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What's News

Business & Finance

The Fed is likely to announce Wednesday that it will slowly start shrinking its $4.2 trillion portfolio of bonds bought during and after the financial crisis. **A1**

◆ **China is moving** toward a broad clampdown on bitcoin trading that goes beyond plans to shut commercial exchanges. **A1**

◆ **Central banks** should consider introducing their own virtual currencies to counter the risks from bitcoin's growth, the BIS said. **B5**

◆ **Northrop plans** to buy Orbital ATK in a $7.8 billion deal that would help the defense contractor build and launch space-based weapons. **A1**

◆ **Portugal's debt** rallied after S&P gave the government back the investment-grade rating that it lost during the 2012 euro crisis. **B1**

◆ **Google proposed** revising its shopping search results so that rivals can bid for space to show products, in an effort to meet EU demands. **B1**

◆ **Ford is linking up** with Indian auto maker Mahindra to explore potential collaboration on new technology and retail sales. **B2**

◆ **Teva said** it would sell its remaining women's health assets for $1.38 billion as it grapples with high debt. **B3**

◆ **U.S. business schools** received fewer applications to full-time M.B.A. programs for a third straight year. **B3**

◆ **Cisco's chairman** is stepping down after leading the network-equipment company for over two decades. **B4**

World-Wide

◆ **Trump's economic chief** said the U.S. stance on the Paris climate accord hasn't changed, following signals over the weekend that the U.S. was exploring ways to remain in the 2015 pact. **A6**

◆ **Iran's vice president** accused the U.S. of trying to undermine the 2015 nuclear deal and said Tehran was in full compliance. **A3**

◆ **The U.S. flew** warplanes over the Korean Peninsula in response to Pyongyang's launch of a missile over Japan last week. **A5**

◆ **Iraq's Supreme Court** ruled that the Kurdish region should suspend an independence referendum scheduled for next week. **A4**

◆ **Trump called** on the U.N. to reduce bureaucracy and curb mismanagement at a meeting of world officials. **A3**

◆ **Hurricane Maria** barreled toward the Caribbean's eastern islands with Puerto Rico in its sights. **A7**

◆ **Flynn's family** launched a legal-defense fund to help defray the former Trump aide's costs associated with the Russia election probe. **A7**

◆ **Britain is considering** arming police after five terrorist attacks and a recent rise in crime. **A4**

◆ **Japan's Abe hinted** that he would call an election for the powerful lower house of parliament. **A5**

◆ **Russia and China** began joint war games in the North Pacific, showcasing a budding military alliance. **A5**

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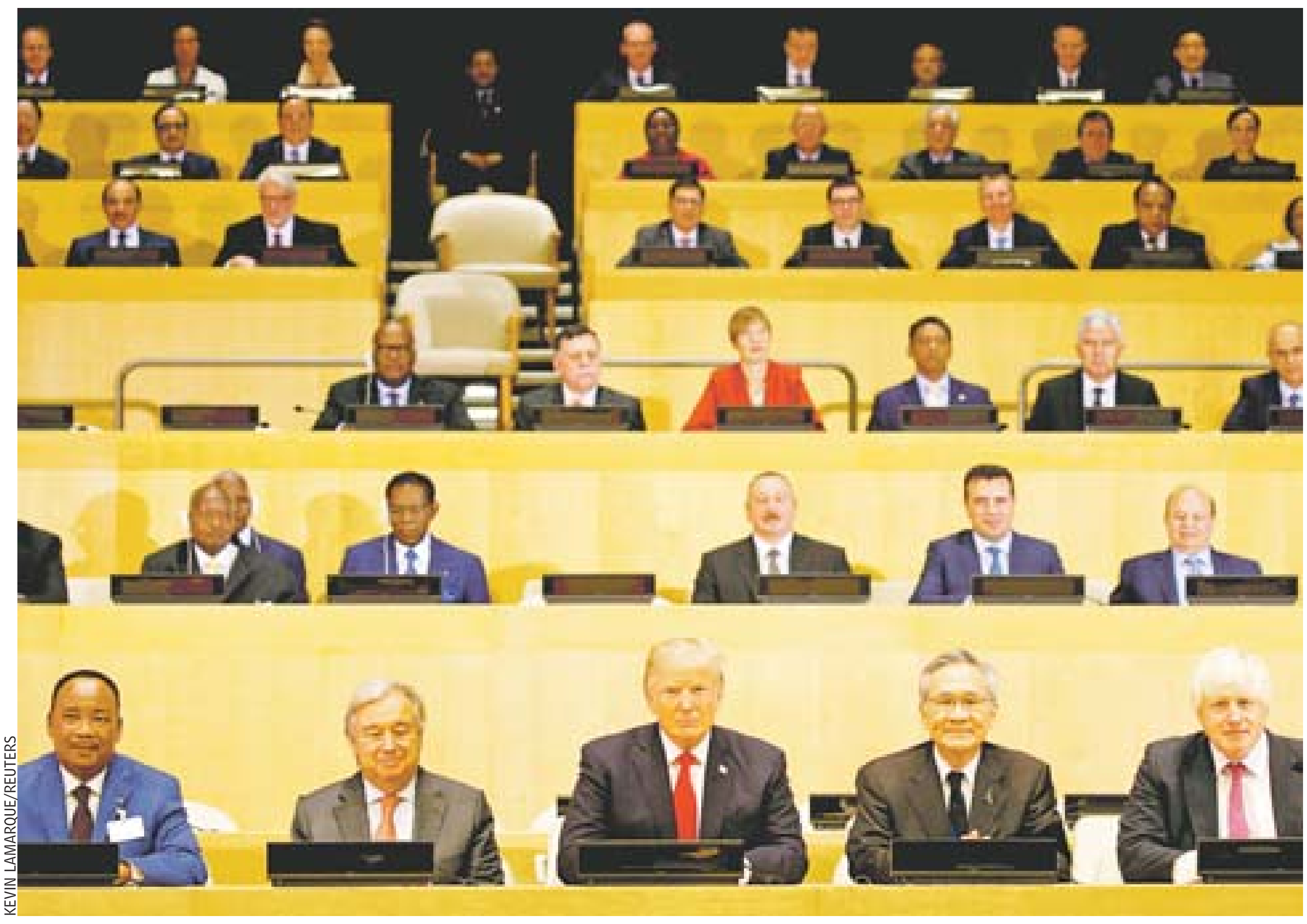
A New Face in the Crowd at the United Nations



KEVIN LAMARQUE/REUTERS

FRONT AND CENTER: President Donald Trump is set to address the General Assembly Tuesday. He called for overhauls at the U.N. Monday. A3

INSIDE THE EQUIFAX HACK

Crisis has sent shock waves through the industry, spooked consumers and sparked investigations

On March 8, researchers at Cisco Systems Inc. reported an online security flaw that allowed hackers to break into servers around the internet. Cisco urged users to upgrade their systems immediately with a newly issued fix.

By AnnaMaria Andriotis, Michael Rapoport and Robert McMillan

Equifax Inc. was among the companies using the flawed software. On Friday, it said its technology experts at the time worked to identify and patch vulnerable systems.

In late July, though, Atlanta-based Equifax discovered suspicious traffic on its system—and found the same security flaw still existed in some areas. The company's security staff again addressed the problem, according to Equifax, but by then it was too late.

From about mid-May to July 30, hackers ransacked vast troves of information at the credit-reporting company. The breach potentially exposed about 143 million Americans' personal information, including names, addresses, dates of birth and Social Security numbers. The revelations have shaken the company, as well as public confidence in a linchpin of the financial system, and triggered a federal criminal investigation.

Much remains unknown about the hack attack and how it burrowed so deeply inside the company. Investigators, security experts and Equifax itself are focusing on what the company did or didn't do right in the run-up to the massive intrusion, including its response to the flaw found by Cisco.

Alex Holden, chief information security officer of identity-theft monitoring company Hold Security LLC, says Equifax has long been considered a target for identity thieves. Last week, Hold said it discovered it was possible to access an Equifax-operated employee portal in Argentina by using the easily guessed username and password combination "admin/admin."

Please see HACK page A8

Fed Set to Embark On Great Unwind Of Assets

By Nick Timiraos

WASHINGTON—The Federal Reserve resorted to a series of shock-and-awe stimulus campaigns to stabilize the economy after the financial crisis. Now the Fed is preparing the final move to unwind its support—and it wants to be as boring as possible.

The central bank is likely to announce Wednesday it will start slowly shrinking its $4.2 trillion portfolio of mortgage and Treasury bonds purchased during and after the financial crisis. It will do so passively by allowing some bonds to mature without replacing them.

The markets haven't blinked at Fed signals for many months that this moment was nearing. But plenty could still go wrong. The central bank has never before had such a large balance sheet or attempted to do this.

If it succeeds, the central bank will quietly close a chapter on an extraordinary policy experiment that lowered borrowing costs for homeowners, businesses and consumers, and will provide a model for other central banks that followed suit. A misstep could disrupt growth at a time when major economies are finally expanding in sync.

Chairwoman Janet Yellen's management of the process will shape the final verdict on whether the bond-buying was successful, which in turn could determine whether it remains a policy tool for future downturns.

"She has reached agree-

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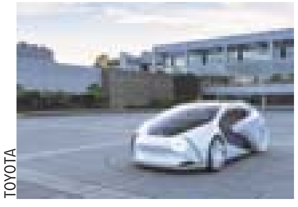
INSIDE

EPA/SHUTTERSTOCK

ABE HINTS AT SNAP VOTE FOR LOWER HOUSE

WORLD NEWS, A5



TOYOTA

NEW WAY TO TRACK AUTO INNOVATION

BUSINESS & FINANCE, B1

Beijing Widens Bitcoin Crackdown

By Chao Deng

BEIJING—Chinese authorities are moving toward a broad clampdown on bitcoin trading, testing the resilience of the virtual currency as well as the idea that its decentralized nature protects it from government interference.

Regulators have decided on a comprehensive ban on channels for the buying or selling of the virtual currency in China that goes beyond plans to shut commercial bitcoin exchanges, according to people familiar with the matter.

Officials communicated the message to several industry executives at a closed-door meeting in Beijing on Friday, according to people who were at the meeting. Until last week, many entrepreneurs in China's bitcoin circles had thought authorities might shut down only commercial trading activity while tolerating peer-to-peer, or over-the-counter, bitcoin platforms, which enable buyers and sellers to find each other and trade directly.

Word of a more serious tightening spread after the meeting, and at least one Chinese platform last week said it would halt one-on-one trading services per official instructions.

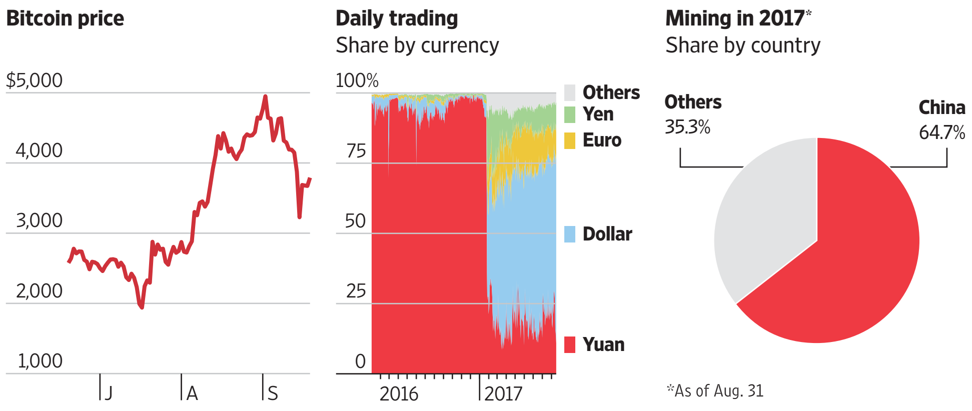
The Chinese plan represents some of the most draconian measures any government has taken to control bitcoin, created by an anonymous programmer nearly a decade ago as an alternative to official currencies, and word of it sent another wave of anxiety through the Chinese bitcoin community.

China has digitized its financial sector faster than any

Please see CHINA page A2

Bit of Uncertainty

China's clampdown on bitcoin has hurt global prices and domestic trading volumes; for now the country remains a major center for bitcoin mining.



Sources: coindesk (price); bitcoinity.org (trading volume, mining)

THE WALL STREET JOURNAL.

◆ Countries are urged to weigh digital currencies.................. B5
◆ China tries to curb fintech investment.................. B8

The Dicey Future of Jarred Gefilte Fish

* * *

Traditional Jewish holiday dish is getting the artisanal treatment

By Lucette Lagnado

NEWARK, N.J.—Can this jar of gefilte fish be saved?

A staple of Jewish cuisine, gefilte fish—Yiddish for stuffed fish—has been a fixture for Manischewitz Co., which started selling jars of the beige dumplings of minced carp, pike and whitefish in the late 1940s. Families still snap up the jars for holiday dinners, such as Rosh Hashana, the Jewish New Year, which begins Wednesday evening.

Traditional jar fans haven't gone away by any means, but times and tastes have changed. In an artisanal food world, Manischewitz is struggling to make its shelf-stable product hook a new, more-finicky generation of eaters.

Among its more promising attempts: gluten-free gefilte fish, a "Premium Gold" version and a secret variation yet to come.

The emphatic response from Jewish foodies? Don't bother.

"I ate gefilte fish from the jar as a child," says Chanie Apfelbaum, a gourmet cook and kosher blogger from Brooklyn. "I still have nightmares."

Ms. Apfelbaum says traditional Jewish foods are making a comeback—but the nostalgia doesn't extend to gefilte fish with a four-year pantry life. She says people have "moved on."

These days, she buys frozen gefilte fish, which she fashions into small cakes then fries with a crust of panko.

Philadelphia chef Michael Solomonov has offered gefilte fish escabeche with fiddleheads and artichokes as a Passover special. A Brooklyn company, the Gefilteria, makes "artisanal gefilte fish" from scratch. Susie Fishbein, author of books on elegant kosher cooking, has a recipe for "tricolor gefilte fish" with dill.

Please see GEFILTE page A8

Military Space Race Heats Up With Deal

By Doug Cameron

Northrop Grumman Corp. plans to acquire Orbital ATK Inc. for around $7.8 billion in a bid to position itself for the new military battleground: space.

The proposed deal, announced Monday, would help Northrop to produce and launch large and small space and communications satellites and develop new high-speed weapons and missile-defense systems to deter potential adversaries such as Russia and China.

Northrop is the world's fifth-largest defense company by sales and the fourth-largest in the U.S. after Lockheed Martin Corp., Boeing Co. and Raytheon Co. The planned combination would be the largest in the U.S. defense sector for two years. It also represents the first test of the Trump's administration's views on industry consolidation as it would increase Northrop Grumman's role in key programs such as a new, long-range bomber.

The Wall Street Journal first reported Sunday that the companies were nearing a deal.

"Orbital ATK is the fit," said Northrop Chief Executive Wes Bush on an investor call Monday. He noted the company hadn't previously spotted attractive acquisition targets before opening talks with the company this year. Orbital wasn't put up for sale, said CEO David Thompson.

Please see DEAL page A2

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Key Question: What Does North Korea Want?

CAPITAL JOURNAL
By Gerald F. Seib

As President Donald Trump and other world leaders gather at the United Nations this week, a lot of important questions hang in the air, but none more important than this one: What does North Korea want?

That is, what is North Korea's real goal in its relentless, reckless pursuit of nuclear weapons as well as missiles that can carry them as far as the

United States? The answer will determine whether it's even possible to push the country off the nuclear path at this point, or whether a strategy of regime change or containment of a nuclear-armed country is the most realistic option—or, most ominously, whether armed conflict is likely.

The international community is, of course, casting about for ways to deter North Korea, and U.S. officials say there will be conversations this week about imposing more-severe economic sanctions than the ones already implemented in a pair of U.N. Security Council resolutions this year. Chinese and Russian companies doing business with North Korea are likely targets.

Yet devising a strategy requires reaching some determination of what it would take to change North Korea's course. Nobody knows for sure what is going on in the mind of North Korea's bombastic, 33-year-old leader, Kim Jong Un, and it's possible he is simply improvising. But the systematic effort he has undertaken suggests otherwise.

The most frightening possibility is that Mr. Kim considers nuclear weapons an existential requirement for his survival internally. Michael Pillsbury, a longtime Asian analyst now at the Hudson Institute, says some experts believe the North Korean nuclear program is the result of a deal with the North Korean military made long ago by Mr. Kim's father and grandfather, when they were in charge: "You keep us in power, and we'll deliver the nuclear weapon to you."

That possibility raises a troubling prospect, he adds: "Are we really dealing with something that is not negotiable....Is this a business deal and we haven't found the right price yet, or is it something sacred?"

Mr. Pillsbury, a former Pentagon official and author of a book about the long-term struggle between the U.S. and China, says he thinks many Chinese leaders subscribe to the theory that the nuclear program is the result of such a pact with the military—one that Mr. Kim can't afford to reverse.

It's also possible that Mr. Kim sees the nuclear program as necessary to guarantee survival against external threats. This has been the more widely held theory over the past two decades.

It holds that Mr. Kim, like his father and grandfather, sees North Korea at perpetual risk of a hostile regime-change effort by South Korea and the U.S., and perhaps even by Pyongyang's nominal allies in China. The best way to keep that overthrow effort at bay is to brandish the possibility that the regime could respond with a nuclear strike.

In that case, there may be a deal to be struck. In theory, at least, if regime survival—as well as simple international respect and perhaps some handsome monetary reward for backing down—is the reason to possess nuclear weapons, then the need for those weapons goes away if the world provides a guarantee of regime survival and help entering the real global economy.

The third possibility is that North Korea wants nuclear arms for blackmail purposes. The Kim regime's real goal, under this theory, is to reunite North and South Korea under its rule, and it plans to use military might someday to achieve that goal.

The principal obstacle standing in the way is the U.S. commitment to defend South Korea. North Korea's way to eliminate that problem is to be able to say to the U.S. that Pyongyang will strike it with a nuclear weapon if American forces come to the aid of South Korea. Would the U.S. defend Seoul if that meant putting Seattle at risk?

The differences among these possible goals deeply affect the approach the U.S. and its allies take. Secretary of State Rex Tillerson is signaling that the Trump administration wants escalated economic pressure to compel Mr. Kim into meaningful negotiations over its nuclear program. Perhaps only in such negotiations is it possible to discern North Korea's real aims.

If diplomacy ultimately can't reverse the nuclear program, the U.S. and its allies likely will be looking at a long-term strategy of containing a nuclear-armed North Korea and all that entails: far more spending on missile-defense systems, a bigger American military presence in Asia, military buildups in Japan and South Korea, possibly the reintroduction of American tactical nuclear weapons into South Korea.

Such a containment strategy worked with the Soviet Union for half a century. It is an expensive and frightening proposition—though perhaps not as frightening as war on the Korean Peninsula.

KCNA/AGENCE FRANCE-PRESSE/GETTY IMAGES

In this picture released Saturday by North Korea's state-controlled news agency, North Korean leader Kim Jong Un inspects the launch of the ballistic rocket Hwasong-12 at an undisclosed spot.

A Unique Campaign Vehicle in Kenya

YASUYOSHI CHIBA/AGENCE FRANCE-PRESSE/GETTY IMAGES

GET OUT THE VOTE: A Kenyan rides a camel during a voluntary campaign to support Kenya's president ahead of election next month.

DEAL

Continued from Page One

Northrop Grumman, based in Falls Church, Va., makes fuselages and radars for the F-35 combat jet, as well as satellites and other surveillance and communications systems, many of them classified. Dulles, Va.-based Orbital ATK produces space rockets, engines for missiles, and smaller satellites.

Northrop aims to close the deal in the first half of next year, subject to shareholder and regulatory approvals.

U.S. defense companies are returning to growth after five years of federal-government budget pressures. But big opportunities are scarce and focused on a handful of large programs such as the Lockheed Martin F-35, replacing U.S. nuclear weapons and strengthening its space-based capabilities.

Potential adversaries such as China and Russia have been investing heavily in space capabilities, and Pentagon leaders have expressed concern about the U.S. losing its technological advantage.

The Pentagon is also looking to make U.S. space assets less vulnerable by launching larger numbers of smaller satellites, and pursuing research into new weapons such as hypersonic missiles able to travel at more than 5,000 miles an hour. That would enable them to hit any target on the globe in minutes.

Deal activity in the defense sector in recent years has focused on the services business rather than weapons makers. Pentagon leaders have discouraged any further consolidation among the largest defense companies since a series of huge deals in the 1990s. However, analysts said Northrop's move could trigger interest in other smaller, space-focused companies such as Harris Corp.

One of the largest defense-sector opportunities is the Pentagon's plan to develop a new, land-based nuclear missile, with Northrop competing against Boeing for a program estimated to cost around $80 billion.

Northrop is already working with Orbital ATK and fellow rocket-engine maker Aerojet Rocketdyne Inc. on the project. Boeing has also signed up Aerojet as a partner, and Mr. Bush said on the call that his planned deal wouldn't affect existing programs. "Our industry is characterized by the ability of companies to work together," he said.

Mr. Bush declined to comment on whether the proposed deal had been discussed with the Pentagon, though he pledged to continue working with other large defense companies on large military programs. Boeing and the Pentagon had no immediate comment Monday.

This is the first test of the administration's views on industry consolidation.

Northrop agreed to pay $134.50 a share for Orbital, a roughly 22% premium to Friday's closing price of $110.04. Including $1.4 billion in assumed debt, the deal carries a total price tag of about $9.2 billion.

Orbital shares were up 20% to $132.27 in Monday trade. Northrop shares gained 3.4% as the company committed Monday to reducing debt and maintaining a share buyback program. Repurchases have powered the company's stock in recent years.

Northrop Grumman said it plans to establish Orbital as a distinct business segment.

Buying Orbital ATK would add a company with 13,000 employees and an estimated $4.6 billion in sales this year to Northrop's expected revenues of around $25 billion in 2017.

CHINA

Continued from Page One

other nation. Authorities continue to support the trend, though their public comments also suggest concern that bitcoin could weaken official control of the country's money supply.

The crackdown on the bitcoin ecosystem represents Beijing's possibly biggest effort to limit expansion of a system to rival the yuan. In a previous crackdown, in 2009, the central bank banned the use of tokens valued at billions of dollars created in China's large online-gaming networks for real-world purchases.

A quasiregulatory body called the National Internet Finance Association of China, or NIFA, warned investors about virtual-currency trading in a statement last week and said that bitcoin platforms lack legal basis to operate in the country.

A goal of China's monetary regulation is to ensure that "the source and destination of every piece of money can be tracked," Li Lihui, a NIFA official, told a technology conference in Shanghai on Friday.

A lack of clarity from regulators has fueled worries about how far the government will go. One uncertainty is whether the ban will affect bitcoin deals made over social-messaging apps such as WeChat. People in the industry say a wave of bitcoin users in recent days migrated from WeChat to the encrypted messaging service Telegram.

