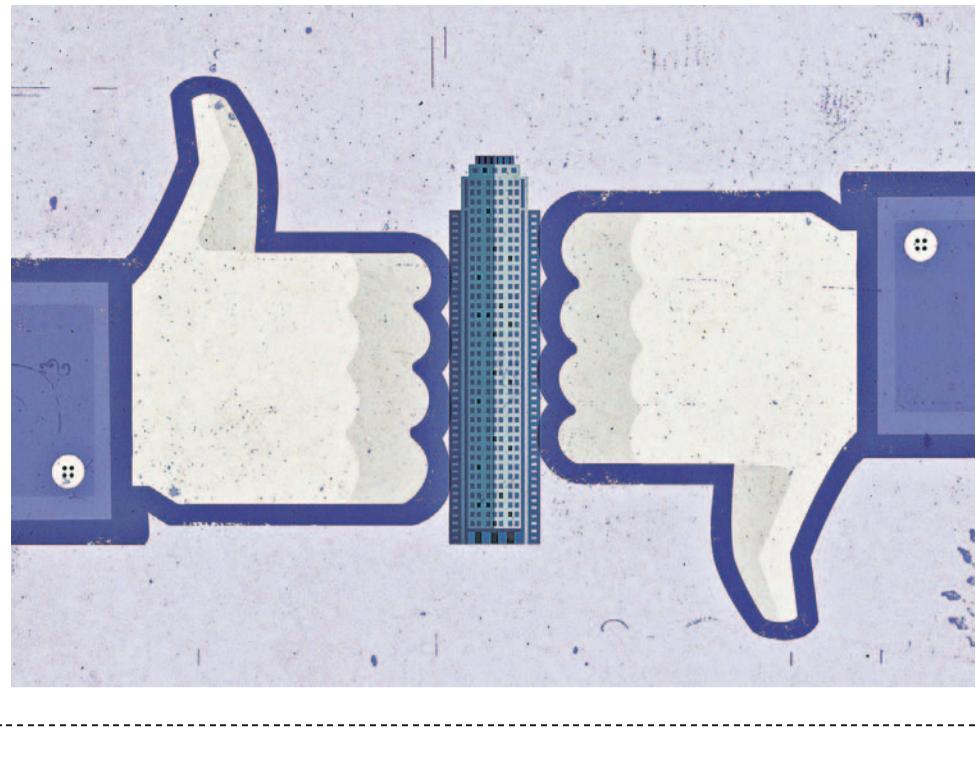
If you aren't comfortable with storing your passwords with a manager, there's another cybersecurity-expert-approved method for managing passwords that might surprise you: Write them down on a sheet of paper and keep it in a safe place.

"I'm much less worried about people who live in my house than the rest of the hacking population on the planet Earth," says Mr. Herley.

Mr. White says you can still use a password manager to create strong passwords for all your needs, and then save them on paper instead of within the app. Or you could use a password manager for the bulk of your accounts, while leaving your most critical ones out of it, he says.

"Honestly, for some accounts writing it down is pretty good advice," says Mr. White. "You can't be hacked from paper."

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RICHARD MIA

## JOURNAL REPORT | CYBERSECURITY

# Remember the Age of Paper Ballots? It's Back

To maintain election integrity, local governments are looking to the past to make sure the future is secure

BY BYRON TAU

**IN AN ERA** rife with concerns about cybersecurity, election officials are increasingly turning to a decidedly low-tech solution: paper.

While security advocates have long considered use of paper a best practice for election integrity, the pace of its adoption has accelerated in the wake of Russian meddling in the U.S. election in 2016. City and county governments around the country and a handful of states, so far, have moved to replace electronic voting methods with paper ballots or to adopt electronic-voting machines that generate paper receipts.

Virginia last year, just two months before its state election, phased out all its old electronic touch-screen machines after a demonstration at a hacking conference spotlighted vulnerabilities in its electronic voting system. Voters across the state cast paper ballots on election day. In Kentucky and Pennsylvania, meanwhile, state officials have ordered that all new voting equipment have a paper trail. Georgia, New Jersey, Delaware, Louisiana, Ohio and several other states, meanwhile, are considering requiring a paper trail or running postelection audits to ensure there was no tampering with results.