A broader clampdown will likely include blocking mainland access to websites of foreign bitcoin exchanges such as Coinbase in the U.S. and Bitfinex in Hong Kong, say people familiar with the matter.

Last weekend, the largest domestic bitcoin exchanges—BTCC, Huobi and OKCoin—all said they would halt trading services in coming weeks, sending prices of bitcoin on the global market tumbling. Bitcoin traded at $3,947 on Monday evening in Beijing, roughly 20% off its high of $4,960.72 on Sept. 1.

Industry advocates hail bitcoin for allowing users to transact with each other without the involvement of a central authority. In reality, users access the market for virtual currencies via services and businesses that are centralized in real locations and, therefore, are susceptible to third parties. Any attempt by China to interfere broadly in the bitcoin network would test that notion further.

On the flip side, if bitcoin does prove resilient, China could be shutting itself out of an expanding global market. As recently as last year, China accounted for the bulk of global bitcoin trading activity, but its share has dropped significantly since the government started attempting to cool the market. China now accounts for less than 15% of bitcoin-trading volume.

Blocking overseas exchange sites would add them to a long list of websites Beijing considers too sensitive, including Google and Facebook.

Chinese authorities haven't made public their stance on virtual-currency trading. The People's Bank of China and the Ministry of Internet and Information Technology didn't respond to requests for comment on bitcoin measures.

A document passed around at Friday's meeting and reviewed by The Wall Street Journal instructs Beijing-based exchanges to unwind their operations and provide information on bank accounts used for clients' deposits by Wednesday.

While China's sway in bitcoin-trading volumes has faded, the country remains a big creator of new bitcoin through a process called mining. Chinese bitcoin miners operate a vast collection of computers to create new bitcoin in remote areas where they can access cheap electricity.

One entrepreneur said that miners are worried about authorities moving to limit their operations. "Using VPNs as a workaround will be difficult," he said, referring to virtual private networks that allow users to circumvent China's "Great Firewall," its vast array of censors and tools to block access to some parts of the internet.

The stepped-up tightening by regulators comes as China's leaders have been vocal about battling money laundering, in advance of an important leadership transition this fall. Last week, China's State Council released guidelines aimed at better coordination between regulators to address the transfer of capital for illicit purposes.

—James T. Areddy in Shanghai and Liyan Qi in Beijing contributed to this article.

CORRECTIONS & AMPLIFICATIONS

Singapore's president draws an annual salary of S$1.54 million (US$1.1 million). A World News article Thursday about the nation's new president incorrectly said the salary was S$4.3 million.

Readers can alert The Wall Street Journal to any errors in news articles by emailing **wsjcontact@wsj.com**.

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WORLD NEWS

Tehran Accuses U.S. of Violating Accord

Iranian vice president says Washington is looking to undermine the 2015 nuclear deal

BY LAURENCE NORMAN

CHRISTIAN BRUNA/EPA/SHUTTERSTOCK

Iran's Vice President Ali Akbar Salehi at the International Atomic Energy Agency meeting in Vienna.

VIENNA—Iranian Vice President Ali Akbar Salehi accused the U.S. of violating the spirit and letter of the 2015 nuclear deal, escalating a clash between the two countries at the start of a crucial week of talks on the accord's future.

President Donald Trump has said he expects not to certify Iran's compliance with the accord when a decision comes due next month, a move that could unravel the agreement. Failure to certify the accord would give Congress an opportunity to decide whether to reimpose U.S. sanctions that were suspended as part of the 2015 deal.

Speaking Monday at the annual conference of the International Atomic Energy Agency, which oversees Iran's compliance with the accord, Mr. Salehi said Iran was complying fully with the agreement. Under the pact, Tehran significantly reduced its nuclear program.

"The American administration's overtly hostile attitude and actual foot-dragging policies and measures aim at undermining the nuclear deal and blocking Iran's legitimate benefits from its full implementation," said Mr. Salehi, who also heads Iran's atomic agency. That is "contrary to the letter and spirit" of the nuclear deal.

Mr. Salehi's comments took place as world leaders gather in New York for the annual United Nations General Assembly. A meeting of foreign ministers from Iran and the six countries that negotiated the agreement will take place on Wednesday, the highest level meeting between Iranian and U.S. officials since Mr. Trump took office. On Tuesday, senior officials from the six powers that negotiated with Iran will meet.

Before a meeting with Israeli Prime Minister Benjamin Netanyahu in New York on Monday, Mr. Trump, responding to a question on whether the U.S. intends to withdraw from the Iran nuclear deal, said "You'll see very soon."

Mr. Netanyahu described the deal as "terrible" and said he and Mr. Trump would discuss how to address "Iran's growing aggression in the region."

Iran's Supreme Leader Ali Khamenei, who steers Iran's foreign-policy decisions, on Sunday warned that any "wrong move by domineering powers" on the accord would draw an Iranian response.

Iran has complained that the U.S. is undercutting the accord by increasing sanctions on Iran and by pressing international partners not to do business with Iran. U.S. Secretary of State Rex Tillerson said while Iran may be in "technical compliance" with the accord, it has violated the spirit of the accord through its missile tests, support for terrorism and its regional actions in Syria and Yemen.

So far, the body that oversees implementation of the agreement has said all sides are complying.

U.S. Energy Secretary Rick Perry, also speaking in Vienna, again pressed the IAEA to step up its oversight of Iran's activities. U.S. Ambassador to the U.N. Nikki Haley said last month, following a visit to the IAEA, that there were hundreds of sites in Iran where suspicious activities could be taking place. She raised particular concerns about Iranian statements that they wouldn't allow the IAEA to access military sites.

Mr. Perry said Monday that the U.S. "strongly encourages the IAEA to exercise its full authorities to verify Iran's adherence to each and every nuclear commitment" under the agreement. "We will not accept a weakly enforced or inadequately monitored deal."

In an interview Monday evening, the IAEA's Director General Yukiya Amano pushed back against U.S. concerns, saying his agency wouldn't change its approach to its work.

"We have a very established method. It doesn't happen [that] someone thinks shall we lean back or shall we be more aggressive," he said. "We are a technical organization. And our interest is to do our job professionally and objectively and impartially."

Mr. Amano wouldn't say whether the agency has visited military sites but he said Iran has complied with its commitments under the accord. On no occasion, he said, had Iran deliberately denied or delayed inspectors access to a site. He acknowledged however that on occasion, it had taken some time to arrange visits.

Washington has been pressing European governments to adopt a more aggressive stance against Iran. European officials have said they support the current agreement.

"The agreement is solid and we will make sure the agreement is strictly implemented," French Foreign Minister Jean-Yves Le Drian said.

Trump, at United Nations, Calls for Overhauls

BY FARNAZ FASSIHI AND ELI STOKOLS

UNITED NATIONS—President Donald Trump called on the United Nations to "focus more on people and less on bureaucracy," in comments during a meeting of international officials as the annual General Assembly gathering got under way.

Mr. Trump reiterated his campaign criticism that the U.N. wasn't living up to its potential, but did so in softer terms than he previously has used, sticking with his prepared remarks about the need to reduce bureaucracy and curb mismanagement.

The "ways of the past," he said, are "not working."

The president thanked U.N. Secretary-General António Guterres, who sat beside him, for his openness to changes in U.N. structure and operations. And he said the cost burdens of supporting the institution, which Mr. Trump has argued fall too heavily on the U.S., must be more equally distributed.

"We must ensure that no one and no member state shoulders a disproportionate share of the burden, and that's militarily and financially," Mr. Trump said.

The U.S.-hosted event lasted less than an hour and attendees, senior officials from over 100 countries, didn't interact much with Mr. Trump or offer input on the agenda. Messrs. Trump and Guterres and U.S. Ambassador Nikki Haley each delivered short remarks.

The president's comments came a day before his highly anticipated official speech at the General Assembly, where Mr. Trump is expected to address broader policy themes including terrorism, the standoff with North Korea and the future of the Iran nuclear deal.

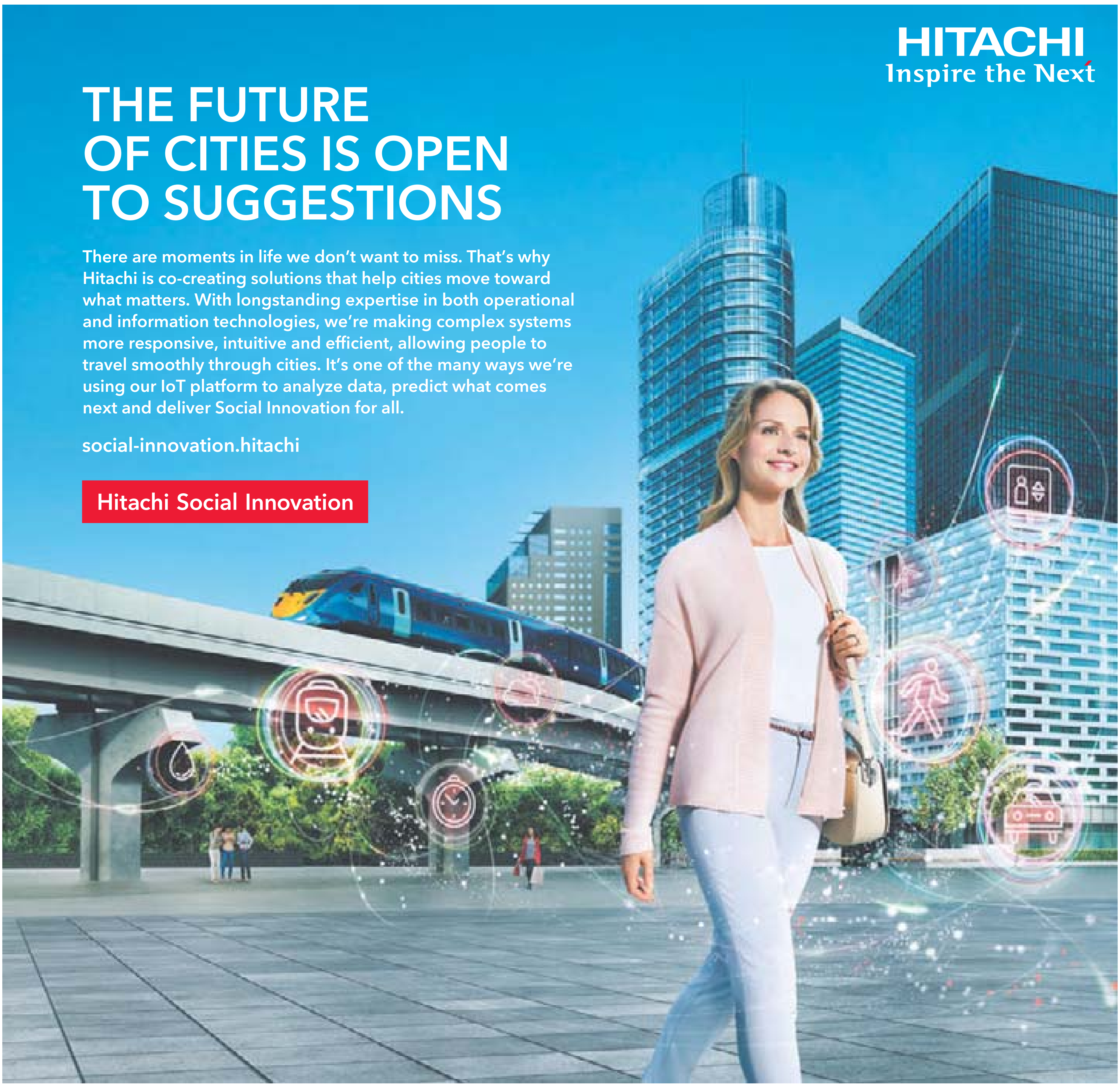
On Monday, Mr. Trump scheduled meetings with Israeli Prime Minister Benjamin Netanyahu and French President Emmanuel Macron, and diplomats said North Korea and Iran were at the top of the agenda.

Mr. Trump also planned a dinner for Latin American leaders, with the political and economic crisis in Venezuela a chief topic.

While Messrs. Guterres and Trump are at odds about issues including the Iran nuclear deal and the Paris climate accord, they appear to share a common view on the need to make the U.N. more effective and influential, diplomats said.

BRENDAN MCDERMID/REUTERS

President Donald Trump urged curbs to U.N. bureaucracy.



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Syria Regime, U.S. Allies Jockey for Edge

Contest is playing out in Deir Ezzour, the last province largely under the extremists' control

A fighter with the U.S.-backed Syrian Democratic Forces watching Islamic State movements on the eastern outskirts of Deir Ezzour.

AHMED DEEB FOR THE WALL STREET JOURNAL

In the last Syrian province largely under Islamic State control, U.S.-backed forces are on a collision course with the Syrian and Russian militaries as both sides scramble to strengthen their hands ahead of postwar negotiations.

*By **Maria Abi-Habib** and **Raja Abdulrahim** in Beirut and **Nathan Hodge** in Okeirbat, Syria*

The contest for territory is playing out in Deir Ezzour, an oil-rich province where Islamic State has fought to protect its revenue streams and preserve what remains of its rapidly shrinking caliphate.

The Damascus-based Syrian government, backed by Russia and Iran, wants Deir Ezzour's resources to repair a shattered economy and replenish its coffers by exporting oil. It could also help Tehran establish a route over land to Beirut to support its Lebanese allies.

The U.S.-backed forces, who are led by Kurds, are also fighting Islamic State but wary of giving ground to the Syrian regime. Kurdish leaders want to use the province's wealth as a bargaining chip that could help them secure greater autonomy in Syria.

"The Kurds are trying to get as many cards in their hands as possible for the time when everyone sits around the table to play the big game. The scorecards that everyone will be looking at when they sit around the table and think, 'Who has the most and can ask for the most?' " said a senior Western diplomat who is based in the Middle East and focused on the Syria conflict.

With these different armed groups closing in on Deir Ezzour, forces backed by the U.S. and Russia are sometimes fighting within a few miles of each other, raising the risk of missteps that could inflame tensions.

On Saturday, Russian military forces attacked a location in Deir Ezzour east of the Euphrates River where they knew troops from the U.S.-led coalition and allied Syrian rebels were operating, the U.S. military said.

The strike injured several members of the U.S.-backed group, known as the Syrian Democratic Forces, according to a statement from the U.S.-led coalition. The statement added that the U.S. would seek talks with its Russian counterparts to avoid future conflicts.

The Russian military provided extensive air support to Syrian government forces during their lightning advance on Deir Ezzour. And this past week, Russia's defense ministry launched a major public-relations offensive to capitalize on those gains by the central government.

Russian military helicopters ferried international news crews to Deir Ezzour on Friday, capturing scenes of life returning to a semblance of normalcy in government-held areas of the provincial capital, also known as Deir Ezzour.

The Russian military also brought reporters to Okeirbat, a town in central Syria that was recaptured from Islamic State militants at the beginning of the month, enabling the government advance.

The town, emptied of inhabitants, still bore signs of heavy fighting, including airstrikes that had penetrated concrete warehouses Islamic State fighters used for maintaining captured tanks and converting armored vehicles into massive suicide bombs, Russian military officials said.

Over the past two months, the U.S. has pushed for a deconfliction line along the Euphrates River to coordinate the separate battles to retake Islamic State-held territory in Deir Ezzour. Washington has reached agreement with its Russian counterparts on deconfliction in other parts of Syria.

The talks between Washington and Moscow stalled, according to a U.S. official, and this month Damascus and its allies advanced into Deir Ezzour city.

Days later, the Kurdish-led Syrian Democratic Forces, backed by the U.S. military, pushed south to box in regime forces, potentially cutting off Damascus and Moscow from advancing further east, toward the Iraqi border and the province's lucrative oil fields.

Delsos Derrik, an SDF commander involved in the push along the Euphrates River, said his forces hadn't expected to advance into Deir Ezzour province until Raqqa had been fully captured. But they didn't trust the regime to remain west of the river. "For that reason we have advanced in order to block them," Mr. Derrik said.

Syria's Kurdish minority has used the country's multisided war to carve out a semiautonomous region in Syria's north while mostly avoiding conflict with Damascus and its allies on the battlefield.

The Kurdish minority is now scrambling for as much territory as it can effectively hold to increase leverage in any postwar negotiations, according to Western diplomats. In Deir Ezzour province, the Kurdish presence is negligible but the oil fields are seen as one of the biggest prizes left to be conquered in Syria as Islamic State's hold weakens.

That has left the Kurds and the Damascus government separated only by the Euphrates River, now about 2 miles apart. The U.S.-led coalition recently said it wouldn't move into Deir Ezzour city, on the western side of the Euphrates.

It isn't yet clear whether Washington and Moscow can reach an agreement to allow the Kurdish-led forces to take the lead and recapture the province's oil fields. If no agreement is reached, diplomats say, the situation could devolve into a race to seize Syria's oil assets.

"There is no grand deconfliction plan," a Western diplomat said.

Iraqi Court Aims to Block Kurdish Independence Vote

Iraq's Supreme Court ruled the semiautonomous Kurdish region should suspend an independence referendum scheduled for next week, though the Kurds have so far

*By **Ben Kesling** in Baghdad and **Paul Sonne** at the United Nations*

ignored the court's decision and other last-ditch efforts to stop it from carving a new country out of Iraq.

Monday's decision marks the latest opposition—both local and international—to the vote. Kurdish officials say a door is still open to postponing the referendum, which some observers see as a powerful lever to extract more aid from the West, if they are given certain unspecified concessions by the central government and Western nations.

"Because the requests fulfill the legal conditions, the court has issued a 'temporary halt decision,' " the high court said.

The order came after Prime Minister Haider al-Abadi, a staunch opponent of the referendum, filed a request to the court to declare the vote unconstitutional.

The court didn't say when it would make a final decision on the matter.

In recent days, U.S. and international diplomats have shuttled through the country in a last-ditch effort to persuade the Kurds to wait on the vote, scheduled for Sept. 25.

But the region's president, Masoud Barzani, has refused all offers, a move senior Western diplomats said indicated he could be holding out for greater concessions.

"In case Kurdistan's authorities do not respond to the court decision, the Iraqi government and Prime Minister Abadi have wider authorities to deal with the situation," Iraqi legal analyst Haider al-Sufi said on a state television broadcast. "And the prime minister will be able to adopt any decision he sees suitable as prime minister and as commander-in-chief."

Mr. Abadi on Saturday said he would consider deploying Iraqi troops and using military force if the referendum triggers violence.

Voting is scheduled to take place not just in predominantly Kurdish areas—where the referendum is likely to be wildly popular—but also in ethnically mixed areas whose populations have been displaced by the war against Islamic State.

Iraqi Kurds have long sought independence. They chafed under the rule of late dictator Saddam Hussein, who eventually granted them de facto semiautonomous status, and they built on that status after his ouster in 2003.

Today, the region fields its own military, called the Peshmerga.

It doesn't require visitors to obtain an Iraqi visa to enter, despite the fact the region is technically on Iraqi soil, instead making some visitors get a Kurdish visa.

Mr. Barzani first announced his intention to hold an independence referendum in 2014, after which it was postponed. This June, he announced the new date.

Neighboring Iran, which supports the large Shiite Muslim militias fighting alongside Mr. Abadi's forces in the battle against Islamic State, on Sunday threatened to close its border if the referendum were to proceed.

The White House on Friday issued a statement opposing the effort.

The United Nations also opposes the timeline, saying it would be a distraction in the fight against Islamic State.

After Attacks, U.K. Considers Arming More Police

BY AMANDA COLETTA

LONDON—In a police station in a crime-plagued South London district, Sgt. Guy Mantoura recently sent his night-duty officers off on their beats with batons, incapacitating spray, handcuffs and six Tasers. In a tradition many see as quintessentially British, none was issued a gun.

But after five terrorist attacks in seven months, along with a recent rise in crime, pressure is increasing on police in tradition-bound Britain to reassess their 188-year-old policy of not routinely arming officers, except in Northern Ireland.

The National Police Chiefs' Council, which is responsible for coordinating national police operations, announced in July it was conducting an unprecedented review of the country's armed response to terrorism. In England and Wales, only 5% of police officers carry firearms.

In the past, opposition to arming police officers has come from the officers themselves, who have argued they don't need guns because tough restrictions limited the circulation of legal and illegal guns.

But that is changing. London's Metropolitan Police says the number of guns being smuggled into the U.K. is "worrying," and there are fears terrorists might use them to carry out marauding attacks. Only 6% of Metropolitan Police officers surveyed in January by their union said the number of armed officers was adequate.

"There is a much stronger movement for arming the ordinary bobby than I can ever remember," said Clive Emsley, a professor of history and criminology at the Open University. One factor likely animating that shift was the fatal stabbing of unarmed police Constable Keith Palmer as he stopped terrorist Khalid Masood from entering the Parliament buildings in March.

Senior police officials say they have foiled six terrorist plots since then in what they have described as a "summer like no other." But driving home the persistence of the threat, a homemade bomb exploded on a packed subway train in southwest London on Friday, injuring more than two dozen people.

In the police station in Peckham, a South London neighborhood with some of the U.K.'s highest violent-crime rates, Constable Damon Blackman endorses the rethink. A police medic trained to carry a Taser, he responded to the June 3 terrorist attack at London Bridge that left eight people dead. He said he believed more lives could have been saved if the first responders had been able to shoot the attackers before they rampaged through nearby Borough Market.

His colleague Constable Lorcan Searson, however, said arming police could hurt relations with the public.

"I've been in a few fights and I've never really felt like I needed a gun," he said as he patrolled a neighborhood street dotted with fried-chicken joints and barbershops in a police cruiser. Moments later, he and his partner responded to a request for backup at a street skirmish between two families over an allegation of domestic violence. Without the use of guns, the officers took 10 minutes to calm the situation, arresting one man. "You can talk 98% of the people down," Mr. Searson said.

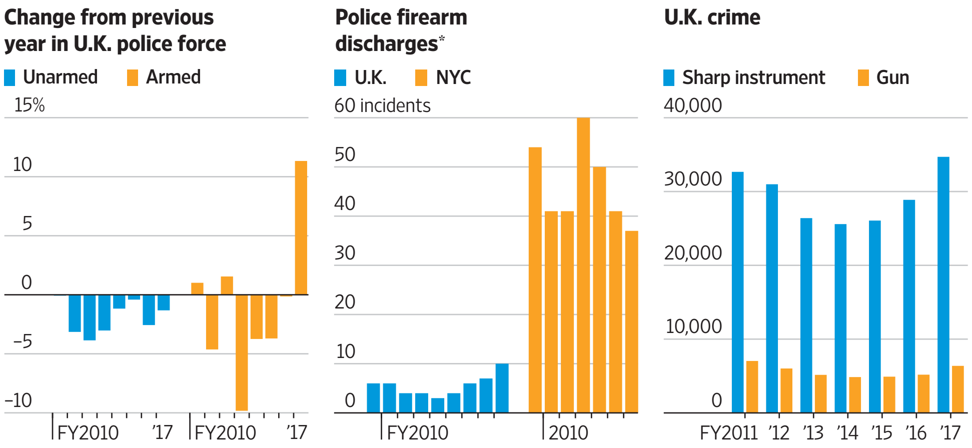
An independent review in 2016 of London's preparedness for a major terrorist attack noted that cities such as Paris and Brussels suffered attacks despite the prevalence of gun-carrying officers. And even if it was possible to put heavily armed officers on the streets, the review concluded, it wouldn't be reassuring to the public.

Few in Britain believe it makes sense to arm every officer. Metropolitan Police Commissioner Cressida Dick, London's top cop, said after the London Bridge attack that routine arming was neither sensible nor practical.

But she has been open to putting more armed officers on London streets. She has asked the government for more resources, arguing that ordinary bobbies are being diverted from basic policing to deal with what she called a "shift in the terror threat."

Arming Up

Only a handful of police officers in the U.K. are armed with guns and they open fire infrequently.
But the growing specter of violent crime and terrorism is pushing police to re-evaluate the policy.



Note: Fiscal year ends March 31. *Excludes accidental, animal destruction, police training and tire deflation

Sources: Home Office (force size); National Police Chiefs' Council and Home Office (U.K. firearm discharges); New York Police Department (NYC firearm discharges); Home Office (crime)

THE WALL STREET JOURNAL.

Why 'Bobbies' Have Long Been Unarmed

LONDON—The decision not to arm British police officers was made when Sir Robert Peel, then the home secretary, founded the Metropolitan Police in 1829. Police officers were nicknamed "bobbies" after him, and a conscious effort was made to differentiate them as much as possible from the heavily armed British army, which the public then viewed with considerable hostility.

That marked the beginning of a tradition of "policing by consent"—the idea that a police officer's primary duty is to the public rather than to the state, as it is elsewhere. In the U.S., for instance, police power is derived from the states under the 10th Amendment, which recognizes states' right to manage their affairs.

Outfitted in top hats and tightly buttoned blue tunics—a deliberate color choice to set them apart from the red coats of the British army—the first bobbies patrolled their beats on foot, equipped with nothing but a wooden truncheon and a whistle. Those in particularly dangerous areas carried cutlasses.

In 1863, police adopted the high-top "custodian" helmets some still wear now.

—Amanda Coletta

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Shinzo Abe's party's chances look bright, partly because of opposition turmoil and wide support for his hard stance on North Korea.

Japan's Abe Hints at Snap Election for Lower House

By Peter Landers

TOKYO—Japanese Prime Minister Shinzo Abe hinted that he would call an election for the powerful lower house of parliament, taking advantage of opposition disarray to seek a vote of support for his close alliance with President Donald Trump on North Korea.

Local media said the election would likely take place Oct. 22.

The ruling coalition led by Mr. Abe's Liberal Democratic Party would be a heavy favorite, thanks partly to support for his policy of putting pressure on North Korea after its nuclear and missile tests in recent weeks.

Polls over the past week have shown support for Mr. Abe's cabinet rising above 40% to as high as 50% after falling as low as 30% in the summer.

"The North Korean provocations are causing concern, and people feel that they want strong leadership," said Koji Murata, a professor of politics at Doshisha University.

Opposition parties earlier this year accused Mr. Abe's government of doing favors for his friends, including helping one get approval for a veterinary school.

The scandal has died down without producing any evidence that Mr. Abe was personally involved in helping the school head, and Prof. Murata said voters were "getting bored" with it.

Mr. Abe told reporters at Tokyo's Haneda Airport that he would make a decision on the timing of the election after returning to Japan late this week from a trip to the United Nations.

That suggested he was planning one because he usually responds to questions about calling an election by denying any consideration of the idea.

In an interview conducted Sept. 12, he told the Nikkei newspaper, "I am absolutely not thinking about it."

The Japanese leader has emerged as one of Mr. Trump's most steadfast allies. They have met or spoken by phone more than a dozen times this year, frequently after North Korea missile tests. Japan is beefing up its own missile defenses but still relies on the U.S. military for protection, including a nuclear deterrent.

"The solidarity of the international community is being put to the test in response to the repeated dangerous provocations by North Korea," Mr. Abe said Monday as he departed for the U.N. General Assembly.

One election advantage for Mr. Abe is turmoil in the opposition. The Democratic Party, which has the most parliament seats among opposition groups, has suffered defections and recently elected its fourth leader in three years.

Another potential opponent of Mr. Abe is popular Tokyo Gov. Yuriko Koike, who led a regional party to victory over Mr. Abe's Liberal Democrats in July elections for Tokyo's assembly.

Lawmakers close to Ms. Koike are moving to create a national party, but analysts said it would be hard for them to find candidates and money for a national campaign if the election were just a month away.

Unless Gov. Koike herself runs for parliament—an idea that she has rejected—her forces would likely gain only a limited number of seats beyond a handful of unaffiliated incumbents planning to join her camp, said Yasuharu Ishizawa, a professor at Gakushuin Women's College.

The last election to the lower house in Japan was held in December 2014, and Mr. Abe's coalition won more than two-thirds of the seats in the chamber.

Lower House

- Currently has 475 members; will fall to 465 after the next election.
- More powerful of parliament's two chambers because it selects the prime minister and can pass a national budget on its own.
- Members serve a maximum four-year term. Prime minister can dissolve the lower house at any time, and an election must follow within 40 days.

—Peter Landers

Allied Warplanes Fly Over Korea

By Kwanwoo Jun

SEOUL—The U.S. flew two B-1B bombers and four F-35 stealth fighters over the Korean Peninsula in a show of force ahead of the United Nations General Assembly meeting at which world leaders will discuss how to contain North Korea's nuclear ambitions.

Monday's exercise, which followed one on Aug. 31, was in direct response to North Korea's launch of a missile over Japan last week, the U.S. Pacific Command said in a statement. This month, Pyongyang carried out its sixth nuclear test, its most powerful so far, defying international efforts to get it to change course.

Four South Korean and four Japanese jet fighters also took part in Monday's drill, which involved practicing attack capabilities by releasing live weapons at a training area, the military said.

"U.S. Pacific Command maintains the ability to respond to any threat in the Indo-Asia-Pacific theater at a moment's notice," it said.

South Korean defense officials said the U.S. aircraft carried out the bombing exercise for 2½ hours before flying north near the border with North Korea and returning to their home bases in Guam and Japan.

There was no immediate response from Pyongyang through its state media, which often denounces U.S. flyovers.

The U.S. has been increasing pressure on North Korea, looking to rally world leaders to stop the regime from advancing its nuclear and missile programs. The U.N. Security Council last week toughened its sanctions on the country.

The White House over the weekend again called on North Korean leader Kim Jong Un to give up his nuclear weapons. U.S. President Donald Trump, who was set to address the U.N. General Assembly on Tuesday, has maintained that military options are on the table.

North Korea has shown no signs of giving up its nuclear weapons, and many analysts say it is unlikely to do so.

Earlier Monday, Pyongyang appeared to hit out at China and Russia—which in the past have often taken its side—over their support for the latest round of U.N. sanctions, which target North Korea's oil imports and textile trade.

"Big, neighboring countries, which do not want to see the DPRK getting stronger...are following the U.S. action," party newspaper Rodong Sinmun said, using the acronym for the country's name.


OUTH KOREAN DEFENSE MINISTRY/GETTY IMAGES

U.S. F-35Bs dropped ordnance during the joint drill on Monday.

Russia, China Begin War Games

By Thomas Grove

MINSK, Belarus—Russia and China launched joint war games in the North Pacific on Monday, showcasing a budding military partnership and giving Moscow a venue to double up on its display of military might as world leaders convene at the United Nations.

Chinese and Russian forces are set to conduct eight days of land and sea drills, including defending ships from attack by air or by other surface ships, the Chinese Defense Ministry said.

No formal military alliance exists between Russia and China, but they are developing common equipment and techniques that allow them to train and fight together.

"They are building a de facto alliance," said Vasily Kashin, a military expert and China specialist at the Higher School of Economics. "They want to understand on a granular level how their two militaries can cooperate."

At the same time, Russia is winding down one of its biggest military exercises since the Cold War. As leaders began to assemble in New York for the annual U.N. General Assembly, Russian President Vladimir Putin made the pointed gesture of staying in Russia on Monday to observe the military games, known as Zapad, just outside his hometown of St. Petersburg.

For Russia, the latest exercises are a form of diplomacy in their own right. Moscow is facing lingering problems over international refusal to recognize its annexation of the Black Sea peninsula of Crimea from Ukraine in 2014. It is also facing broader sanctions from the U.S.

"Russia is trying to show Europe and the United States that it is ready for a full-scale war and that is why we should all sit down and talk about geopolitics on Russia's terms," said Arseny Sivitsky, director of the Belarus-based Center for Strategic and Foreign Policy Studies, which is close to the Belarusian foreign and defense ministries.

Though the exercises with China highlight Moscow's relationship with a powerful partner, Russia and China are in many respects rivals.

WORLD WATCH

CHINA

U.S. Trade Chief Excoriates Beijing

President Donald Trump's trade chief said China represented an "unprecedented" threat to the world trading system, saying its state-driven economic system posed a "substantially more difficult" challenge than in the past.

"The sheer scale of their coordinated effort to develop their economy, to subsidize, to create national champions, to force technology transfers, and to distort markets in China and throughout the world is a threat to the world trading system that is unprecedented," U.S. Trade Representative Robert Lighthizer told an audience at the Center for Strategic and International Studies, a Washington think tank.

—William Mauldin

UNITED KINGDOM

Price Pressure Likely To Stay: BOE Chief

Britain faces a prolonged spell of inflationary pressure as it reorients its economy toward new markets and away from the European Union, Bank of England Gov. Mark Carney said.

In remarks prepared for delivery in Washington, Mr. Carney said Monday that Britain's planned departure from the EU in 2019 is already fueling faster inflation in the U.K. as weak investment and falling immigration restrain the economy's capacity to expand.

He reiterated the BOE's message that interest rates may need to rise "within months" to keep a lid on price growth, after annual inflation reached 2.9% in August, well in excess of the BOE's 2% target.

—Jason Douglas

EUROZONE

Inflation Projected To Slow in Early '18

Inflation will probably slow to 0.9% in the first quarter of 2018, some way from the European Central Bank's target of just below 2%, the bank said on Monday in its monthly report. Inflation had accelerated to 1.5% in August, close to the target.

The projected slowing reflects year-to-year developments in oil and unprocessed food prices, which are important but volatile components of broader inflation data, the ECB said. Both rose strongly at the start of 2017 but have since moderated, which will weigh on annualized price growth in early 2018, it said.

ECB officials tend to look past temporary price movements, focusing instead on core inflation, which excludes energy and food.

—Tom Fairless

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White House Still a No on Climate Deal

Economic chief Gary Cohn holds a meeting on Paris deal ahead of annual U.N. gathering

President Donald Trump's top economic adviser reiterated the White House's position that the U.S. stance on the Paris climate accord hasn't changed, following signals over the weekend that the U.S. was exploring ways to remain in the 2015 pact.

By Emre Peker, Nick Timiraos and Russell Gold


NICHOLAS KAMM/AGENCE FRANCE-PRESSE/GETTY IMAGES

Trump adviser Gary Cohn

White House economic chief Gary Cohn's breakfast discussion on energy and climate matters in New York followed a similar meeting led by Canada, China and the European Union in Montreal on Saturday, when U.S. officials broached revising Washington's goals under the Paris accord to avoid pulling out of it, according to officials at the event.

"Consistent with the president's announcement in June, we are withdrawing from the Paris Agreement unless we can re-engage on terms more favorable to the United States," said a White House statement issued following the meeting Monday, which comes on the opening day of the United Nations General Assembly. "This position was made very clear during the breakfast."

Mr. Cohn, who is leading the White House's stance toward the 197-party accord, was holding the meeting to discuss how the U.S. could continue to reduce greenhouse-gas emissions without sacrificing its re-emergence as a leading energy producer, according to a White House official. The initiative to hold an informal meeting in New York materialized shortly before the Montreal event, according to an invitation letter from Mr. Cohn, and it was interpreted by some U.S. partners as a harbinger of a policy shift on climate.

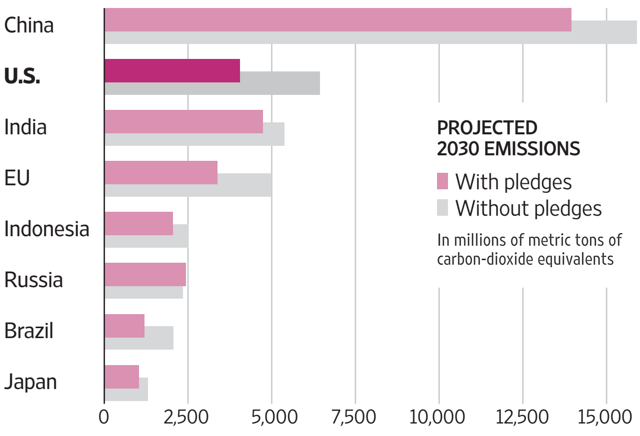
Yet Mr. Cohn didn't table a policy revision, according to an official familiar with the discussions, telling participants the U.S. would remain party to the Paris accord "under the right conditions, but these are not there yet." That came as a disappointment to some of the attendees, who were dismayed that the U.S. offered to re-engage with international partners on fighting climate change without offering a plan on it.

Trump administration officials on Sunday confirmed the president remained open to revising U.S. commitments under the Paris accord rather than quitting the pact.

The White House has said such a position isn't a shift: Mr. Trump said in June that the U.S. would withdraw from the pact "but begin negotiations to re-enter either the Paris accord or an...entirely new transaction, on terms that are fair to the United States."

Air of Uncertainty

Under the Paris accord, participants would curb emissions aimed at keeping global temperatures from rising above a danger threshold.



Source: Michel den Elzen, PBL Netherlands Environmental Assessment Agency

THE WALL STREET JOURNAL.

But Mr. Trump, a Republican, has repeatedly boasted of withdrawing from what he has called a "job-killing" deal and hasn't emphasized revising the country's participation in the pact.

Asked Sunday by ABC News whether the U.S. could remain in the Paris pact, national security adviser H.R. McMaster said: "If there's an agreement that benefits the American people, certainly."

Secretary of State Rex Tillerson told CBS News: "The president is open to finding those conditions where we can remain engaged."

Remarks by the top U.S. national-security official and diplomat reflected the message offered by the U.S. delegation, led by White House senior adviser Everett Eissenstat, to representatives from 34 governments in Montreal Saturday, according to a person familiar with the discussions.

Mr. Trump's envoy, who is deputy director of the National Economic Council, the White House office led by Mr. Cohn, said the U.S. couldn't carry forward with targets set by the Obama administration. Mr. Eissenstat said the White House continued its review of those commitments, the person said. Meanwhile, the U.S. said it would participate in climate talks, remain active and be constructive, the person said.

Participants at the Montreal gathering said Mr. Eissenstat's remarks fueled optimism among proponents of the Paris deal. Since Mr. Trump's inauguration in January, officials from China, the EU and Canada have tried to convince his administration that fighting climate change could also prove an economic boon.

Businesses mostly declined to discuss the administration's position, while indicating it wouldn't affect clean-energy investments.

Many firms are shifting to less carbon-intensive fuels and renewable energy to satisfy customer preferences and because these fuels have become less expensive and more competitive. Most also operate in multiple countries, including in jurisdictions still pursuing ambitious climate regulations.

"Reducing emissions cost effectively remains an important part of our strategy," said Neil Nissan, a spokesman for North Carolina-based power company Duke Energy, which plans to cut carbon emissions by 40% by 2030.

The Paris deal, brokered under a U.N. framework, calls on countries to meet a commitment to limit the global temperature increases to "well below" 2 degrees Celsius (3.6 degrees Fahrenheit), compared with preindustrial levels.

Mr. Cohn had argued in favor of remaining party to the Paris deal before the president's June decision, though he remains committed to Mr. Trump's policies, a White House official said.

—Paul Vieira, Ben Leubsdorf, William Mauldin, Bradley Olson and Sarah Kent contributed to this article.

Next Steps Unclear On Climate Deal

President Donald Trump said in June that the U.S. would exit the Paris climate accord, while leaving open the possibility of renegotiating the deal or crafting an "entirely new transaction." In recent days, American officials said the U.S. could remain in the climate accord if it could revise its commitments. Here is a closer look at the Paris agreement and the process of withdrawing from it.

Technically, Mr. Trump can't pull the U.S. out of the agreement for several years.

Mr. Trump's June announcement was only the beginning of a multiyear process for extricating the U.S. from the deal. According to the agreement, countries can exit only three years after the effective date of the deal. That was Nov. 4, 2016. Once November 2019 comes, Mr. Trump could request to exit from the accord, and after that, the U.S. could be out as early as November 2020.

The level of U.S. commitment is nonbinding.

The Obama administration agreed to aim to reduce carbon-dioxide emissions by 26% to 28% below 2005 levels by the year 2025. Mr. Trump could ease that goal, which is voluntary, and make it less ambitious.

Renegotiation could be difficult.

Mr. Trump has said the U.S. could seek a new deal or try to reopen negotiations on the Paris agreement. But experts say such a process would be difficult, because nearly all nations agreed on the pact in 2015, and leading economies have said they would continue with the original deal if the U.S. leaves.

The administration has sent mixed signals.

Trump advisers told a group of climate officials in Montreal on Saturday the U.S. could remain engaged in the Paris accord. In June, Mr. Trump said the U.S. would seek to renegotiate on "terms that are fair." But Mr. Trump has boasted of withdrawing the U.S., making no mention of revising U.S. participation.

A future administration could rejoin the agreement.

Environmental groups say the Paris agreement was designed to be durable and withstand shifts in global climate politics.

FED

Continued from Page One

ment in a way that is really impressive. Markets didn't freak out. Nobody said 'boo,' " said Austan Goolsbee, who headed the White House Council of Economic Advisers in 2010-2011. Now, he said, "The final exam, with the grade yet to be determined, is can the Fed actually get out of this stuff."

Other central banks that adopted such programs are watching, particularly the European Central Bank, which is considering whether to wind down its asset purchases next year.

When central bankers began these unconventional campaigns, "we had no idea what we should buy, how much, for how long," said David Blanchflower, a Dartmouth College economist who was on the Bank of England's monetary policy committee from 2006 to 2009. Similarly, "there is no idea on the way going out."

Markets' ho-hum reaction so far prompted J.P. Morgan Chase & Co.'s James Dimon to warn this summer against complacency. The Fed's unwind "could be a little more disruptive than people think," the CEO said at a conference in Paris. With other central banks set to pull back on stimulus, "the tide is going out."

Added Matthew Jozoff, J.P. Morgan's mortgage-debt strategist: "We have never seen a central bank exit out of $1 trillion of mortgage-backed securities, so we are concerned about how this is going to go."

What could go wrong is hard to predict. When the Fed discussed plans to pare its purchases of new bonds in 2013, a tumble in prices sent yields soaring, in what was called the taper tantrum. The unanticipated turmoil included capital outflows from emerging markets. Fed officials' desire to avoid a replay has driven careful planning for the balance-sheet wind-down, according to current and former Fed officials.

The Fed launched its bond buying in late 2008, at the depth of the financial crisis, to shore up money-market funds, companies and banks.

A government takeover of housing-finance giants Fannie Mae and Freddie Mac had failed to thaw the mortgage market. So the Fed began buying hundreds of billions of dollars of their debt and mortgage-backed securities to get mortgage rates down.

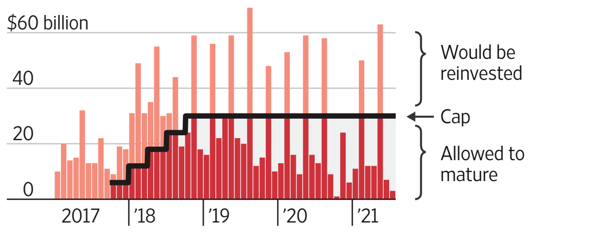
Maturing Assets

The Fed's plan to shrink its bond portfolio will allow increasing amounts of assets to mature or be paid off without being replaced with new securities.

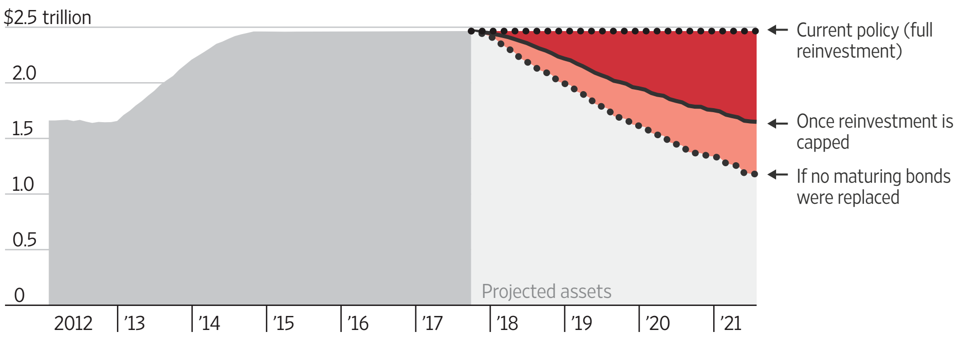
Treasurys

Currently, the Fed reinvests maturing Treasurys to keep its asset portfolio steady. Now, it plans to allow some—up to a monthly cap—to mature without reinvestment.

Value, by month, of maturing Treasurys held by the Fed



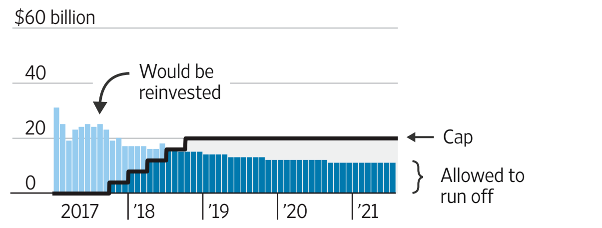
Treasurys held by the Federal Reserve



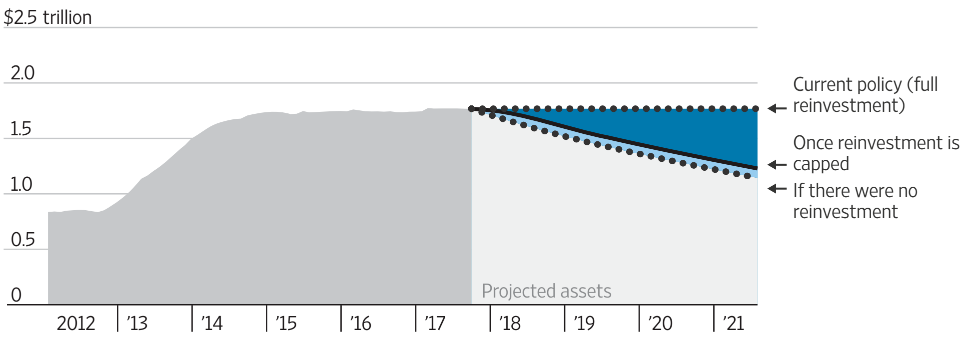
Mortgage-backed securities

At present, the Fed also reinvests the payments it receives on its vast mortgage holdings. The cap on reinvestments is set so that by late 2019, under current rate forecasts, all repayments will run off each month.