#### Nationwide push

It's part of a nationwide push to ensure that the U.S. election infrastructure is secure from any interference, and that voters have confidence in the integrity of the results. Though all elections in the U.S. are run locally, Congress has made \$380 million available to states to help up-

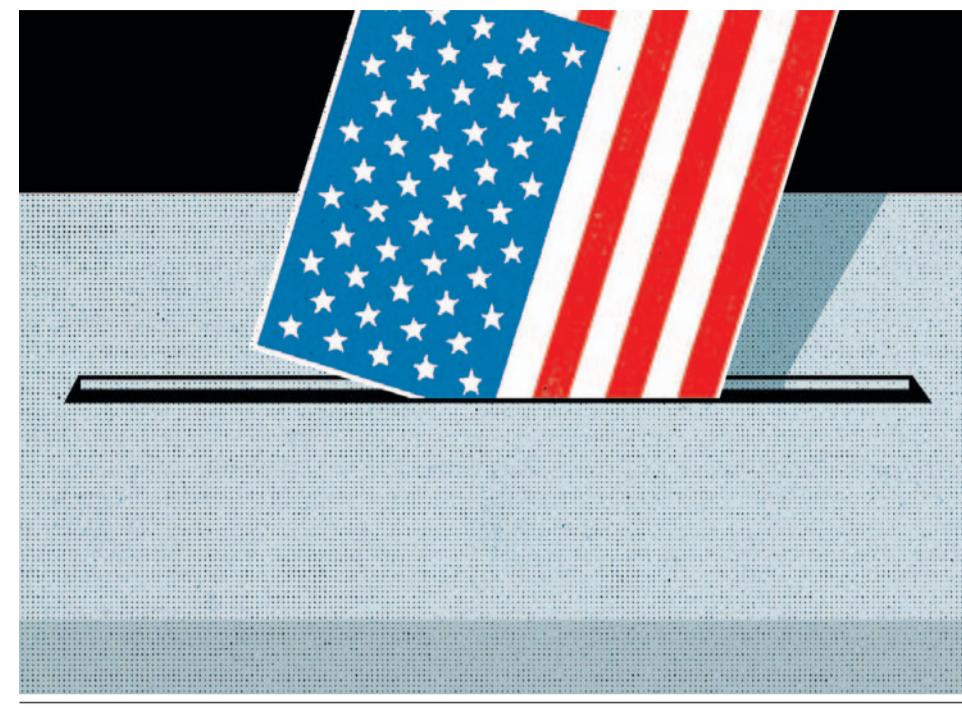
grade and secure their voting systems, in a bipartisan bill passed in March. Much of that money is expected to be spent on machine upgrades and audits. That's the first significant national investment in voting technology since 2002. The funds will also help support greater use of machines with paper backups or paper ballots.

The money "will help states modernize their voting systems and ensure that audit-able ballots can provide safeguards against manipulation and malicious cyberattacks," says Sen. James Lankford, a Republican from Oklahoma who helped get the funding put into a recent spending bill.

Many of the voting machines Americans use are more than a decade old, purchased with federal funds made available for electronic-voting-machine upgrades after the contested 2000 presidential election. That money—\$3.5 billion allocated by Congress under the Help America Vote Act of 2002—mostly went for state-of-the-art touch-screen machines to replace the old punch-card machines at the heart of the 2000 controversy in Florida.

But what was state-of-the-art technology in 2002 or 2004 has rapidly become outdated. Many machines haven't seen a security update in years. Some use software so dated that security patches are no longer being written, and hardware so old that local election officials need to scour eBay for parts just to keep their systems running, according to a 2015 report on the state of election technology by the New York-based nonpartisan Brennan Center for Justice.

The Senate Intelligence Committee in a bipartisan report issued earlier this month



like it the whole time people have been working and advocating against these vulnerable machines," she says. "So that's a good thing, that the issue has been elevated in the consciousness of the press and the public."

#### Money and political will

Advocates say that the federal aid is a good start, but add that to replace the outdated equipment nationwide will require significantly more money and more political will in the states where such machines still exist.

"The fact is that this is really serious, and it needs the attention that a hostile invasion would get," says Susannah Goodman, director of a voting-integrity campaign for Common Cause, the government-watchdog group based in Washington, D.C. "Because they did it with bits not bullets, we haven't responded in the way that we need to," she says.

According to Verified Voting, all voters in Delaware, Georgia, Louisiana, New Jersey and South Carolina still vote on electronic machines that have no paper backups. Another half-dozen states use a mix of voting technology, including some machines with no paper backups in some jurisdictions.

Those are the type of machines that experts say are most at risk. When Virginia eliminated its touch-screen voting machines last year, it was in response to a hacker demonstration that exploited a security flaw that system administrators had known about for more than a decade.

"We just reached the point where we weren't comfortable using that equipment in Virginia elections," says Edgardo Cortes, former Virginia commissioner of elections, who is now an adviser on election issues at the Brennan Center.