Value, by month, of principal paid down on the Fed's mortgage-backed-security holdings*



Mortgage-backed securities held by the Federal Reserve



*Assumes forecast in which interest rates do not fall significantly.
Note: Scenarios assume portfolio size normalizes in 2021 at around $3.3 trillion and that the plan starts in October.
Source: Federal Reserve Bank of New York

Nick Timiraos and Andrew Van Dam/THE WALL STREET JOURNAL.

The Fed later decided it needed to do more to support the economic recovery, and over the next three years it launched two other bond-buying rounds to lower long-term interest rates and keep inflation from going below zero.

Buying long-term bonds sends some investors into riskier assets, buoying stocks, corporate bonds and real estate. Ultralow interest rates allowed millions of Americans to refinance, reducing foreclosures and freeing up cash for spending.

Problems some critics warned about, such as roaring inflation and currency debasement, haven't materialized. Labor markets have tightened, dropping unemployment to a 16-year low in July, while price pressures have been muted.

At the same time, the bond-buying has fueled concerns about frothy asset values, such as in commercial real estate. And while financial markets have boomed, economic growth and business investment have been unspectacular.

Research published by the Fed in April estimated its purchases have reduced by around 1 percentage point what economists call a "term premium," the extra yield investors demand for the risk of lending over a longer term.

Fed economists estimated this stimulus would decline slightly this year as markets anticipate the end of bond reinvestments. When the Fed's balance sheet returns to a more normal level, the term premium could still be around 0.25 percentage point lower than if the bond programs had never occurred.

The Fed, though it stopped adding to its holdings of bonds in 2014, has continued to reinvest the proceeds of those that mature. It owns $1.7 trillion in mortgage bonds issued by government-related entities, or about 29% of the market, and about $2.4 trillion in Treasurys, which is 17% of that market.

In June, the Fed said when it started to shrink its balance sheet it would do so by allowing a small initial amount of bonds—$4 billion of mortgages and $6 billion in Treasurys a month—to run off the portfolio without reinvestment. Every quarter, it will let a slightly larger amount do so, up to a maximum of $20 billion in mortgages and $30 billion in Treasurys a month.

For the next year or so, the Fed should still end up buying bonds in most months since only a small fraction will mature and go not replaced, said Richard Clarida, an economist at **Pacific Investment Management Co.**, or **Pimco**.

One question the central bank hasn't yet decided: How large should its balance sheet be at the end of the process?

Its holdings have swelled to $4.5 trillion from less than $900 billion before 2008. Though they will fall, the Fed will end up with more assets than it had before the crisis because its liabilities have grown—there is more currency in circulation. The balance sheet size could settle out at between $2.4 trillion and $3.5 trillion sometime early next decade, New York Fed President William Dudley said in a speech earlier this month.

That would mean the Fed would end up selling only around $1 trillion to $2 trillion in securities after having added $3.7 trillion between 2008 and 2014.

One reason markets have been relatively unfazed is that central banks in Europe and Japan are still purchasing assets. The Fed wants to move now because the economy is on stronger footing. Its large holdings have become a political liability, with critics saying the mortgage-debt buying, in particular, exceeded the Fed's mandate once normal market functioning had been restored.

Hanging over the discussions has been the question of who will lead the Fed next year. Ms. Yellen's term expires in February, and Vice Chairman Stanley Fischer is giving up his seat. There are three other vacancies on the seven-seat board of governors.

By reaching unanimous agreement on the balance-sheet plan, the Fed has essentially resolved the issue for any successor to Ms. Yellen and given more certainty to markets.

The balance-sheet plan bears hallmarks of Ms. Yellen's meticulous, leave-nothing-to-chance leadership, said current and former Fed officials. The core of it came together three years ago. Officials said they would raise the federal-funds rate before starting on the balance sheet, and wouldn't be bond sellers.

The rate-setting committee ramped up discussions at its March 2017 meeting, weighing questions such as whether to set a fixed calendar or to condition a wind-down on economic conditions; the pros and cons of a phasing out of reinvestments vs. stopping cold turkey; and whether to treat mortgage bonds and Treasurys differently.

Other central banks that adopted such programs are watching, particularly the ECB.

After the March discussion, a majority—about 10 of the committee's 17 members—appeared to form a consensus: The Fed's plans should be predictable and passive. Tapering the pace of bond reinvestments would extend the process by a year, reducing the chance of spike in bond yields.

In regular calls and meetings to gain more feedback from committee members after the March meeting, Ms. Yellen gently highlighted the growing consensus to those who had different ideas.

Meantime, when minutes of the meeting revealed details of the discussion, markets shrugged, helping to move off the fence some who worried about acting too soon. By the Fed's June meeting, officials who were uneasy about moving ahead with rate increases voiced little concern about starting the balance-sheet plan, largely because it was so gradual.

"We won't know until we actually take the action, but I'm reasonably confident that it's not likely to be much of an event," said Boston Fed President Eric Rosengren. "We communicated it better this time."

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KC MCGINNIS FOR THE WALL STREET JOURNAL; DAVID GREEDY/GETTY IMAGES (LEFT)

Cedar Rapids, Iowa, recovered from a 2008 flood, left, in large part because it used federal funds, as well as city and private investments, to reinvent itself. Right, the NewBo City Market on Sept. 1.

City Bounces Back From Its Own Harvey

By Shayndi Raice

CEDAR RAPIDS, Iowa—This once-bustling city was facing all the challenges of former manufacturing hubs across the country when it wrote a 25-year plan to revive its business and residential life.

The plans didn't go very far, though—until the Cedar River flooded in 2008. Judged at the time to be one of the worst natural disasters in U.S. history, the flood left 10 square miles, or 14% of Cedar Rapids including City Hall and much of downtown, underwater.

In the years since, the city has worked with businesses, charitable foundations and nearly $1 billion in federal, state and local funds to transform itself, trading in dilapidated buildings and meatpacking plants for new office towers, loft-style condos, trendy coffee shops and bike lanes.

"Many, many people in our community will say they would not wish a flood like that on anyone, but it's the best thing that happened to us," said Chuck Peters, chairman of Folience, an employee-owned holding company that owns the local newspaper, the Gazette.

Natural disasters like Hurricane Harvey in Texas and Hurricane Irma in Florida are happening with increasing frequency. Cedar Rapids was able to use its disaster as a springboard into its future as a modern, more vibrant metropolis.

Two factors were critical to the transformation, local officials say. Cedar Rapids had a plan ready that it could quickly put in place, and the city was willing to jump in ahead of the private sector, despite a developing financial crisis, to get things started.

Cedar Rapids was a late 19th- and early 20th-century hub for food processing, steel manufacturing and technology. Aviation tech firm Rockwell Collins got its start here as Collins Radio in 1933 and is still the city's largest employer. But by the turn of the millennium, Cedar Rapids was in rough shape, battered by the late-1990s telecom bust and the U.S. manufacturing slump.

Snow melt after a harsh winter and heavy spring rains caused the Cedar River to flood, cresting at more than 31 feet on June 13, 2008, to surpass the previous record of 20 feet and overwhelm the city's flood defenses. The flood affected 4,766 homes and caused an estimated $6 billion in damage, according to data provided by the office of the city manager.

Investments from the private sector, coupled with disaster relief funds, have paid off. Gross domestic product for Cedar Rapids, Iowa's second-largest city with a population of some 131,000, has grown by nearly 40% to $18 billion in 2015, the most recent year available, from $13 billion in 2007, the year before the flood, according to Bureau of Economic Analysis data.

The number of area businesses has grown 25% since 2007, and downtown now has 674 residential units, a 62% jump, according to the Cedar Rapids Metro Economic Alliance. Total property values have risen 18%, the city says.

"We had an opportunity with a lot of federal and state money to really transform the place," said Doug Neumann, executive director of the economic alliance. "We did 25 years of development in five years."

The city bought up old, blighted properties and sold them, in one case becoming a developer itself. It rehabbed a dilapidated hotel in the center of downtown and added an entertainment and convention center next door for around $138 million.

In total, the city used $147 million in local, state and federal disaster relief money to purchase 1,375 properties. It has sold 428 so far. Any proceeds from the sale of land went to repay disaster-relief funds, said Caleb Mason, an economic development analyst with the city of Cedar Rapids.

With the global economic crisis just kicking in, city leaders said they had to take the lead on rebuilding. "There was an apprehensive feeling from the private sector," said Mayor Ron Corbett, who was elected in 2009. "If you're not willing to invest, why would others?"

The approach, coupled with corporate tax incentives, has led a string of big employers to move downtown. "We somewhat stuck our neck out for the community and said we wanted to go downtown," said Duane Smith, chief executive of insurance firm TrueNorth Cos. Since moving downtown, TrueNorth has doubled its size to 300 employees.

The neighborhood south of downtown office towers now offers something Cedar Rapids has long lacked—a trendy arts and culture district. The area, called NewBo, was once a home to abandoned meatpacking plants. After the flood, the city built a large farmers market there; private developers followed. Joe Ahmann, a local developer, says he has invested about $40 million in NewBo, building and developing multi-use projects around the market.

New Storm Menaces Caribbean

By Dudley Althaus And José de Córdoba

FAJARDO, Puerto Rico—Hurricane Maria, a Category 3 storm that is rapidly gaining strength, barreled toward the Caribbean's outlying eastern islands early Monday with Puerto Rico in its sights.

Maria became a hurricane overnight Monday and is expected to become a Category 4 storm by the time it cuts through the belly of Puerto Rico on Wednesday morning, according to the U.S. National Hurricane Center. Puerto Rico Gov. Ricardo Rosselló said Sunday that the storm posed a "serious menace" to the island.

Although Maria, packing 110-mph winds, was tracking south of the islands devastated by Hurricane Irma two weeks ago, tropical storm force winds and rain are expected to hit St. Martin and the U.S. Virgin Islands this week.

Maria's current path is expected to take it over or very near St. Croix, the U.S. Virgin Island largely spared the previous storm's wrath.

This week's storm is aimed directly at the islands that were expected to pick up much of the cruise ship and other tourism business lost to the destruction of the Virgin Islands, Anguilla and St. Martin.

Forecasters were warning of hurricane conditions for Guadeloupe, Dominica, Martinique and St. Kitts, Nevis and Montserrat on Monday. They advised Puerto Rico, where electricity remains off in some areas because of Irma's glancing blow, to closely monitor the storm.

"We are screwed," said Luis Díaz, who operates a taxi service in Fajardo, a port town on Puerto Rico's northeastern coast.

Mr. Díaz said Maria's trajectory was similar to Hurricane Hugo, which devastated the island in 1989, leaving parts of Puerto Rico without power for seven months.

Predicting as much as a foot of rain in some places, the National Hurricane Center said Hurricane Maria's "rainfall on all of these islands could cause life-threatening flash floods and mudslides."

Irma, a Category 5 storm when it slammed into the northern Caribbean early this month, killed at least 38 people on the islands, damaged or destroyed as much as 90% of the homes and other buildings in some places and stripped the land bare of lush tropical foliage.

Maria's approach raised the anxiety level over the weekend among residents of the Virgin Islands and others hit by Irma, many of whom have been nearly two weeks without electricity and roofs. Many of the aid flights and boats bringing food, water and other supplies to the stricken islands have been launched from Puerto Rico.

"We're being vigilant. We have systems, we have experience and we have strength. We also have faith," Hugh Riley, secretary-general of the Barbados-based Caribbean Tourism Organization, said as Maria approached the Leeward Islands.

"Protecting ourselves and our guests is now today's priority," said Mr. Riley, whose organization represents hotels and other businesses on the vulnerable islands. "Tomorrow we'll resume the cleanup and rebuilding process."

JONATHAN DRAKE/REUTERS

A damaged home in Charlotte Amalie, St. Thomas, U.S. Virgin Islands.

Meanwhile, Hurricane Jose, which had threatened the northern Caribbean a few days after Irma before turning north into the Atlantic, is moving slowly offshore the central U.S. Atlantic Coast. Although they expect Jose to remain at sea, forecasters are warning of dangerously heavy surf along the New Jersey coast northward in the coming days.

People in the tiny two-island nation of Antigua and Barbuda, the first to be hit by Irma, were busy preparing for the possible impact of Maria.

Suit Aims To End Fur Trapping

By Sara Randazzo

Animal-advocacy groups are attempting to abolish commercial fur trapping in California through a recently filed lawsuit that contends the state's fees are illegally low.

The suit claims the California Department of Fish and Wildlife and the state's Fish and Game Commission are violating a state law effective as of in 2013 that requires certain program costs to be covered by the fees they generate. Money collected from commercial fur-trapping permits, costing around $114 each, fall far short of paying for the resources needed to monitor and regulate trapping, the suit claims.

The commission and department each said they don't comment on pending litigation.

The plaintiffs, including the Center for Biological Diversity and Project Coyote, say the fees would have to be increased at least 10-fold to comply with the state law. Such a fee boost, they say, would effectively end the practice of trapping animals such as badgers, raccoons, mink and weasels.

"We're not living in the realm of…survival anymore, which is how trapping came about," said Jean Su, a staff attorney at the Center for Biological Diversity. "Times have to change."

KAREN NICHOLS/DAILY INTER LAKE/ASSOCIATED PRESS

The practice of killing coyotes for their pelts is the target of a lawsuit in California filed recently by animal-advocacy groups.

Trapping in California has already been severely curtailed over the years. Bobcat trapping was eliminated in 2015 at the urging of preservation groups. Other animals banned from trapping in the state include river otter and red foxes.

In the 2015-2016 season, the number of animals killed by trapping was 1,829, according to the suit, with a total fur value of just over $10,000. A coyote pelt that year, the lawsuit says, went for $33, a gray fox's for $13 and a muskrat's—$2.50.

Two years earlier, more than 9,000 animals with furs valued at $460,000 were trapped, the suit says. Much of the market for furs, which go toward making clothing items like coats and slippers, is overseas.

Northern California resident James Schmerker Jr., vice president of the California Trappers Association, said fur trapping is almost dead in the state, in part because of layers of regulations. "It's kind of a field for retired old guys…people trying to hang on to their heritage," said Mr. Schmerker, 53, who runs a wildlife-control business that uses traps. Licenses for pest-control businesses like Mr. Schmerker's aren't targeted by the lawsuit.

Trapping is most popular in California's far-northern counties and areas outside Sacramento, followed by Los Angeles, which has a gray-fox population.

Just 120 commercial trapping licenses were purchased in the most recent season, bringing in $13,500, according to the suit. The plaintiffs said they don't know the exact cost of running the trapping program, but that in 2015, the state estimated the cost of managing bobcat trapping alone at $160,000.

California is "illegally diverting public taxpayer funds to subsidize the costs of the State's commercial trapping program in the absence of adequately high user fees," the suit contends.

Flynn Gets a Defense Fund

By Rebecca Ballhaus

The family of former national security adviser Mike Flynn launched a legal-defense fund to help defray the former Trump administration official's costs associated with the investigation into Russian meddling during the 2016 U.S. presidential election.

The fund won't disclose how much it has raised or the identities of its donors, according to a person close to Mr. Flynn. It will not accept donations from President Donald Trump's campaign or the Trump Organization, or from the president himself, out of concern for "appearance issues," the person said.

It also won't accept foreign donations. The decision to shield the identities of donors supporting a former adviser whom Mr. Trump has called a "very good man" could raise questions about potential conflicts of interest, ethics experts said.

Paul Ryan, vice president of policy and litigation at advocacy group Common Cause, said the fund should disclose its donors, given Mr. Flynn's involvement in the continuing investigation, which he called a "very important matter of national security."

"This is one instance in which it's fair to expect a former public official to go above and beyond what any transparency laws require," Mr. Ryan said.

The fund's website talks up Mr. Flynn's ties to the president, noting that he was "considered a vice presidential candidate" during the campaign, and that he introduced Mr. Trump at "numerous campaign events across the country."

The fund hasn't decided whether to accept donations from White House employees, the person close to Mr. Flynn said. "There are many kinds of contributions that could present appearance issues, and decisions will have to be made in the future as those contributions are made, which can be accepted, and which cannot," the person said. The fund plans to refund any donations if officials can't discern the identity of the donor.

Mr. Flynn was ousted in February after he misled Vice President Mike Pence about his contacts with Russian officials before the inauguration. Since then, Mr. Trump has frequently praised him.

In March, after The Wall Street Journal reported that Mr. Flynn had told the Federal Bureau of Investigation and congressional officials that he would testify in exchange for immunity, Mr. Trump in a tweet urged his former national security adviser to seek immunity and called the investigation a "witch hunt" of "historic proportion."

Special Counsel Robert Mueller, who is investigating potential coordination between the Trump campaign and Russia in the election, is examining what role, if any, Mr. Flynn might have played in a private effort to obtain Democratic candidate Hillary Clinton's emails from Russian hackers, according to people familiar with the matter. Investigators are also using a grand jury to assist in a criminal investigation of the former White House adviser, focusing on his work in the private sector on behalf of foreign interests, including Turkey.

CAROLYN KASTER/ASSOCIATED PRESS

Mike Flynn was ousted as national security adviser in February.

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HACK

Continued from Page One

The Equifax hack has stunned many consumers, who are suddenly aware of their own vulnerability to what was long considered a necessary but largely opaque part of the country's financial plumbing.

More than 11.5 million people have signed up for credit-monitoring offered by Equifax in response to the cyberattack. Other people have frozen their credit reports with Equifax and rivals TransUnion and Experian PLC.

Equifax Chairman and Chief Executive Richard Smith has called the crisis the "most humbling moment in our 118-year history." Some lawmakers have called for his ouster, and investors shrank Equifax's stock-market value by about $6 billion, or more than a third, in 10 days before the stock slightly rebounded on Monday.

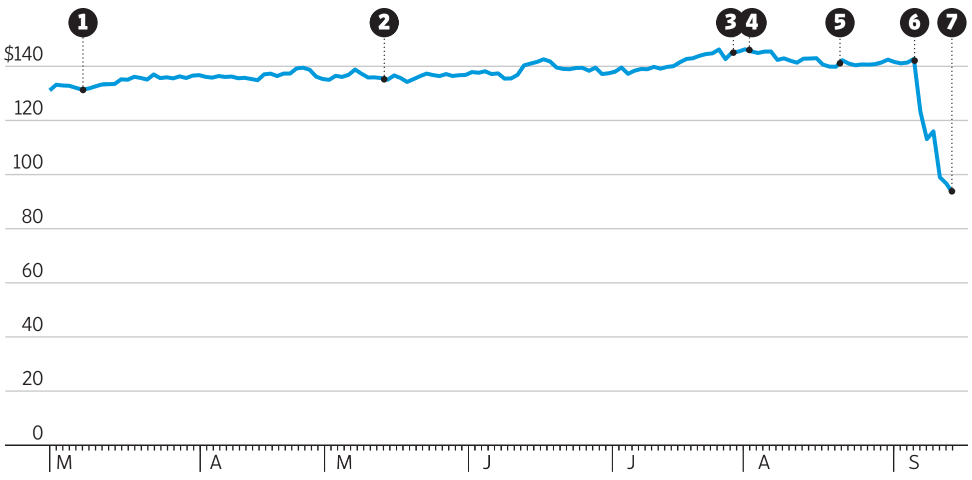
Although investigators are still grappling with who might be behind the Equifax break-in, the scale of the breach, sophistication of the hack and nature of the stolen data all point toward a state-sponsored actor, says a person familiar with the investigation.

JUSTIN LANE/EPA/SHUTTERSTOCK

Equifax Chief Executive Richard Smith, shown in 2007, has said the crisis is the 'most humbling moment in our 118-year history.'

Hacked and Beleaguered

Equifax's stock price fell 30% after its announcement of a massive data breach.



1 **March 8, 2017:** Researchers report security flaw in software that powers part of Equifax's website.

2 **May 13, 2017:** Hackers leverage this flaw to break into Equifax's customer dispute portal.

3 **July 29, 2017:** Equifax notices 'suspicious network traffic' and blocks it.

4 **Aug. 2, 2017:** Company brings in outside cyber investigators.

5 **Aug. 22, 2017:** Company registers the new domain name equifaxsecurity2017.com.

6 **Sept. 7, 2017:** Equifax announces breach potentially impacting about 143 million U.S. consumers.

7 **Sept. 15, 2017:** Company says security intrusion ran from May 13 to July 30.

Sources: FactSet; staff reporting

THE WALL STREET JOURNAL.

Similar to Yahoo

The breach bears similarities to the attack disclosed last year by Yahoo Inc.

In March, the Justice Department charged two officers with Russia's Federal Security Service, alleging the hack was part of an information-collection operation. A Russian official said the charges were part of an attempt to raise "the theme of 'Russian hackers' in the domestic political squabbles in the U.S."

"Credit bureaus are the tracks that the [credit] trains run on, and we should make sure those roads and tracks are sound if we're going to run a whole economy over them," said Louis Hyman, a consumer-credit historian at Cornell University.

On Sept. 7, Equifax said it had discovered the data breach July 29. There are signs that the problem took root long before then.

Cisco security researchers reported March 8 that hackers had found a flaw in Apache Struts, a widely used piece of open-source software used to build interactive websites.

The software is ideal for powering websites where customers need to complete online forms. At Equifax, Apache Struts powers part of the website where consumers can dispute errors in credit reports.

The vulnerability reported by Cisco would allow hackers to break into a company by sending data to a server that was specially crafted to take advantage of the flaw. It was the digital equivalent of popping open a side window to sneak into a building.

Apache, a project administered by a nonprofit foundation, issued a patch for the problem the same day. Two days later, the U.S. Computer Emergency Readiness Team, part of the Department of Homeland Security, sent out a notice about the vulnerability.

Cisco said its investigation found "a high number" of examples where the hack had been used. In an update Friday, Equifax said its security organization was "aware of this vulnerability at that time, and took efforts to identify and to patch any vulnerable systems in the company's IT infrastructure."

Apache Struts is used by many financial firms. One of those firms asked companies it sends data to and receives data from if they had shored up their vulnerability with the new patch, people familiar with the matter say. Equifax was one of the companies asked about the patch—and at the time it said it didn't have an issue, these people say.

Soon, though, other companies started to see suspicious activity. One large firm that links credit-card networks, merchants and lenders saw a spike in fraudulent activity from late May to early June, according to people familiar with the matter.

The firm was getting phone calls from people who said they had an account there and provided all four pieces of personal information typically needed for identity verification: name, address, date of birth and Social Security number. Equifax has said the same type of information was exposed.

Callers then asked the large firm to change the bank-deposit number for what they claimed was their business, people familiar with the matter say. The callers said the change was needed because they had changed banks.

Fraudulent calls

The firm usually gets about a dozen such calls a year, but it was suddenly getting a dozen a week, these people say. The firm determined that the people weren't who they claimed to be but had no idea what was behind the leap in fraudulent calls.

After Equifax disclosed its data breach, the other firm realized that the two sets of events were likely linked, say people familiar with the firm. Call volume at the firm has declined to normal levels.

Other companies have moved to systems that spread out consumers' personal data in different places. If there is a security breach, the chances of hackers getting all the data in one swoop are much lower, the people added.

Equifax said in its latest annual report that it is "regularly" a target of cyberthreats and has made "substantial investment" in security measures.

Jeff Dodge, an Equifax investor-relations official, said at a conference last November that "data security, and how we go about ensuring that, is something we spend a lot of time and effort on."

On July 29, the company's security team observed "suspicious network traffic associated with its U.S. online dispute portal web application," according to an Equifax press release. The team blocked the suspicious traffic, and an internal review continued.

Equifax then discovered the attack involved the Apache Struts vulnerability. The company hasn't explained why its earlier efforts to address the bug failed. Equifax said its security team patched the software before bringing the web application back online.

The bug exploited by hackers was "known and could have been fixed and patched," says Ted Schlein, general partner at venture-capital firm Kleiner Perkins Caufield & Byers, a major technology investor. Mr. Schlein also is a former executive at cybersecurity firm Symantec Corp. "If you are the purveyor and keeper of that much sensitive information, it's just terrible that you wouldn't have the highest security standards," he adds.

In an update Friday, Equifax said that while it "fully understands the intense focus on patching efforts, the company's review of the facts is still ongoing."

On Aug. 2, Equifax brought in Mandiant, the well-known cyber-investigations division of FireEye Inc., which investigated Yahoo's data breach. As Mandiant began combing through the digital wreckage, Equifax executives decided to hold off on making an announcement until they had more clarity on the number of people affected and the types of information that were compromised, according to a person familiar with the matter.

Three Equifax officials, including the company's finance chief, sold a total of about $1.8 million in stock Aug. 1 and 2, according to securities filings. Equifax has said they didn't know about the breach at the time of the stock sales.

Business as usual

In public, Equifax took a business-as-usual attitude. Investor-relations officials met with shareholders in Newport, R.I., New York, Boston and three other cities. In materials provided to investors, Equifax said it aimed to be "a trusted steward and advocate for our customers and consumers."

In the weeks after being called in, Mandiant told Equifax that the damage from the attack could be widespread, possibly affecting about 50 million accounts, said a person familiar with the matter.

On Aug. 17, Mr. Smith spoke at the University of Georgia event in Atlanta. After his prepared remarks, someone in the audience asked: What about data fraud?

No. 1 worry

"It's my No. 1 worry, obviously," Mr. Smith said, according to a video of the event. "There's an old saying that there's those companies that have been breached and know it, and those companies that have been breached and don't know it."

A few weeks after its initial assessment, Mandiant told Equifax the hit was far larger than Mandiant first thought, a person familiar with the matter says.

Behind the scenes, Equifax was preparing for when to go public about the breach. On Aug. 22, Equifax registered a new internet domain name, equifaxsecurity2017.com, which became the company's website for consumers to learn more about the breach.

Hackers claiming to have credit-card data from Equifax attempted to sell their database in August in online forums, says Andrew Komarov, an independent security researcher. No sale has been made, though, he says.

Equifax said as part of the breach announcement that credit-card numbers for around 209,000 U.S. consumers were stolen, too. Those cards likely belong to people who previously bought credit-monitoring services from Equifax in hope of securing an additional layer of protection from fraud, according to people familiar with the matter.

Equifax decided to make its announcement about the cyberattack after the end of regular stock trading Sept. 7. Just before the company issued its press release, a top Equifax executive called an industry executive.

"I want you to hear this from me before you hear it from someone else," the Equifax executive said, according to a person familiar with the conversation. "We've been breached."

Credit Firms' Data Tempts Hackers

Credit-reporting companies such as Equifax are vast repositories of financial information that they receive when someone applies for credit, gets a loan or makes payments. The data builds up credit history and feeds credit scores that are compiled by separate companies.

Equifax began as a local Atlanta firm that gathered and published information about the paying habits of retail store customers. It grew by buying rivals and became a nationwide company. When Richard Smith, a General Electric Co. veteran, became chief executive in 2005, Equifax was a staid company centered on the collection of credit data, according to comments he made last month at a University of Georgia event.

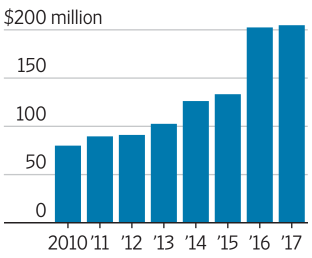
Mr. Smith changed that. Equifax branched out to become a data provider, purchasing companies with information about consumers' bill-paying habits and salary information about employees at large companies.

Equifax is now a "world-class, state-of-the-art" technology and data-analysis company, he said at the event last month. Every day, Equifax manages 1,200 times as much data as is in the Library of Congress, he added. "It's been a fun journey, a journey that we're all very, very proud of."

That data makes credit-reporting companies a tempting target for hackers. In 2015, Experian found that an unauthorized party had accessed T-Mobile data on its server, as well as records containing names, addresses, Social Security numbers, dates of birth and identification numbers.

Consumer Facing

Equifax operating revenue from the sales of credit monitoring and identity theft protection to consumers



Note: Data is for the first half of each year. Revenue also includes sales of credit information to consumers; revenue from 2015 includes consumer sales in the U.K.

Source: the company

THE WALL STREET JOURNAL.

GEFILTE

Continued from Page One

"What can you do with a jar of Manischewitz?" Ms. Fishbein says. "I am sorry, but there is nothing to do—no magic spice, no magic touch."

She confesses a fondness for the company and once did a TV segment for Manischewitz's brisket spices. But she isn't touting its gefilte fish. "If I put a jar of it on my table, no one will even think to open it," she says. Her guests would assume it was vintage table decoration.

At the end of the 20th century, Manischewitz was selling 1.5 million jars of gefilte fish, but in recent years, sales have fallen by about 2% a year, the company says.

Rabbi Aron Yonah Hayum, who oversees production at Manischewitz, is trying to help revive gefilte fish's appeal. "To keep the category alive," he deadpans, "we have to bring it to the 1990s, at least."

The kosher-food company, founded in 1888, has tried to freshen up its fish before and Rabbi Hayum, a 23-year Manischewitz veteran, can rattle off every experiment. In the late 1980s, Manischewitz unveiled a salmon gefilte fish. "They thought that it would generate buzz," he says.

Unfortunately, the industrial cooking process washed out the natural pink color, he says, and turned the fish an unappetizing shade of gray.

Manischewitz tried jalapeño gefilte fish in the early 1990s, hoping customers were ready for a zesty flavor. "Not so much," says the rabbi.

Next up was "Mediterranean" gefilte fish, made with rosemary and oregano. While he liked it, the product had a weird look, Rabbi Hayum says. "We put real spices and you could see little green dots and stems," floating through the jar. "Too wacko."

Rabbi Hayum is an avid collector of company memorabilia. Items line his office and grace glass cases in the company's halls—from a canvas "Borscht belt" with names of old Catskill hotels, to a Roberta Flack record album, signed "To Manischewitz with Love." There is also a jar containing a "loaf" of gefilte fish the company once tried to market. It was a no-go.

LAUREN VOLO

CHAYA BIALESTOCK PHOTO

Left, a recipe by Liz Alpern and Jeffrey Yoskowitz. Right, Chanie Apfelbaum's panko-crusted gefilte.

European Jewish immigrants brought the specialty with them to America. Making it from scratch meant securing live fish—which homemakers parked in the bathtub—that had to be killed, deboned, minced and seasoned.

"Gefilte fish took a whole day to make, and Jewish women who had carefully made it in Europe," says Jonathan Sarna, professor of American Jewish history at Brandeis University.

When Manischewitz began mass-producing its gefilte fish, it was embraced by homemakers seeking relief from the arduous preparation.

The jar, says Prof. Sarna, was "a metaphor for America itself—Jewish women no longer had to slave all day long."

Now consumers have gravitated from the jar to frozen gefilte fish, which yields a cream-colored loaf.

The frozen version lets cooks be creative, Prof. Sarna says. "You might *patschke* [fuss] with it a little bit. The frozen gefilte fish allowed you to add some of your own carrots, some of your own spices, and it didn't take very long."

The Gefilteria's co-owners Liz Alpern and Jeffrey Yoskowitz suggest a return to pre-jar days. It is far less labor-intensive to make gefilte fish now, Ms. Alpern says, with one of their recipes taking 1½ hours at most. And, she adds, no need to store fish in a bathtub. Buy fish filets and use a food processor.

Some of Manischewitz's innovations have worked. Rabbi Hayum says the gluten-free gefilte fish, which uses potato starch instead of matzo meal, is popular, as is the Premium Gold variety, which uses less carp and more whitefish. He says Manischewitz is hoping to try its new secret variation in the spring.

The company says it sells 1.2 million jars annually, retailing from $6.26 to $8.99 for the 24-ounce jar.

Rabbi Hayum knows keeping the jar alive is an uphill battle. But he believes it is important. For many American Jews, he says, the jar of gefilte fish on the supermarket shelf "is their last connection to Judaism."

Manischewitz, now part of Bain Capital Credit after churning through several owners, recently laid off workers and said it would manufacture products, including gefilte fish, in other facilities. David Sugarman, CEO, said Manischewitz was taking "necessary steps to preserve and position the business" to grow "over the next 129 years."

Karen Blum, of Westlake Village, Calif., answered an online Facebook survey by Manischewitz on gefilte fish. She recalled how after she had her tonsils removed as a 4-year-old, she refused any nourishment, even ice cream and Jell-O. Instead, she says, "I pointed to the jar of gefilte fish."

She says she still favors the version from the jar: "It is the ultimate Jewish comfort food."

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YOUR HEALTH | By Sumathi Reddy

If You Need an MRI, Ask This

Patients need to know if the doctor is using contrast, or gadolinium, because it may leave harmful metal deposits

T PATIENTS getting an MRI
know to ask a critical ques-
will the MRI use gadolinium
t?

agnetic resonance imaging
a gadolinium-based contrast
, called a GBCA, leaves metal
sits in the body's organs and
es including the brain, re-
h shows. Scientists are ex-
ng if the deposits harm pa-
s.

dolinium is a metal dye in-
d into the veins to help radi-
sts better read an MRI scan.
dye is used, experts estimate,
many as half of the millions
RIs performed annually in the
generally for scans that are
ng for tumors, severe inflam-
on or blood vessels. Doctors
he dye makes it possible to
t and diagnose more detail.
to look at bone and joint is-
don't need a contrast agent
octors to make a diagnosis.

me patients with healthy kid-
are reporting getting sick
the dye and are pressing for
research and warnings to the
c. Doctors have for years cau-
d patients with serious kid-
problems about getting MRI's
use gadolinium because their
eys can't always fully flush out
metal toxins.

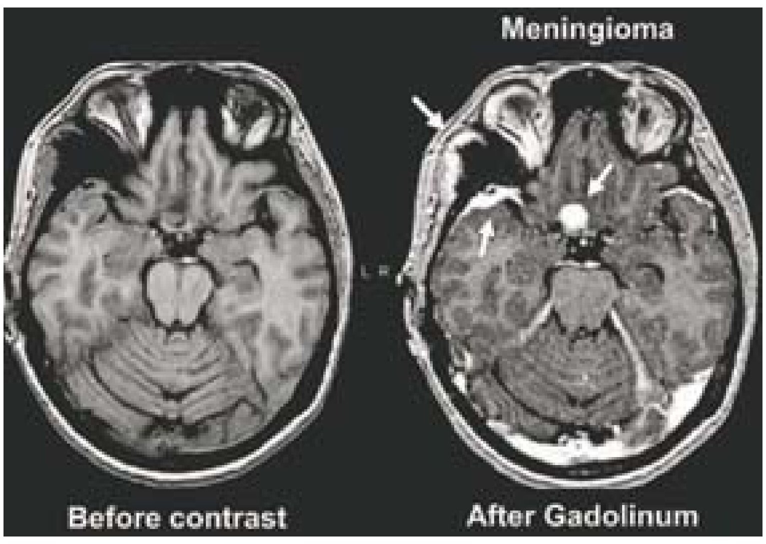
rlier this month an advisory
nittee to the U.S. Food and
Administration voted 13 to 1
vor of adding a warning on la-
that even in patients with
hy kidneys gadolinium can be
ned in some organs, including
rain. Certain types of agents,
d linear GBCAs, have a greater
tion than others, such as
ocyclic GBCAs, the committee
ed. It also voted to request
manufacturers of GBCAs per-
more studies to see if there
eed for additional regulatory
ns, such as restricting their
n pregnant women and chil-

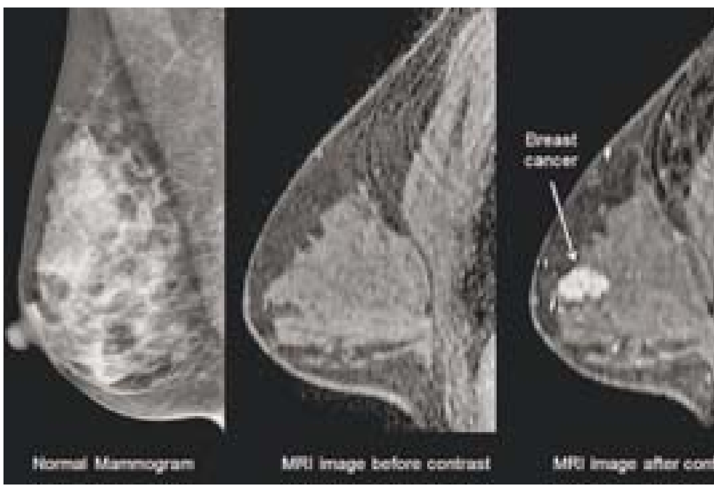
eople understand the incredi-
alue that MR with contrast
rought to medicine," says
erly Applegate, a member of
ommittee and professor of ra-
gy and pediatrics at the **Uni-
ty of Kentucky** in Lexington,
king as an individual and not
ehalf of the committee. "We
to image gently."

bert McDonald, senior associ-
onsultant of neuroradiology
e **Mayo Clinic in Rochester**,
., says studies he and others
done using animals and post-
em human tissue have shown
esidual gadolinium is re-
d in tissues and organs.
re trying to understand to
extent it's happening in the
es of the body and also the
al significance, if any," says
cDonald who was at the FDA
nittee hearing after several
ufacturers asked him to at-
General Electric Co., one of
manufacturers of GBCAs, paid
is travel expenses.

he big question is whether or
hese deposits are biologically
e," he says. "So far we haven't
able to see any evidence of
e injury."

A new U.S. Food and Drug Administration warning cautions that even in patients with healthy kidneys gadolinium can be retained in some organs, including the brain.





A spokeswoman for **GE Healthcare** Life Sciences, one of several manufacturers of GBCAs, says GE strongly supports the FDA vote and "agree that further research is needed in this area."

"It's a critical tool for the detection and diagnosis of many diseases," says Scott Reeder, a professor of radiology at the **University of Wisconsin**, Madison who spoke at the FDA hearing representing the **International Society for Magnetic Resonance in Medicine** and the **Society of Computed Body Tomography and Magnetic Resonance**.

The term "gadolinium deposition disease" was coined by Richard Semelka, until recently director of MRI Services and a professor of radiology at **UNC** Hospitals in Chapel Hill, N.C., in a paper published last year in the American Journal of Roentgenology. He estimates that about 1 in 1,000 people with gadolinium deposits in their body will get sick from it. "We have to figure out who these people are," he says. "They appear to be people who have a genetic problem with handling heavy metals."

Lori Combs was among the patients to testify at the FDA hearing. Ms. Combs was in the insurance industry for 30 years before going on disability last year due to complications such as muscle weakness that she believes stem from gadolinium deposition from an MRI done in 2006.

"I was in the absolute prime of health," says the 55-year-old who lives in a suburb near Cleveland, Ohio. "I was out hiking and slipped and fell and hit the back of my neck on a log."

A doctor recommended an MRI of her brain. She said she immediately felt burning and stroke-like symptoms after the MRI and could barely walk by the time she got home. She was rushed back to the emergency room with seizures and discharged after doctors couldn't find anything wrong with her. "I have never been the same since," she says. Symptoms have included burning sensations in her body, sunburn-like rashes, blistering, tremors and difficulties walking, as well as cognitive declines.

The FDA advisory committee's action, she says, is not enough. "A patient isn't going to see the label," she says.

Brent Wagner, a staff physician at the South Texas Veterans Health Care System in San Antonio and a
nephrologist, says his laborator
studies have found that human
cells exposed to gadolinium sho
signs of fibrosis, or scarring. H
said the symptoms that patient
with healthy kidneys have com
plained about are similar to the
ones exhibited by kidney patien
who develop nephrogenic syste
fibrosis (NSF) from gadolinium
posure, a rare disease that caus
severe pain and scarring all ove
the body and in the internal or

Dr. Wagner is now using ani
models to identify the mechani
that results in patient symptom
The goal is to develop a screen
tool to identify the patients wh
are at a higher risk of having a
reaction to the gadolinium. He
mately hopes to invent a way t
lessen their risk of a bad react

PLAYLIST: Kimberly Hébert Gregory

THE PARENT TWO-STEP

*erly Hébert Greg-
44, stars in the HBO
dy series "Vice
ipals" and ABC's
n (Probably) Saves
World." She spoke
Marc Myers.*

nother bought all
nusic that played
he stereo in our
e in Houston. She
l putting on albums
we all cleaned the
e on Saturday
nings. The song that
nds me most of those morn-
is Luther Vandross's **"BAD
HAVING A PARTY,"** from
.

ring those cleaning ses-
, my parents typically
ped at some point as my
sister, Tracey, and I contin-
One day my mother put on
ross's album, "Forever, for
for Love." Today we as-

lads, but "Bad Boy," the first track on his early album, was a dance song.

As soon as the music came on, my parents moved to it. It was rare to see them dance together in the house. Typically, my mother, my older sister and I would sing and dance while my dad read the paper in his recliner. He was a quiet man. But this was one of those moments when my father couldn't resist. Just watching him take my mother's hand and lead her around the den in a two-step was a thrill. They even danced side by side facing forward. It looked like a Victorian dance.

The song opens with people laughing at a party, followed by a bass playing a funky line. Luther

Then the song's lyric begins. I still love these lines:

"Every time that we meet, we skip and we dip to the beat, yeah / What in the world could be better than getting together again."

As my parents danced, I suddenly saw them as everyday people. They went from parents to husband and wife and maybe even girlfriend and boyfriend. Seeing my parents dance wasn't embarrassing. It was natural. But I had no clue they could move like that. They were a working-class, churchgoing couple.

When they finished, dad sat down in his chair. It was a moment, and that was that. He picked up his paper and went back to the real world while my mother returned to cooking.

On many of the Saturday mornings that followed, they danced to "Bad Boy" when it played. And each time the song ended, Tracey and I returned to

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OPINION

REVIEW & OUTLOOK

America's Insider-Trading Feud

An appellate panel rewrites Supreme Court precedent.

Prosecutors and regulators like to define insider trading broadly—they claim to know it when they see it. A U.S. Second Circuit Court of Appeals panel in 2014 sought to establish a limiting principle, which last month was vitiated in unprecedented fashion by another panel on the same court. This intracircuit squabble is begging for adjudication.

* * *

Many liberals want to criminalize any trading that exploits a disparity of information regardless of how it was obtained. But such an expansive interpretation of insider trading could ensnare many people who unwittingly receive or disclose nonpublic information—such as stock analysts or anyone with acquaintances who work at public companies.

As the U.S. Supreme Court ruled in 1980, there is no "general duty between all participants in market transactions to forgo actions based on material, nonpublic information." The High Court sought to establish a limitation on prosecutions in its landmark 1983 *Dirks* decision, which requires proof that a fiduciary duty was breached in return for a "personal benefit." The Court defined such a benefit as a "pecuniary gain or a reputational benefit that will translate into future earnings" or a "gift of confidential information to a trading relative or friend."

Yet prosecutors have since stretched *Dirks* to make its limits meaningless. In *Newman*, former U.S. Attorney Preet Bharara charged two hedge-fund managers with trading on information they received from friends of friends of friends who worked at Dell and Nvidia. Mr. Bharara argued the "friendship" between the tippers and tippees—a fellow church member and former co-worker—satisfied *Dirks* personal-benefit test. He could thus charge the traders at many stages of remove from the tippers even if he couldn't prove the information was disclosed improperly.

Mr. Bharara's prosecution prompted a unanimous rebuke by a Second Circuit three-judge panel that sought to define a "trading relative or friend" and "personal benefit" under *Dirks*. An inference of insider trading is impermissible, the court held, "in the absence of proof of a meaningfully close personal relationship that generates an exchange that is objective, consequential, and represents at least a potential gain of a pecuniary or similarly valuable nature."

The Second Circuit refused to reconsider *Newman* en banc, but two of its liberal jurists recently used an appeal of *U.S. v. Martoma* to undermine the precedent. In February 2014—10 months prior to the *Newman* ruling—a jury convicted former SAC Capital trader Mathew Martoma of insider trading for exploiting non-public information that he obtained from a doctor overseeing a drug trial.

Martoma argued that the jury had been improperly instructed and that his conviction should be tossed in light of *Newman*. Two of the panel judges disagreed, and Martoma probably deserved conviction under even a narrow definition of insider trading given his close relationship with the research doctor.

But the two judges went much further and used the case to declare that *Newman* was "no longer good law" and was contradicted by the Supreme Court's unanimous *Salman* decision last December. Alas, the two judges misconstrued *Salman*.

In *Salman* the Supreme Court upheld the conviction of a trader who had received a tip from his brother-in-law. The High Court held that a "gift of confidential information to a trading relative or friend" constituted a personal benefit under *Dirks*. Therefore, the tipper need not receive something of a "pecuniary or similarly valuable nature" in return.

The *Martoma* majority says *Salman* overturns *Newman*, and they're right insofar as the High Court ruled that a trading "gift" from a family member need not be a *quid pro quo*. But as judge Rosemary Pooler notes in her Second Circuit dissent, *Salman* affirmed *Newman*'s conclusion that the "inference of a personal benefit from a gift 'is impermissible in the absence of proof of a meaningfully close personal relationship.' "

In other words, a trading gift only confers a personal benefit between close friends and family—not distant relatives or acquaintances. If there is no meaningfully close relationship, the government must prove a *quid pro quo*. Both *Newman* and *Salman* repudiated the government's argument that a gift of confidential information to anyone is enough to prove insider trading.