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#### Paper Ballots

19 states and the District of Columbia (cream colored on the map) will use only paper ballots at polling places in elections this year



Source: Verified Voting Foundation

recommended that all states adopt paper ballots or paper backups—and postelection audits to check the integrity of any electronic system.

In this day and age, some may think it odd to be talking about reverting to paper ballots,

Sen. Kamala Harris, a Democrat from California and member of the committee, said recently. "But that actually

might be one of the smartest systems—going back to a day that we could have something tangible that we could hold onto. Because Russia cannot hack a piece of paper like they can a computer system connected to the internet."

Marian Schneider, president of Verified Voting, a Philadelphia-based nonprofit that has long advocated for paper

systems or backups, adds, "The value of having the voter-marked paper ballot is that it allows you to detect if something happened and to recover from it." Ms. Schneider, a former Pennsylvania election official, says that interest in election security has increased among local officials and the public at large.

"I haven't seen anything

## The Search for Women In Cybersecurity Careers

BY DEBORAH GAGE

**THERE IS A** shortage of workers in cybersecurity and a shortage of women in tech jobs. New efforts to get girls interested in cybersecurity are aimed at tackling both of those problems.

Boston University, the SANS Institute and nonprofits such as TechGirlz are among the organizations sponsoring camps and contests to teach girls about coding and how to solve cybersecurity problems. Technology firms are getting into the act, too: **Palo Alto Networks** Inc. has helped develop a cybersecurity curriculum for the Girl Scouts, which will start awarding cybersecurity badges in September, while **Symantec** Corp. has given a grant to the American Association of University Women to develop a cybersecurity class for middle-school girls.

The goal is to inspire more girls to pursue careers as information-security analysts, a field the Bureau of Labor Statistics predicts will grow 28% from 2016 to 2026. Women today fill just 11% of cybersecurity jobs globally, according to a 2017 report from the Center for Cyber Safety and Education and the Executive Women's Forum on Information Security, Risk Management & Privacy. And the women who do work in cybersecurity hold fewer positions of authority and are paid less, on average, compared with men in the field despite having higher levels of education, the report found.

Michele Guel, a distinguished engineer at Cisco Systems Inc., battled the Morris Worm, considered to be one of the first pieces of malware, at NASA Ames in 1988. She says some girls have the wrong idea about cybersecurity, which could explain at least some of the gender gap.

"They think that you wear hoodies, work in the dark, drink soda and eat Twinkies all day," she says. "What we



Ninth-graders participating in the Girls Go CyberStart contest

need is a new perception."

Sarah Larbi, a recent graduate of Boston University, discovered cybersecurity in college and has a job lined up at Liberty Mutual Insurance, where she aims to work on cybersecurity issues. She will be teaching for the second time this summer at a cybersecurity camp sponsored by the university for high-school freshman and sophomore girls.

One exercise the girls will be asked to perform: Using an add-on to the Firefox browser, find the websites with the most third-party trackers, which seek to keep tabs on the websites people visit, often to provide relevant ads. "It's an inspiring thing to see girls not feel like they [have] to be quiet, that it [is] OK to be curious and learning," says the 22-year-old Ms. Larbi.

In February, the SANS Institute ran Girls Go CyberStart, a contest that offered high-school girls and their schools prizes for solving cybersecurity problems relating to cryptography, web attacks, forensics, programming and Linux, the operating system that supports commonly used security tools. The contest was held in 16 states plus American Samoa, and prizes included a trip to the Women in Cybersecurity Conference in Chicago in March.

Hannah Manner and Miranda Evans, a junior and sophomore at Padua Academy

in Wilmington, Del., were part of the Cyber Sisters, the team that won the Delaware contest. The girls said they worked nights and weekends, in one case figuring out how to spot an error in code written in Assembly language.

"I never learned programming, [and] I had no idea I'd be able to do that," Ms. Manner says. "I had a blast."

CyberStart was adapted from a multilevel game created by SANS EMEA, which was under contract to an intelligence agency in the United Arab Emirates. It was used first in the U.A.E. and then in the United Kingdom, which was looking for young people with cybersecurity talent for intelligence agencies, the military, critical infrastructure companies and all internet-connected organizations. It was piloted in seven U.S. states in 2017 for both male and female students age 16 and over, but out of the 3,500 students who enrolled, only 7% were girls.

"I thought the country was stupid if we didn't get women involved," says Alan Paller, the director of research at SANS, explaining why Girls Go CyberStart was created. "How would we ever defend ourselves if we use half or less than half of the smart people in the country?"

**Ms. Gage is a writer in San Jose, Calif. She can be reached at** [reports@wsj.com](mailto:reports@wsj.com).



## Noisy attacks aren't hard to find...

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