* * *

As Judge Pooler explains, limitations are needed to prevent prosecutors from charging individuals based on little more than circumstantial evidence: "There is great wisdom in the Supreme Court's limitations on broad rules, particularly when those rules might otherwise allow punishment of the absentminded in addition to persons with corrupt intentions."

Congress could help if it wrote a clear definition of insider trading, but that's also high risk in a season when Wall Street is a populist target. Meantime, the Second Circuit should rehear *Martoma* en banc to vindicate the Supreme Court's *Dirks* standard and its own *Newman* precedent—lest political prosecutors like Mr. Bharara punish the innocent.

Justice and Private Property

A victory in U.S. Congress against the revived civil asset-forfeiture program.

Attorney General Jeff Sessions recently provoked bipartisan opposition when he revived a civil asset-forfeiture program that had been restricted by his predecessor, Eric Holder. Last week a bipartisan coalition brushed Mr. Sessions back with amendments to the annual appropriations package working its way through the House.

The program allows local and federal law enforcement to take property from people who haven't been convicted of any crime—and then share in the spoils. In theory, civil asset forfeiture ensures that crime doesn't pay by allowing law enforcement to seize homes, cars and cash thought to be paid for or generated by illegal activity. That's why Mr. Sessions calls it a "key tool" against organized crime.

In practice, it means property can be taken from people without due process or criminal culpability. A March report from Justice's Inspector General noted that the department doesn't even have a way to measure if these seizures are advancing criminal investigations. In short, it invites abuse.

Last week House members passed, by voice vote, five forfeiture amendments that showed their displeasure. An amendment by Darrell Issa (R., Calif.) redirects $10 million in funding for Justice's asset forfeiture to a program designed to help local governments reduce the backlog of unprocessed rape kits. A Peter Roskam (R., Ill.) amendment bars bonuses for certain Justice employees until they decide on a backlog of 255 asset forfeiture cases referred by the IRS.

Three other amendments target the "adoptive forfeiture" aspect of the program, which allows local law enforcement to make end runs around state prohibitions by working with the feds. Three separate amendments—from Jamie Raskin (D., Md.), Tim Walberg (R., Mich.) and Justin Amash (R., Mich.)—limit the funding Mr. Sessions can use to implement his program.

Though Congress will have to pass a separate law to make these restrictions permanent, these are a victory for property rights and due process. Who says Washington is so polarized that Republicans and Democrats can't agree on anything?

U.S. Democrats Target Tesla

In California, the left loves unions even more than electric cars.

California Democrats have finally found a cause that's worth suspending their environmental passions. The United Automobile Workers are struggling for a presence in Tesla's Fremont plant, and organized labor has called in a political favor.

Since 2010 California has offered a $2,500 rebate to encourage consumers to buy electric vehicles. But last week, at unions' behest, Democrats introduced an amendment to cap-and-trade spending legislation that would require participating manufacturers to get a sign-off from the state labor secretary verifying that they are "fair and responsible in their treatment of workers."

The legislation, which passed Friday, is a direct shot at Tesla. The Clean Vehicle Rebate Project has amounted to a $82.5 million subsidy for the company, giving extra incentive to 32,842 Tesla buyers in seven years.

Tesla's sales have been built with taxpayer support. When Hong Kong cut back its electric-vehicle tax credits earlier this year, Tesla sales dropped to zero in April from nearly 3,000 the month earlier. And when Denmark scaled back incentives last year, electric-car sales plummeted by 70%.

The labor secretary in California is handpicked by unions and their Democratic allies, and last month the UAW and a few auto workers filed a complaint against Tesla with the National Labor Relations Board, alleging unfair labor practices.

But the plant's employees are doubtless aware of the union's abysmal record in Fremont, which stretches back decades. In the early 1980s, the union's control was so complete that General Motors couldn't fire even workers who drank, used drugs and had sex at the Fremont plant. Roughly one in five workers failed to show up on any given day. The plant closed in 1982—no surprise. Auto workers got a second shot with a GM-Toyota joint venture, but that was shuttered in 2010.

A record of closures and corruption contributed to the UAW's defeat last month at a Mississippi Nissan plant, where workers voted nearly two-to-one against the union. Organized labor needs political coercion because it can't win over workers on its own. As for electric cars and green subsidies, what progressive politicians give away with one hand they want to redistribute with another.

The Cyber Age Is Only Just Beginning

By Mark P. Mills

Apparently American companies can be organized now into two camps: smoking-hot tech firms and old-economy roadkill. Economists cite soaring tech-stock valuations as evidence of a two-speed economy. Yet Silicon Valley magic hasn't benefited most companies or created jobs for most Americans. What's going on?

Amazon's market value is twice that of Wal-Mart and 500-fold that of evaporating Sears. Apple's valuation is twice Exxon's, and Facebook and Google are each valued at 20-fold CBS. Next come 200 "unicorns," private software-dominated startups each valued at more than $1 billion. Uber has a valuation greater than all car rental companies combined, and 8-year-old Airbnb is worth as much as 80-year-old Marriott.

Despite such lofty valuations, the information sector accounts for less than 10% of America's gross domestic product, according to the U.S. Bureau of Economic Analysis. Everyone is told to learn how to code, but there aren't that many tech jobs. U.S. Bureau of Labor Statistics data show the entire information sector accounts for less than 5% of employment, with a flat trend line. The productivity and job benefits that software could produce for the rest of the economy have yet to arrive.

As amazing as artificial intelligence and the cloud seem today, the world is still in the early days of truly useful, ubiquitous software that can be infused into the physical world's hardware. Most everything critical to daily life—food, energy, buildings, transportation—is physical, not virtual. The fabric of civilization involves digging up, processing, fabricating, moving and operating gigatons of material composed of atoms, not bits.

The billions of dollars in economic value from information technology has been associated with improvements mainly in information-related activities, as those domains are relatively easy to digitize. Very little of the hardware world is digitized so far.

Contrary to breathless prose about robots taking manufacturing jobs, the data show underinvestment in automation and information technology in factories. U.S. companies need more robots and software to boost their competitiveness. While spending on information technology remains high in media, banking, education and insurance, it lags far behind in chemical and food processing, energy and transportation.

Infusing software into hardware so that it becomes invisible and reliable is hard. The physical world involves factors like inertia, friction and gravity, all of which present serious safety implications. The real world cannot tolerate the equivalent of frozen screens, reboots or iterative upgrades of sloppy software rushed to market.

One iconic cyberphysical system, the self-driving car, has seen many impressive demonstrations, but several researchers recently showed how easily self-driving cars are confused by simple graffiti on street signs. Automotive AI systems have yet to achieve the situational awareness of an inebriated college freshman.

The information sector accounts for less than 10% of GDP and 5% of jobs.

Apple appears to be scaling back its self-driving-car initiative. There is little evidence that Apple will soon produce cars—or that Google will build power plants, Facebook will develop pharmaceuticals, or Uber will build aircraft. When more tech companies use their gargantuan cash hoards to acquire traditional enterprises—like Amazon's acquisition of Whole Foods—we'll know the fusion between atoms and bits has really begun.

The early automobile age provides a relevant analogy. By 1920, several decades after the first cars were introduced, hundreds of U.S. auto makers had sprung up, although less than 10% of the population had a car, according to the U.S. Transportation Department.

Producing reliable, affordable cars and developing all the associated industries and infrastructures took time. By 1937 about a quarter of the population had cars. That had risen to nearly 40% by 1957 and around 85% today. America's economy was transformed, stimulating employment across the landscape.

The U.S. now stands at the equivalent of 1920 for ubiquitous cyberphysical systems. Today's two-speed economy is not permanent. It's a sign that America is about to shift to the next level, driven by cyberphysical software. Economic growth and jobs will follow.

Mr. Mills is a senior fellow at the Manhattan Institute and a faculty fellow at Northwestern University's McCormick School of Engineering.

Trouble Grows in Guatemala

AMERICAS
By Mary Anastasia O'Grady

A barrage of condemnation from Washington descended on Guatemalan President Jimmy Morales in August when he tried to kick the lead prosecutor from the United Nations International Commission Against Impunity in Guatemala, known by the Spanish abbreviation CICIG—the only U.N. system of outsourced justice in the world—out of his country. Mr. Morales declared Iván Velásquez persona non grata two days after the prosecutor, who is Colombian, requested that Mr. Morales's immunity from prosecution be lifted so he could be investigated for allegations that his 2015 campaign accepted illegal contributions.

Republican and Democratic leaders on the U.S. House Foreign Affairs Committee said Mr. Morales was wrong, as did the U.S. State Department. It's unusual that all three parties agree on anything. What's even more striking is that most Guatemalans seem to agree Mr. Morales was out of line.

But hold the applause. CICIG is an effort at nation building, and on that score Guatemalans view it as a failed experiment. Their country is no closer to a rule of law than it was a decade ago when then-President Oscar Berger invited CICIG to set up shop in the largest nation of Central America's notoriously crime-ridden Northern Triangle.

Mr. Morales is a former comedian who ran for the highest office in Guatemala on a pledge to clean up its politics. He says he is innocent of CICIG's charges and that if there were illegal contributions, he didn't know about them.

That's entirely possible. But his attempt to boot the prosecutor hasn't advanced his defense with the public. It didn't work either. The constitutional court overrode his decree. Mr. Velásquez remains.

On Wednesday Guatemala's Congress brought more shame on the political class when it passed a reform that would retroactively eliminate leadership responsibility for breaking campaign-finance laws and apply criminal penalties only to the person who recorded the transaction. This would not only clear Mr. Morales but nullify CICIG charges against the leadership of two other political parties.

All four major newspapers cried foul on Thursday. Civil society—from the business community to academia—and even the Guatemalan inspector general demanded that Mr. Morales use his veto power to kill the bill. Late Thursday the constitutional court suspended the new laws and late Friday, under public pressure, Congress withdrew them.

CICIG has had mixed reviews since its formation in 2006. The first two lead prosecutors came and went without much success in uncovering political rot. They even came under popular suspicion that they allowed their own politics to interfere with their mandate.

Under Mr. Velásquez's leadership, working with Attorney General Thelma Aldana, CICIG collected enough evidence in 2015 to indict then-Vice President Roxana Baldetti and then-President Otto Pérez Molina on charges of bribery and graft. That opened the door for the election of Mr. Morales, and generated public respect for Mr. Velásquez.

Mr. Morales's woes aren't a left-right issue. But he has spawned a political crisis that will fuel efforts by radical elements to destabilize the country, with the eventual goal of bringing down the government. Militants know that Hugo Chávez was able to demolish Venezuelan institutions by exploiting national frustration with corruption at a time when oil prices were low due to a strong dollar and the economy was wobbling.

Only serious reform can cure what ails Guatemala. CICIG may be meeting its specific mandate to hunt crooked politicians, but it isn't a long-term solution. First, because the U.N. has its own corruption problems and it also leans left. Second, because the country needs to shape its own institutions and shore up the rule of law.

Last year a package of constitutional reforms was tabled in the Guatemalan Congress with the goal of increasing the independence and professionalism of the judiciary and reducing its administrative burdens. But it died without adequate debate, most likely because special interests saw it as a threat to the status quo.

So the country remains in legal limbo. Property invasions and violence to block hydroelectric projects violate the rule of law. Criminal gangs spur large migrations. Investors flee. The nation may be grateful to CICIG in this moment, but it is no substitute for the functioning justice system that honest Guatemalans deserve.

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OPINION

Climate-Change Hype Doesn't Help

By Ryan Maue

As soon as Hurricanes Harvey and Irma made landfall in the U.S., scientists, politicians and journalists began to discuss the role of climate change in natural disasters. Although a clear scientific consensus has emerged over the past decade that climate change influences hurricanes in the long run, its effect upon any individual storm is unclear. Anyone trying to score political points after a natural disaster should take a deep breath and review the science first.

> **Bigger than global warming is the issue of more people choosing to live in coastal areas.**

Harvey and Irma broke the record 12-year major-hurricane landfall drought on the U.S. coastline. Since Wilma in October 2005, 31 major hurricanes had swirled in the North Atlantic but all failed to reach the U.S. with a Category 3 or higher intensity.

Even as we worked to divine exactly where the hurricanes would land, a media narrative began to form linking the devastating storms to climate change. Some found it ironic that states represented by "climate deniers" were being pummeled by hurricanes. Alarmists reveled in the irony that Houston, home to petrochemical plants, was flooded by Harvey, while others gleefully reported that President Trump's Mar-a-Lago might be inundated by Irma.

How to put these two hurricanes into proper context? An informative website from the Geophysical Fluid Dynamics Laboratory, part of the National Oceanic and Atmospheric Administration, synthesizes reams of research literature on the links between hurricanes and global warming.

Over the next century, climate models generally indicate fewer but stronger storms—between 2% and 11% greater average storm intensity—with substantially increased rain rates. Against the background of slow sea-level rise, explosive coastal population growth will overwhelmingly exacerbate any hurricane's damages.

In the aggregate, the global-warming signal may just now be emerging out of our noisy observational records, and we may not know certainly for several decades. These conclusions are hardly controversial in the climate-science community.

My own research, cited in a recent Intergovernmental Panel on Climate Change report, found that during the past half-century tropical storms and hurricanes haven't shown an upward trend in frequency or accumulated energy. Instead they remain naturally variable from year-to-year.


NOAA-NASA GOES PROJECT/GETTY IMAGES

A satellite image of Hurricane Irma over Florida on Sept. 10.

The global prevalence of the most intense storms (Category 4 and 5) hasn't shown a significant upward trend either. Historical observations of extreme cyclones in the 1980s, especially in the Southern Hemisphere, are in sore need of reanalysis.

While most details are still hazy with the best climate modeling tools, the bigger issue is that more people are choosing to live in coastal areas, where hurricanes certainly will be most destructive.

The nascent field of "attribution science" attempts to explain how climate change may affect characteristics of a given hurricane using models in "what if" mode. Such research requires a faithful reproduction of events and predictions of the future constrained by subjective choices within computer models.

This research also takes time—which means other scientists must examine the evidence with patience and judiciousness not usually seen on Twitter or cable news.

Still, the scientific community already knows plenty about hurricanes and climate change—knowledge it has accumulated over two decades through peer-reviewed research, academic conferences and voluminous national and international assessments. Yet climate scientists all too often speculate during interviews rather than refer to IPCC reports or their cousins from the U.S. National Climate Assessment.

Some climate scientists have peddled tenuous theories with no contemporaneous research evidence. Advocacy groups package these talking points for easy consumption by journalists, who eagerly repeat them.

The historical record books contain dozens of devastating hurricane landfalls over the past century, any of which, if repeated, would be catastrophic regardless of additional climate-change effects. To prepare for the next hurricane, the U.S. needs the best weather forecasts, evacuation plans and leadership. These plans should be built on sound science, not speculation, overselling or exaggeration. Hurricane science in this political climate already has enough spin.

Mr. Maue, a research meteorologist, is an adjunct scholar at the Cato Institute.

The Fed Should Stop Worrying and Learn to Love Low Inflation

By William M. Isaac And Richard M. Kovacevich

There's no excuse for the Federal Reserve's dawdling—not even its obsessive concern that inflation is too low. At 1.4% year on year as of July, core inflation is below the Fed's target of 2%, but that goal is arbitrary and unrealistic for today's economy. When the Federal Open Market Committee meets this week it should put aside this inflation fixation and raise interest rates, which have been dangerously low for much too long.

The current economic recovery has been the slowest in recent times, despite the lowest interest rates in history for the longest time. Easy money has benefited mainly the wealthy, while average consumers have been getting close to zero interest on their savings accounts. This is particularly tough for retirees who don't participate in the stock market.

Low inflation, on the other hand, has been good for the U.S. economy, workers and the middle class, including retirees living on fixed incomes. Over the past five years, hourly earnings in the private workforce are up 2.2% a year on average, which is only about half of what might be expected in a normal economic recovery. But thanks to low inflation, workers have gained some real income.

If the Fed had been successful in achieving its 2% inflation target, it would have offset nearly all these wage gains. That in turn would have severely weakened the annual growth of consumer spending, which, at over 3%, is a bright spot in the economy.

Higher inflation doesn't create greater economic growth. To the contrary, it is greater economic growth that can lead to higher inflation. Therefore, the Fed ought to be focused on revving the economy and adding jobs—period.

One reason business investment has been very weak for eight years is the lack of confidence in Washington's monetary and fiscal policies.

The only legitimate reason to increase inflation artificially is to avoid deflation, which can be dangerous. If consumers become convinced that prices will drop over time, they begin to postpone purchases, slowing economic growth.

> **America's central bankers ought to be focused on revving the economy and adding jobs—period.**

But to find out if this is happening, the metric to look at isn't inflation. It is the savings rate. If consumers have money and don't spend it, then obviously the savings rate must go up. There's no evidence that it has done so to any significant degree world-wide.

In the U.S., the opposite is occurring: The savings rate slid to 3.5% as of July, down from 5.1% a year earlier.

As long as the economy and employment continue to improve, the Fed should stop fretting about low inflation and move to normalize monetary policy. Ideally it could reach interest rates of at least 2% by the middle of next year, up from 1.25% today. That would be a good middle ground.

If economic growth then slowed, the Fed would have room to maneuver by ticking rates down. But if inflation increased, it could quickly raise rates to the equilibrium level.

The Fed should also start, at the FOMC meeting this week, reducing its outsize balance sheet, so as to let the markets begin to function properly. Before the recession of 2008-09, the Fed's balance sheet had never reached $1 trillion. Today it stands at $4.5 trillion, or 25% of Washington's entire public debt.

The Fed's eight-year intervention in the markets has helped push asset prices—including the stock market, long-term bonds and at least some commercial real estate—so high as to raise concerns of a bubble. Should it burst, the effects could be catastrophic, shattering confidence in the economy. The Fed would feel pressure once again to bail out the wealthy with monetary policies that artificially support risky assets.

The incomes of many Americans are flat or declining, and thousands who want work still cannot find a decent job. What built America's prosperity was the unparalleled success of the U.S. free-market system. If the Fed wants to help, it should forget its inflation worries, get out of the way, and let the markets operate.

Mr. Isaac, a consultant to financial institutions, is a former chairman of the Federal Deposit Insurance Corp. Mr. Kovacevich is a retired chairman and CEO of Wells Fargo & Co.

China's Economy Needs Concrete Reform

By Mats Harborn

The Chinese authorities have spoken strongly throughout 2017 in favor of reforms that will promote economic globalization and openness to the outside world. The reasons are clear, given the benefits China has accrued since its WTO accession in 2001 and its current need to increase foreign investment. While the European Chamber fully embraces these renewed pledges to opening up, there is a distinct feeling that we have been here before.

The pledges come less than five years after the Third Plenum's Decision first saw the light of day, which ultimately failed to deliver on its own promises for deep and meaningful reforms. China needs to send an unambiguous statement of intent by moving ahead with the measures that have been promised and by providing reciprocal access to its market, for both trade and investment.

During his much-publicized speech in January at the World Economic Forum in Davos, Switzerland, President Xi Jinping stated that China would expand market access for foreign investors and level the playing field to make China's market more transparent and better regulated. Later that month, the State Council released Document No. 5, which outlined plans to do just that. The State Council then released Document No. 39 in August, unveiling additional details of its plan to attract more foreign investment.

The European Chamber attaches great importance to these official statements, which it views as the overarching guiding principles for reforming China's foreign business and investment environment in the short to medium term. Following through on its pledges will see China on its way to reaching its full economic potential. It will also surely improve China's dismal 59th-place ranking among the 62 countries evaluated by the Organization for Economic Cooperation and Development this year on openness to foreign investment.

With foreign investment in China declining year-on-year during the first half of 2017, it's clear that the authorities would like to attract more. However, there's a right way and a wrong way to do it.

European businesses make investments when capacities need to be established or expanded in response to market demand, not because an investment zone offering short-term financial incentives has been set up. If greater market access were granted, 56% of respondents to the European Chamber's Business Confidence Survey 2017 would be more likely to increase their investments.

Full implementation of the State Council documents' commitment to fair competition would help to win over the doubters. It would also align with the European Chamber's longstanding call to establish a level playing field for all businesses in China.

At the moment, this is a dim prospect, particularly considering certain mergers of Chinese state-owned enterprises that have created enormous companies with preferential access to capital and often markets. This untenable situation has allowed these SOEs to dominate domestically while muscling out international competitors.

There are some reasons to be hopeful, though. For example, there have been significant improvements over the past year in the pharmaceutical industry, with authorities streamlining regulations and improving patients' access to drugs.

This approach should now be applied to other areas facing potential market closure, such as the agriculture, food and beverage industries. Starting Oct. 1, shipments of food products, including some low-risk items, will require an official inspection certificate from a foreign government. As certification requirements for low-risk food products are out of line with international practice, this could lead to a dramatic reduction in food imports.

In July, the authorities enacted a new Foreign Investment Catalog with 63 restricted or prohibited areas in effect nationwide. However, any perceived progress here is tempered by the fact that the catalog is still far too extensive. What's more, the accompanying rules and regulations still maintain a distinction between foreign and domestic investment.

> **Beijing's implementation, not its pledges, will determine the country's growth in the 21st century.**

It's highly unlikely that this kind of incremental change will result in an opening-up of the foreign-investment tap. Amending China's company law so that it applies equally to foreign and domestic enterprises would have a far more profound impact.

The European Chamber hopes that after the 19th Party Congress the Chinese authorities will boldly proceed with implementation of the State Council documents and focus on concluding negotiations for the EU-China Comprehensive Agreement on Investment. This would reduce both current and potential political tensions between China and the West, as we have previously pointed out.

Market-driven reforms are crucial to ensuring long-term and high-quality economic growth in China, and offering reciprocal access to its own market would be a major step in the right direction. The Chinese authorities clearly know what needs to be done. The European Chamber looks forward to supporting them in their commitment to economic globalization, and transforming well-intentioned words into tangible, positive change.

Mr. Harborn is president of the European Union Chamber of Commerce in China.

Love Your Dog, Support Animal Research

By Matthew R. Bailey

Dog owners may soon be able to add years to their pets' lives, thanks to an experimental anti-aging pill. In tests on mice the medication, rapamycin, has been shown to lengthen lifespans up to 60%. Now scientists at the University of Washington's Dog Aging Project are studying whether it works in canines.

Initial reports indicate the drug improves heart health. Researchers speculate that if larger trials are successful, rapamycin could extend a dog's life by five years. Animal lovers the world over must be jumping up and down in excitement, right?

Wrong. In fact, many animal-rights groups strongly oppose the studies—as they do almost any studies involving animals. Christine Lattin, a Yale researcher, puts wild sparrows into medical scanners to measure how they respond to the stress of captivity or of exposure to crude oil. This summer People for the Ethical Treatment of Animals began a campaign accusing Ms. Lattin of "torturing birds" in "wasteful experiments." Soon she was getting emails telling her to kill herself.

If these groups truly advocate for animals, their logic is backward. Nearly 70% of American households have pets. Those animals' food and vaccines all have been developed through humane research and testing with lab animals.

> **Endangered species as well as pets benefit from humane testing.**

Consider feline immunodeficiency virus, which attacks cats' immune systems and has a survival rate of 80% four to six years postinfection. In 2002, scientists at the University of California and the University of Florida developed an FIV vaccine, based on tests they conducted on laboratory cats.

Livestock also benefit from studies conducted on lab animals. Antimicrobials such as Rumensin—developed in 1975—are commonly used to treat various infections in cows and were developed through research on mice. Fowl pox threatens the world's 19 billion chickens. The virus produces painful lesions on a bird's skin, throat and respiratory tract. Thanks to studies conducted in mice, scientists in 2006 created a live-virus vaccine for chicks.

Endangered species benefit from this kind of research, too. Take Asian elephants, which number only about 40,000 in the wild. One of the biggest threats they face is a strain of herpes that kills up to 90% of the elephants it infects, according to the International Elephant Foundation. The virus has killed roughly 25% of the population in North American captivity in the past 40 years. But researchers are working on a vaccine that could save the species from extinction.

Animals are living longer, healthier lives because of these scientists. Real animal lovers should be proud to support animal research.

Mr. Bailey is president of the Foundation for Biomedical Research.

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BURNING QUESTION

What's the Best Way to Take a Nap?

A sleep expert explains theories behind why humans have evolved to make time for a short midday snooze

BY HEIDI MITCHELL

SETTLING IN FOR a midday snooze has been given a bad rap. Getting caught napping is often code in the U.S. for being lazy. Yet many cultures build catnaps into their normal routines, and dozens of studies have shown that grabbing a few Zs in the daylight hours is healthy.

So what's the best way to take a nap? One expert, David Dinges, the chief of the Division of Sleep and Chronobiology in Psychiatry at the University of Pennsylvania Perelman School of Medicine, explains how to optimize midday shut-eye.

Two Kinds of Naps

Dr. Dinges, who is also a member of the American Academy of Sleep Medicine, says that naps actually come in two forms: voluntary and involuntary. A voluntary nap, he says, is where a person makes a conscious decision to catch some relief before continuing her day.

"Those are naps that fill in additional sleep needs, and they have many health benefits," he says. Involuntary naps, often the kind that happen when you're caught napping, are considered to be a mark of someone who lacks the fortitude to stay awake. Dr. Dinges calls voluntary, or intentional, sleep the best way to fill up a person's "sleep tank."

"So if you live on a schedule where you only get six hours of sleep a night and you get 45 minutes of intentional naps a day, you don't develop much of a sleep debt," he says. Doctors recommend that adults get at least seven hours of sleep in a 24-hour period.

You're Getting Sleepy...

Studies have shown that work hours and commute times are the two largest sources of sleep debt for Americans, Dr. Dinges says. This is why when sleep-deprived people get on the train or bus to commute home, they frequently doze off. The first sign of falling asleep is that the muscles relax. "First go the arms, then the hands, then the eyelids," says Dr. Dinges, whose book, "Sleep and Alertness: Chronobiological, Behavioral and Medical Aspects of Napping," dives deep into the science of siestas. "Next goes the neck, so your head falls over."

That triggers the part of your brain that feels you're falling, which wakes you up. These involuntary sleep attacks don't provide much benefit, because "the brain doesn't progress into sleep far enough for recovery, so it's more like a disturbed night of sleep," Dr. Dinges says. One way to prevent them is to drink caffeine, a natural stimulant that aids in alertness. The better way is to set yourself up for a proper, preventive nap.

A Window of Opportunity

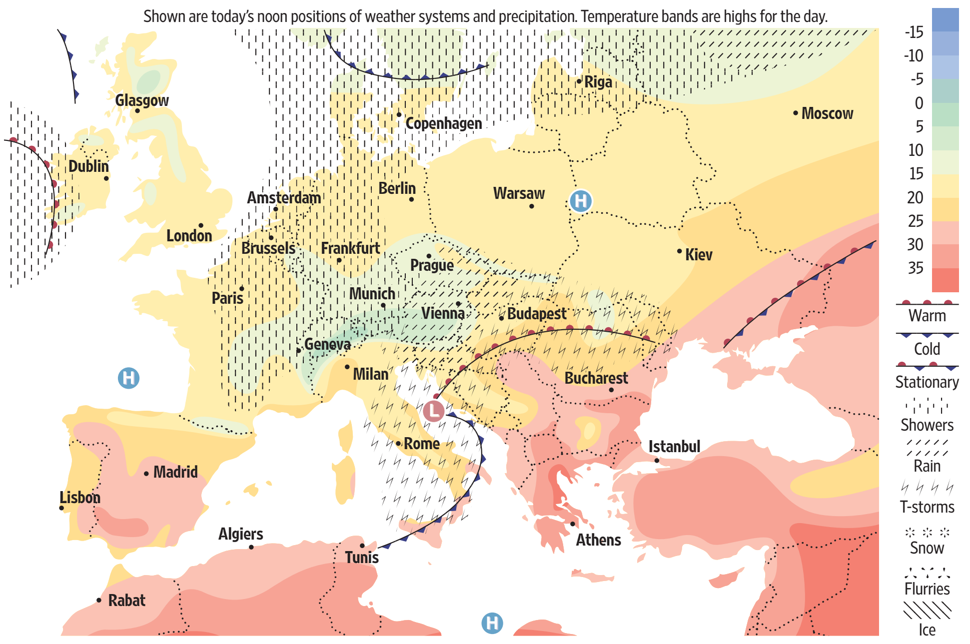
Humans are biologically programmed to sleep at night, and to take a nap in the mid-afternoon, though scientists aren't sure why. "There is no melatonin triggering the sleep, it just seems to be this harmonic phenomenon," Dr. Dinges says. The consensus among his colleagues, he says, is that human civilization evolved mostly in equatorial climates, where it got very hot later in the day, and napping during the extreme heat optimized work performance.

To make the most of this biological need, don't overthink it. Find a cool, dark, quiet place to lie down or put your head down. And put all your electronics away. The light from screens can mess with your ability to fall asleep.

A napper has to feel safe, which is why napping in public (or in a glass-walled office) is often less than ideal. "Set an alarm so you don't oversleep" more than 15 to 60 minutes so as not to affect nighttime sleep.

Even a 15-minute nap is enough to relieve some sleep pressure, since the brain goes into light non-REM sleep, which contributes to recovery. "Being awake is like carrying a bag on your back. The longer you're awake, the more bricks you add," he says. "And when you take a nap, you remove some of those bricks."

Weather

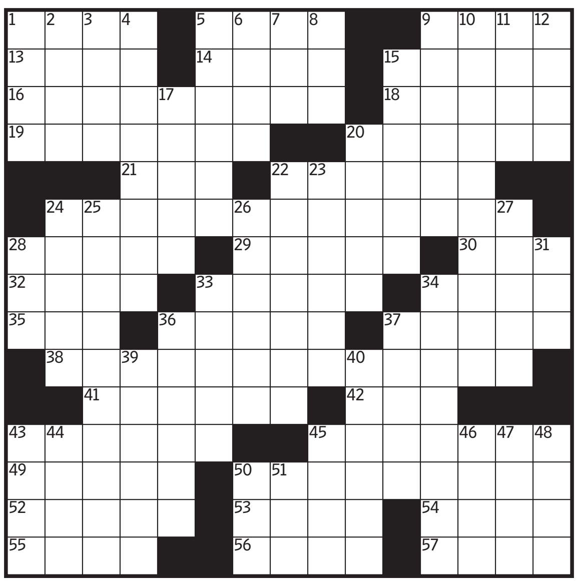


Global Forecasts

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

City	Today Hi	Today Lo	Today W	Tomorrow Hi	Tomorrow Lo	Tomorrow W
Amsterdam	17	10	sh	17	10	pc
Anchorage	13	8	pc	13	8	s
Athens	34	24	s	31	22	s
Atlanta	31	21	s	31	21	pc
Baghdad	45	27	pc	45	26	s
Baltimore	27	18	c	28	17	s
Bangkok	34	26	t	34	26	t
Beijing	30	13	s	28	13	pc
Berlin	17	7	pc	17	8	sh
Bogota	19	9	pc	20	9	pc
Boise	15	9	c	15	4	sh
Boston	20	18	r	22	17	r
Brussels	16	8	sh	17	8	pc
Buenos Aires	23	16	s	24	10	sh
Cairo	34	24	s	35	23	s
Calgary	13	0	pc	12	1	pc
Caracas	31	25	pc	32	25	pc
Charlotte	30	18	s	32	19	pc
Chicago	27	19	pc	31	21	pc
Dallas	35	25	pc	36	25	s
Denver	29	9	pc	28	12	s
Detroit	26	16	c	28	17	pc
Dubai	41	31	s	41	30	s
Dublin	17	11	pc	18	9	r
Edinburgh	16	10	pc	17	12	sh
Frankfurt	15	6	sh	17	7	sh
Geneva	13	5	sh	17	5	pc
Hanoi	33	27	sh	32	26	pc
Havana	31	21	s	31	21	pc
Hong Kong	32	28	pc	33	27	pc
Honolulu	31	24	sh	32	24	pc
Houston	32	25	pc	33	24	pc
Istanbul	29	21	s	32	23	s
Jakarta	34	25	pc	33	24	pc
Johannesburg	26	14	s	28	13	s
Kansas City	31	21	pc	30	21	pc
Las Vegas	33	20	s	33	21	s
Lima	19	15	pc	19	15	pc
London	17	9	pc	19	12	pc
Los Angeles	25	18	pc	25	18	pc
Madrid	26	12	s	28	14	s
Manila	32	26	t	32	26	t
Melbourne	13	6	pc	19	12	pc
Mexico City	25	14	pc	24	14	pc
Miami	32	25	pc	32	25	pc
Milan	22	9	pc	24	9	pc
Minneapolis	24	18	pc	25	15	pc
Monterrey	34	22	pc	35	22	pc
Montreal	26	16	pc	24	12	pc
Moscow	13	8	c	17	9	pc
Mumbai	30	26	r	31	26	r
Nashville	31	20	pc	31	20	pc
New Delhi	35	25	pc	34	25	t
New Orleans	31	23	pc	31	23	pc
New York City	22	19	r	27	19	sh
Omaha	31	18	s	27	19	s
Orlando	32	22	pc	32	22	pc
Ottawa	25	14	pc	25	11	c
Paris	17	5	sh	18	8	pc
Philadelphia	24	19	sh	28	21	pc
Phoenix	38	23	s	38	24	s
Pittsburgh	28	16	pc	28	15	pc
Port-au-Prince	34	23	pc	34	24	pc
Portland, Ore.	17	11	r	16	10	r
Rio de Janeiro	28	20	s	29	20	s
Riyadh	41	25	s	41	24	s
Rome	21	12	t	22	11	pc
Salt Lake City	18	10	pc	25	10	pc
San Diego	23	19	pc	23	20	pc
San Francisco	23	16	s	21	14	s
San Juan	30	26	sh	29	26	r
Santiago	17	7	r	19	6	pc
Santo Domingo	33	24	pc	32	24	pc
Sao Paulo	28	16	pc	27	16	s
Seattle	15	10	r	16	10	r
Seoul	25	15	t	25	15	pc
Shanghai	30	21	c	24	22	sh
Singapore	30	25	t	30	25	t
Stockholm	12	3	sh	13	5	sh
Sydney	23	10	s	20	11	pc
Taipei	35	25	pc	36	26	pc
Tehran	30	19	s	31	19	s
Tel Aviv	30	22	s	30	21	s
Tokyo	27	21	pc	27	20	pc
Toronto	25	16	c	26	15	pc
Vancouver	16	9	r	17	8	r
Washington, D.C.	28	21	pc	30	20	s
Zurich	14	5	sh	16	4	sh

The WSJ Daily Crossword | Edited by Mike Shenk



PIRATED | By Charlie Oldham

Across

1 Pirate attack
5 Apple device since 2001
9 Apple assistant since 2011
13 Alan with six Emmys
14 Factual
15 Mortise's mate
16 Some plays by Kareem Abdul-Jabbaaarrr!
18 Come around again
19 Cardinal point?
20 Arizona hockey player
21 Pewter, in part
22 Precisely right
24 Exercise regimens performed resting on one's foreaaarrrms!
28 Parallel to
29 Don Draper and his colleagues
30 Do some pirating
32 Foxhound's feet
33 Unvarying
34 France, once
35 Overtime cause
36 "___ Tag" (German greeting)
37 Spacek of "Carrie"
38 Nickname for the site of Glacier National Paaarrrk!
41 Potato chips, in Portsmouth
42 Peter who battled pirates
43 White Rabbit's lament
45 Suggests
49 Discontinue
50 Sea creature that resembles the maaarrrlin!
52 Surname of a famed racing family
53 Letter before Quebec in the phonetic alphabet
54 Tennis star Nastase
55 With 7-Down, solve
56 Skater's turning jump
57 Be a rover

Down

1 Cheering cries
2 Oodles
3 Someone to look up to
4 People from Pierre, e.g.
5 Start for Descartes
6 The Pirates and the Buccaneers, e.g.
7 See 55-Across
8 ___ Moines
9 "Bye!"
10 Compared (to)
11 Decisive defeat
12 Concerning
15 Crushed, in a way
17 Seeking damages
20 Encrusted
22 Six-time World Series champs
23 Royal fur
24 Make pigtails
25 Proletariat
26 "Hold on!"
27 Boozer
28 Fitting
31 Global traveler Nellie
33 Charlotte ___ (cream-filled dessert)
34 Tall tree of the Pacific coast
36 Spat
37 Greet the judge
39 Rubs off?
40 Corkscrew shape
43 Hosp. sections
44 List of choices
45 All that was left in Pandora's box
46 Rural sight
47 Laos locale
48 Yonder folks
50 Place for pampering
51 Batik need

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TECHNOLOGY: CISCO'S CHAIRMAN TO STEP DOWN B4

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Euro vs. Dollar 1.1929 ▼ 0.15% **FTSE 100** 7253.28 ▲ 0.52% **Gold** 1306.30 ▼ 1.07% **WTI crude** 49.91 ▲ 0.04% **German Bund** yield 0.455% **10-Year Treasury** yield 2.230%

Portugal: Europe's Unlikely Star Market

Government-bond yields plunge as S&P returns credit rating to investment grade

By Jon Sindreu

In Europe, this year's star investment has been a country long one of its most troubled—Portugal.

Portuguese government debt rallied sharply on Monday after ratings company Standard & Poor's gave the government back the investment-grade label lost during the euro crisis in 2012. Yields on 10-year Portuguese bonds plummeted to around 2.5%, the lowest since late 2015, when only Friday they closed at roughly 2.8%.

Portuguese debt has been one of 2017's hottest investments. Those who bought Portugal's 10-year sovereign bonds at the start of this year have seen a 22% return, better than for any other bond in the eurozone, excluding coupon payments.

When coupons are included, only Greek bonds have performed better this year, data that runs up to last Friday—and excludes Monday's rally—shows.

That is a far cry from 2012, when Portuguese government-bond yields rose to as much as 16% as troubles in Greece and fears about the survival of the common currency sparked concern about the ability of countries across the euro-zone's so-called periphery to pay back their debts.

Portuguese debt is also outperforming stocks and gold.

In dollar terms, the S&P 500 has gained 12% since the start of the year, while gold is up 14%. The Portuguese stock market is up only half as much as the nation's bonds, gaining 11% in euro terms. On Monday, it gained 1.6%, compared with 0.2% for the broader Euro Stoxx 50.

Portugal's government debt has rallied since late March, as international investors returned to Europe after years of pulling money out of the Continent's markets. Later, it was the main beneficiary of a relief rally that came as far-right candidate Marine Le Pen's chances of a victory in this year's French presidential election faded.

The gap between Portuguese 10-year yields and those on equivalent German debt—a key gauge of risk—is at its narrowest since January 2016.

As the eurozone's economic recovery has accelerated this year, the periphery has taken the lead and Portugal is leading the pack.

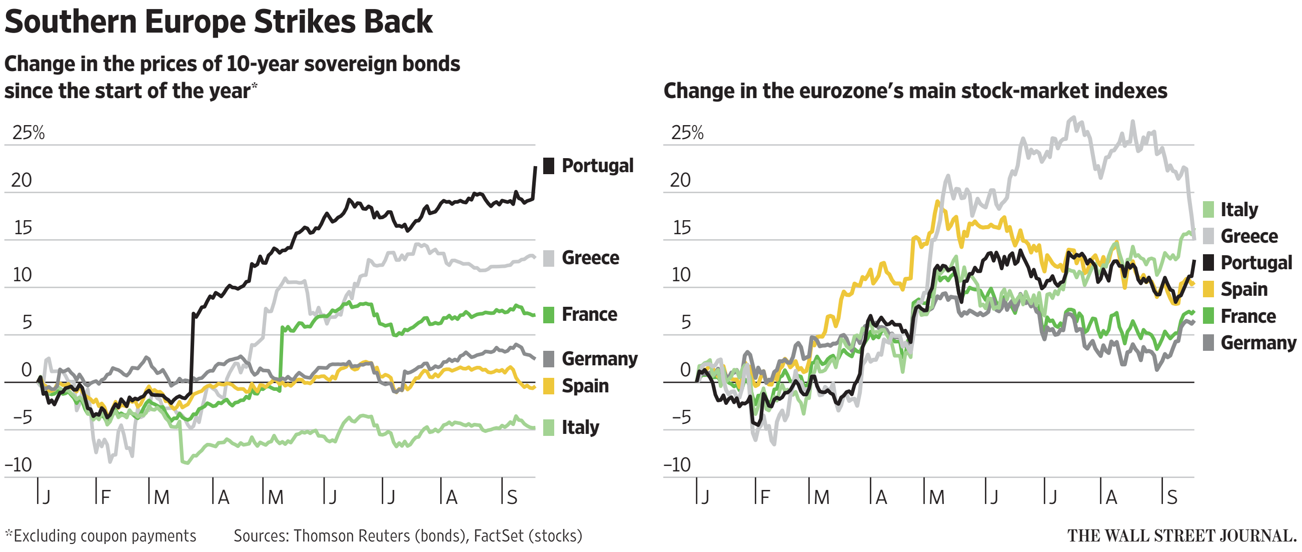
Portugal's gross domestic product has expanded 2.9% on the year in the second quarter and 2.8% in the first, much above the eurozone average. Unemployment keeps going down and is close to a nine-year low.

S&P said it now expected Portugal to grow 2.2% on average until 2020, compared with a March forecast of 1.5%.

"The upgrade reflects our improved forecast for Portugal's GDP growth during 2017-2020, as well as the solid progress it has made in reducing its budget deficit and the receded risk of a marked deterioration in external financing conditions," S&P said.

The ratings firm also underscored that the government has helped strengthen the banking system by recapitalizing state-owned Caixa Geral de Depósitos this year.

Portugal is still rated as a speculative investment by Moody's Investors Service and Fitch, the other two top ratings companies.

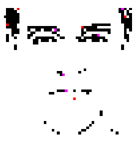


◆ Heard on the Street: ECB's tapering isn't so scary......... B8

STREETWISE

By James Mackintosh

What Is The True Value of Bitcoin?



Behind every bubble is a good idea bursting to get out, and bitcoin kind of looks like a good idea, at least if you squint a bit. A digital currency without borders that governments can't control and that allows secret online transactions? I'm in. Bitcoin itself? Not so much.

So is a single bitcoin worth $500,000, $5,000, $500 or $0? I'm inclined to say $0, especially if bitcoin's value depends on it being adopted as a global digital currency to replace dollars. There is no chance whatsoever that bitcoin can displace the dollar, for the simple reason that it is badly designed. Bitcoin can handle a pathetically small number of transactions, and uses an inordinate amount of electricity to do so, making it entirely unsuitable to replace ordinary money.

Even if bitcoin worked better, it is in a Catch-22 because of Gresham's law, the nostrum that bad money drives out good. Given the choice of spending inflationary government-issued money or something which holds its value, everyone would spend the bad paper stuff and hoard the bitcoin. But if no one spends bitcoin, it will never get established as a currency.

There are two somewhat less ambitious claims for bitcoin that could give it value. The first is that it is a limited form of money because of its usefulness for dealing illegal drugs and dodging capital controls. The second is that it is a form of digital gold: an insurance that will keep its value even if governments confiscate or inflate away the buying power of the currencies they issue.

Let us unpack the idea of bitcoin being based on illegal transactions. Dan Davies, a bank analyst at Frontline Analysts in London, came up with a value thanks to bitcoin's built-in limit of 21 million in circulation.

In any currency, the money supply multiplied by how often it circulates equals the price level times the number of transactions.

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Bruce Springsteen performs with the E Street Band in Lisbon in 2016. Offers for 'Springsteen on Broadway' sales codes are sky-high.

PATRICIA DE MELO MOREIRA/AGENCE FRANCE PRESSE/GETTY IMAGES

Ticket Resellers Target Sales Codes

By Anne Steele

Ticketmaster's latest attempt to stamp out scalping has spawned a new market—not for tickets themselves, but for special codes that offer the opportunity to buy them.

The concert promoter's Verified Fan system aims to identify "real" fans and give them a shot at buying tickets without having to compete with scalpers. Now professional resellers are offering hundreds of dollars for the codes that grant access to the hottest tickets.

Private message boards used by ticket brokers and seen by The Wall Street Journal have been lighting up with offers ranging as high as $1,000 for a single code to access tickets for Bruce Springsteen's solo-run residency at Broadway's Walter Kerr Theatre. Each code allows a buyer the chance to purchase a maximum of two tickets. The market even includes smaller acts: Codes for Trans-Siberian Orchestra are going for $30 and $50.

Having a Verified Fan code doesn't guarantee the holder will get tickets. And for brokers, it is an extra cost on top of the price of the tickets themselves, whose face value, in the case of Mr. Springsteen, ranges from $75 to $850. Trans-Siberian Orchestra tickets range from $35 to $75.

"Ticketmaster is committed to getting tickets directly into the hands of fans," the company said in a statement. "We will continue to innovate and combat those that attempt to subvert that mission."

Representatives for Mr. Springsteen and Trans-Siberian Orchestra didn't respond to requests for comment.

Sellers on StubHub, the popular online marketplace for tickets, are asking for as much as $9,800 a ticket for the Springsteen shows.

Ken Solky, a broker who owns Las Vegas Tickets and two agencies in Southern California

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Google Suggests Search Remedy

By Natalia Drozdiak

BRUSSELS—**Alphabet** Inc.'s **Google** has proposed overhauling its shopping search results so that rivals can bid for space to display products for sale, as part of the tech giant's efforts to comply with the European Union's antitrust order, according to people familiar with the matter.

Under the proposal, Google would bid against rivals to display products for sale in the space above its general search results, according to the people. Google would set itself a price cap that it wouldn't be able to bid above, but competitors could do so if they wished.

Rival shopping sites have hit back, saying an auction-based remedy wouldn't assuage the EU regulator's demands that the company treat its competitors' offerings and its own shopping service equally.

The European Commission ordered Google to make the changes to its search results by late September as part of its decision to fine Google a record €2.42 billion ($2.89 billion) in June for discriminating against rival comparison-shopping sites in its search ranking. The remedies would have to apply in all European countries where Google offers its shopping service.

Google submitted a plan to the EU in August that sketched out how it would amend its search results to comply, but declined to pro-

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INSIDE

GOOGLE INTRODUCES MOBILE PAYMENTS IN INDIA

FINANCE & MARKETS, B5

Car Makers in Push for Patents

By Christina Rogers

DETROIT—Car fanatics wanting a glimpse at the auto industry's next big thing used to flock to auto shows. Now, many of them flip through online patent filings.

Auto makers, pressured to keep up with Silicon Valley companies working on autonomous-car technology and ride sharing, have sharply boosted their U.S. patent filings over the past five years. In 2016, 10 of the world's largest car makers submitted 9,700 patent applications, up 110% from 2012, according to consulting firm Oliver Wyman.

"The pressure is for us to invent before the Valley does," said Bill Coughlin, chief executive of Ford Global Technologies LLC, which handles the Dearborn, Mich., auto giant's patent and copyrights. "The last thing we want is to be a fast follower."

A growing number of these filings seem straight out of science fiction, covering inventions intended to help people pay less attention to the road while they drive—or while they aren't actually driving at all.

Ford Motor Co. seeks a patent for a drone system that would locate passengers who call a self-driving robo-taxi, while another Ford filing, envisioning self-driving cars with conference-room-style seating, seeks to patent a special air bag that will fit into a center table to protect the occupants facing it.

For its part, **BMW** AG wants to patent a system that would allow an autonomous vehicle to communicate with pedestrians or human drivers in other vehicles, through visual signs, beeps or even speech.

Hyundai Motor Co., meanwhile, seeks to protect a device that would allow a driver to exit from the car and then push a button to park it, while **Toyota Motor** Corp. is looking to patent a technology that makes certain car parts such as door pillars appear to be see-through.

Patent holders have exclusive rights on an invention for as long as two decades after the grant date, an important

Please see CARS page B4

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These indexes cite notable references to most parent companies and businesspeople in today's edition. Articles on regional page inserts aren't cited in these indexes.

INDEX TO PEOPLE

BUSINESS & FINANCE

Ford Links Up With Indian Firm

By Christina Rogers

Ford Motor Co. again is distancing itself from cross-town rival **General Motors** Co., saying it will work with an Indian auto maker on boosting its prospects in an important emerging market where profits have been hard to come by.

Ford said Monday that it is linking up with Indian auto maker **Mahindra & Mahindra** Ltd. in a three-year partnership to explore potential areas of collaboration on new technologies and retail sales. Such areas could include everything from codeveloping electric vehicles to collaborating on new mobility ventures and connected-car services. Ford also is looking at ways to leverage the two companies' dealer networks to expand into new markets.

Ford's move closely follows GM's exit from India, where the auto maker will stop selling vehicles so it can redirect investment to more lucrative markets. GM is also spending heavily on autonomous-vehicle and electric-car development.

Mahindra is a well-known player in India, which is the world's fifth-largest car market by sales, but the company has struggled to establish itself and its lineup of rugged SUVs in mature markets.

QUIQUE GARCIA/EUROPEAN PRESSPHOTO AGENCY

Mahindra is known for its frugal approach toward engineering.

Mahindra is known for taking a frugal approach to engineering, including being able to develop vehicles that can appeal to budget-minded buyers, and that could help Ford as it looks to improve its oversight of development costs. As regulatory demands increase in markets like India, Mahindra and its rivals have been hiring engineers in markets like the U.S. and seeking partnerships.

Ford is hoping the partnership will help it trim costs in India, a once promising market that has become a drain on resources for many car makers. While new-car demand continues to grow, the market remains overcrowded with competitors trying to sell low-price cars.

Ford Global Markets Chief Jim Farley said the car maker has made significant headway in establishing the Ford brand among consumers in India but needs to work on the cost side of the equation.

"We're looking at this pretty broad in scope," Mr. Farley said of the Mahindra partnership. He declined to give specifics.

Ford remains a small player in India, where Asian car makers Hyundai Motor Co. and Suzuki Motor Corp. dominate the marketplace with the kinds of low-price models that appeal to Indian buyers—many of them purchasing a car for the first time.

Ford's market share in India is 2.5%. Last year, it sold roughly 87,000 vehicles in the country, up 11% from 2015, according to WardsAuto. Mahindra is much larger, selling over 400,000 vehicles in India last year. Its market share is just under 8%.

For nearly a year Ford has flagged India as a challenge. The company has declined to say whether it is losing money in the country, but in March, Ford Chief Financial Officer Bob Shanks said the crowded market and weak pricing was making India "very difficult" and Ford's approach "needs to change."

Ford also is investing in two other markets GM abandoned: Western Europe and Russia.

Sorry, You May Not Get a Raise in 2018

By John Simons

Unless you are one of the highest performers at the office, don't expect next year's paycheck to grow much.

Businesses plan to keep budgets for raises relatively flat in 2018, while continuing to devote more payroll dollars to performance-based pay, according to a survey of salary planning at 1,062 organizations conducted by Aon Hewitt.

Despite low unemployment and increased competition for talent, companies are bearish on across-the-board pay raises, said Ken Abosch, an Aon Hewitt executive who works on the annual survey.

"Organizations are expressing reservations about the years coming and, for the first time since the recession, are signaling doubt or uncertainty about what they think their performance will look like in the coming year," he said.

Companies are paying to keep their highest performers happy, with an average 12.5% of payroll going to incentive and bonus pay next year.

Overall, two-thirds of the organizations in the survey said they would use merit pay to show workers who's doing a good job, and who could stand to improve. Of those companies, 40% said they would reduce or eliminate raises for low performers. And some high performers will have to work harder next year—15% of the companies changing merit pay say they will set more aggressive targets for bonuses and incentive pay.

Lindenwood University, a liberal-arts school near St. Louis, recently introduced a merit pay system for the school's staff of 950. Previously, there was no formal structure for rewarding performance. High performers get rewarded for extra effort, said Dr. Deb Ayres, vice president of human resources.

STREET

Continued from the prior page

For bitcoin we can estimate three of the four variables, Mr. Davies says. He observed that even hardened criminals don't set prices in bitcoin, but rather in dollars, and then immediately convert. Assume that all drug dealing moves online, that bitcoins circulate as rapidly as ordinary currencies and estimate a $120 billion-a-year market for illegal drugs, and the formula spits out an ultimate value of $571 for a single bitcoin. The more drugs traded, the higher the value, and the more bitcoin hoarded rather than spent, the higher the value.

Drug dealers might be willing to put up with the limitations of bitcoin, notably the uncertain time taken to complete a purchase and the high transaction costs. Laundering dollars is more expensive.

But studies cited by the United Nations Office on Drugs and Crime suggest that cryptocurrency-based online drug dealing remains relatively small, and focused on retail, meaning fewer and smaller transactions than Mr. Davies's limiting assumption, so justifying a much lower bitcoin price.

On this basis the recent price of $3,950 is mostly speculation, and **J.P. Morgan Chase** & Co. Chief Executive James Dimon's comparison to the 17th-century Dutch tulip mania is apt.

Bitcoin is "being driven all over the place by speculative portfolio flows," says Mr. Davies.

Digital gold might be more appealing for bitcoin's true believers, who would surely prefer to avoid basing a currency on illegal activity. Gold is hopeless if you want to pay the mortgage or buy bread, but is useful insurance because we can be confident that if a government currency collapses the metal will roughly hold its value.

It helps that history holds plenty of examples of currencies losing all their value to hyperinflation while gold could still be bartered for food and shelter.

Gold has a value far above what is justified by its uses in electronics and jewelry only because (almost) everyone agrees that it has value. That "network effect" is what bitcoin needs to establish itself, and the more attention it garners, the more likely it is to become established. Yet gold has had thousands of years and a history of being used to back money to support its position.

Technological disruption may be overturning many societal norms, but securing society-wide recognition as a safe asset takes more than the backing of tech evangelists and a bunch of get-rich-quick stock promoters.

Still, the potential to replace gold gives us some figures to work with. Thomson Reuters GFMS estimates there were 2,155 metric tons of gold held in exchange-traded funds. Switch all of that into bitcoin and it would justify a price of about $5,500 for the 17 million bitcoins currently outstanding.

We could be more optimistic and think bitcoin might replace gold coins and bars. Leave aside that the gold is better than bitcoin because gold doesn't depend on having an electricity supply, and the 24,000 metric tons GFMS estimates have been bought for investment in the past half-century would justify a price of $61,000 for every bitcoin.

If we assume that bitcoin will either succeed completely in displacing gold or fail and be worth zero, it helps explain why the digital token has been so incredibly volatile, with a 40% loss in two weeks, and a 33% rebound since Friday's low. Based on the simple choice between total success and failure, we can very roughly say that bitcoin at 70% of the gold ETF-derived price suggests a 70% chance of displacing so-called paper gold as society's chosen emergency store of value, and a 6% chance of displacing physical gold.

Even digital dreamers should accept that is far too high.

JOHN SHEARER/LP5/GETTY IMAGES

Taylor Swift fans at a concert in Austin, Texas, last year. A new Ticketmaster system aims to identify 'real' fans to curb scalping.

SHOWS

Continued from the prior page

fornia, insists the secondary market is never going to go away—and that resellers like him will always find a way around Ticketmaster's efforts. Mr. Solky said Verified Fan did little to stop him from procuring Springsteen tickets for such clients, and it hasn't affected his business. "Reputable brokers bought enough to satisfy the initial demand of their clients," he says.

It has become a high-risk, high-reward game. Brokers say Ticketmaster is making it more expensive, time-consuming and difficult for fans to get tickets.

The system asks users to register weeks before tickets go on sale—sometimes before an artist's album is even released—with their name, email and phone number. Ticketmaster, owned by **Live Nation Entertainment** Inc., doesn't disclose the exact details of how the program works. But according to people who have worked on Verified Fan tours, the ticketing giant seeks to weed out scalpers by delving into its own sales records, along with publicly available data such as social-media history, to check out users' identities. Those deemed genuine fans are sent codes that let them access—but don't guarantee—tickets.

Not all brokers are dealing in codes. Some are creating dozens of Ticketmaster accounts using burner phones, alternate email addresses and Visa gift cards in hopes the system will grant codes to some of the aliases. It isn't clear whether that gambit has worked.

Speaking at an investor conference last week, Live Nation Chief Executive Michael Rapino said the system has been over 95% successful.

"Between our database—which is the largest in the world in terms of ticket-purchase data—and that algorithm and a bunch of other data we inject once you register, we've been very efficient," he said. "We can figure out if you're a bad actor or a fan."

Ticketmaster said that fewer than 3% of the Verified Fan tickets for Mr. Springsteen's Broadway shows have made it to the secondary market. But some brokers are waiting until closer to the shows to put them up for sale in order to keep prices artificially high, according to people familiar with the matter.

StubHub, owned by **eBay** Inc., said it isn't seeing an inventory drop-off on Verified Fan-ticketed events.

A person familiar with matter said the resale prices for some Verified Fan-ticketed events have been pushed higher, but not all.

Brokers predict the Verified Fan system will have an unintended consequence: inducing fans to sell their seats as the resale value skyrockets.

"You're going to see more and more real fans putting those tickets on the secondary market—how can you turn the money down?" according to one person. "You can put a down payment on a car or have a two-hour memory."

BUSINESS WATCH

DOLLAR TREE

New Chief Executive Appointed in Shuffle

Dollar Tree Inc.'s top ranks are changing as its former leader becomes its executive chairman and a longtime employee takes over as chief executive.

Dollar Tree's new CEO is Gary Philbin, the company said Monday. Mr. Philbin, 60 years old, has been with the company in various roles since 2001. He most recently served as enterprise president, with responsibilities for both Dollar Tree and Family Dollar Stores Inc.

Bob Sasser, the discount retailer's chief executive since 2004, is now executive chairman of the board. Former Chairman Macon Brock will remain on the board of directors as a chairman emeritus, the company said.

During Mr. Sasser's tenure as CEO, Dollar Tree went from a market capitalization of $2.3 billion and $1 billion in annual sales to a market capitalization of $19.8 billion and anticipated annual sales of over $20 billion. The company's workforce also grew from 18,000 employees to nearly 10 times that number.

—Cara Lombardo

SLACK TECHNOLOGIES

Startup Closes Financing Round

Slack Technologies Inc. said Monday it closed a $250 million funding round led by **SoftBank Group**'s Vision Fund, making it the latest tech startup to catch the eye of the world's largest technology fund.

The latest financing round values the three-year-old company at $5.1 billion.

Slack, whose namesake workplace messaging platform is used by eight million people a week, has raised $841 million in funding to date.

Japanese conglomerate SoftBank has been pouring money into tech companies this year through the group's $93 billion Vision Fund.

—Cara Lombardo

INGREDION

Successor Is Named For CEO Gordon

Ingredion Inc. said Monday that industry veteran James Zallie will become chief executive effective Jan. 1, succeeding the retiring Ilene Gordon.

Ingredion, a supplier of sweeteners and starches for the food industry, said Ms. Gordon will retain her position of chairman until she retires in July 2018.

Ms. Gordon became chief executive in 2009.

Mr. Zallie was CEO of National Starch LLC when it was acquired by Ingredion in 2010. He is currently vice president global specialties and president of the Americas division.

—Ezquiel Minaya

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JBS Stirs Outcry as Founder Returns

By Samantha Pearson And Luciana Magalhaes

SÃO PAULO—Brazil's **JBS** SA, the world's largest meatpacker, has sparked fierce criticism by putting its 84-year-old founder back in charge of the family-run company after both his sons were jailed, ignoring shareholders' pleas to bring in outside management.

José Batista Sobrinho will take over as chief executive until May 2019, steering JBS through a mammoth corruption scandal with the help of his 26-year-old grandson as an adviser. Shares in the company, which owns brands Swift and Pilgrim's Price in the U.S., slumped 4% Monday.

JBS's announcement Sunday came in stark contrast to the strategy of Brazil's other scandal-hit giants such as construction group **Odebrecht** and steelmaker **Gerdau**, which are booting out their founding families from the companies' management to win back investors' trust.

"The families of these companies will have to be completely removed or the companies will have to be sold—otherwise they do not have much chance of survival," said Marcelo Godke, a law professor at the Insper business school in São Paulo, referring to firms involved in Brazil's corruption investigations.

The family-run business model has prospered in Brazil over the past century, as it has across Latin America, and is generally praised for making companies more stable and better able to withstand the region's economic turmoil.

But it also makes recovering from a corruption scandal particularly tricky.

With their heirs in jail, companies implicated in the Car Wash investigation have struggled to move on while they are still owned by and named after their disgraced founding family.

JBS was thrust to the center of the investigation earlier this year when JBS's controlling shareholders, through their holding company, admitted they bribed close to 2,000 politicians, including President Michel Temer. Initially granted immunity in exchange for the confession, Joesley Batista, the billionaire heir and former JBS chairman, was arrested this month on accusations he omitted information from his testimony—allegations he denied. His brother Wesley Batista, JBS's then-CEO, was arrested last Wednesday, accused of insider trading for allegedly dumping the company's shares and stockpiling U.S. dollars before the market-moving scandal became public—allegations he also denies.

Mr. Batista Sobrinho, Joesley and Wesley's father, said in a statement Sunday he was proud to become the top boss again and has "a lot of confidence in the performance of our leadership."

JBS also promoted his grandson, Wesley Batista Filho, to a "global leadership team" tasked with helping the aging founder make decisions, the company said.

Teva Sells Women's Health Assets

The generic-drug company will receive $1.38 billion in a move to grapple with debt

By Ezequiel Minaya

Teva Pharmaceutical Industries Ltd., the world's biggest seller of generic drugs, said Monday it will sell the remaining assets in its specialty global women's health business for $1.38 billion, the company's latest move to grapple with high debt.

The company has been selling off noncore assets in a bid to pay down some $35 billion in debt.

Teva said Monday it has entered into an agreement with **CVC Capital Partners** to sell it a portfolio of contraception, fertility, menopause and osteoporosis products for $703 million in cash. In addition, Teva has entered an agreement under which Foundation Consumer Healthcare, owned by affiliates of Juggernaut Capital Partners and **Kelso** & Co., will pay $675 million in cash for Teva's Plan B One-Step and other brands of emergency contraception.

Last week, Teva announced it had sold its Paragard contraceptive-device business to **Cooper** Cos. for $1.1 billion.

The sales "demonstrate Teva's commitment to delivering on our promise to generate net proceeds of at least $2 billion from the divestiture of noncore assets," said Yitzhak Peterburg, Teva's interim CEO.

Like other generic drugmakers, Teva faces tough price competition that is squeezing profit margins. It also owes about $35 billion, much of it from last year's acquisition of Allergan PLC's generics unit for $40.5 billion, Teva's biggest-ever deal.

Last week, Teva appointed Kare Schultz, a nearly 30-year pharmaceutical industry veteran, as the company's new chief executive. The company hasn't yet said when Mr. Schultz will assume his post.

Teva has searched since February for a new chief executive to fill the shoes of longtime leader Eli Hurvitz, who is credited with turning the company from a small-time pharmaceutical firm into a global generics drugs seller.

Mr. Hurvitz was chief executive for more than 25 years and involved in Teva until his death in 2011. Since then, the firm has gone through a series of chief executives that have struggled to manage global expansion.

The Israeli drugmaker in August posted disappointing second-quarter results, cut its full-year outlook and slashed its dividend, blaming the rapid deterioration of its all-important U.S. generic drug business. Teva took a $6.1 billion write-down on that unit and posted a quarterly net loss of $6.04 billion.

—Rory Jones contributed to this article

RONEN ZVULUN/REUTERS

Tough price competition is squeezing Teva's profit margins.

ASSOCIATED PRESS

Kraft Heinz is controlled by 3G Capital Partners, which has a history of appointing young executives.

CFO at 29: It Fits Playbook

By Annie Gasparro And Ezequiel Minaya

Appoint young executives, groom them to your liking—and save some money while you're at it. That seems to be Brazilian private-equity firm **3G Capital Partners** LP's strategy for the companies it controls.

Kraft Heinz Co., the firm's biggest investment and the fifth-largest food company in the world, recently named 29-year-old David Knopf as its chief financial officer. In giving the job to Mr. Knopf, a 3G partner who joined the food company in 2015, Kraft Heinz passed over an accounting officer with more than a decade of experience in the food business.

3G has a history of appointing young financiers often from its own ranks to top positions, replacing industry veterans. Such moves are a departure from strategies generally employed at other publicly traded companies, especially those the size of Kraft Heinz, which has nearly $30 billion in annual sales and a market capitalization of about $100 billion. 3G remains the company's largest shareholder, after orchestrating the merger that formed the food giant in 2015.

Publicly traded companies even half Kraft Heinz's size often hire older executives with more operating experience for top roles. Since December, General Mills Inc. and Hershey Co. have both installed new chief executives who have worked in Big Food for decades. Mondelez International Inc. last month named its new CEO: Dirk Van de Put, an industry veteran who was leading Canada's closely held McCain Foods Ltd.

KRAFT HEINZ COMPANY

David Knopf is the new chief financial officer at Kraft Heinz.

When Mr. Knopf takes on his new role in October, he will be the youngest CFO among Fortune 500 companies, according to data provider BoardEx. The average age of finance chiefs in the top 1,000 U.S. companies is 51 years old, according to **Korn/Ferry International**, an executive recruiting firm. The average age of someone starting a CFO role is 50.

Age may not be an absolute proxy for experience, experts say, as finance chiefs today focus on operations, technology and company strategy while more traditional functions of accounting and regulatory reporting can fall to others, such as a global controller. Kraft Heinz has a veteran in that role, and Mr. Knopf's predecessor, Paulo Basilio, a 3G partner since 2012, will remain at the company as president of its U.S. business.

Mr. Knopf "is still green in some areas, but it's my job to develop him," said Kraft Heinz Chief Executive Bernardo Hees, also a 3G partner, at a lunch with business executives in Chicago last week. But he is ready to take on more at the company, Mr. Hees added.

Mr. Knopf played a role in the Kraft Heinz merger, a deal valued at roughly $50 billion. Once it was completed, he became a vice president of finance for the new company and is currently leading the Planters business.

3G co-founder Jorge Paulo Lemann is known in the industry for nurturing young talent, according to Giovanni Lamarca, a managing director at recruiting firm RSR Partners. "One of his strengths is detecting the diamond in need of polish," Mr. Lamarca said.

After 3G acquired H.J. Heinz Co. in 2013 with the help of Berkshire Hathaway's Warren Buffett, it quickly replaced nearly all of Heinz's top executives with 3G partners or younger, lower-level Heinz employees. Mr. Hees, who was 43 at the time, became CEO, succeeding the 64-year-old, longtime chief.

At **Burger King**, 3G partner Daniel Schwartz was appointed chief financial officer following the private-equity firm's 2010 purchase. At the time, he was the youngest CFO among top 1,000 companies, according to Korn/Ferry. Three years later, Mr. Schwartz, then 32, became CEO of the company, now run as **Restaurant Brands International** Inc.

Kraft Heinz didn't make Mr. Knopf or other executives available for an interview.

—Kimberly S. Johnson contributed to this article.

Business Schools Again Post Drop In Applications

By Kelsey Gee

Applications to full-time M.B.A. programs in the U.S. fell for a third straight year, the latest signal that business schools are struggling to entice young professionals out of a strengthening job market.

Students saddled with college debt have become more reluctant to leave their jobs for two years to pursue one of the nation's most expensive degrees, school administrators say. That has spurred schools to offer a flurry of specialized master's programs that take less time to complete or offer greater flexibility for working professionals.

"Ten years ago the M.B.A. was the only option you had, but the market has shifted, and business schools, like any company, have to shift with it to meet the demand of our customers," said J.P. Matychak, an associate dean at Boston University's Questrom School of Business.

American business schools received 3.2% fewer applications in this year's academic cycle compared with 2016, according to a survey of 407 programs by the Graduate Management Admission Council, which administers a common admissions test. Applications from international students—for years a bright spot for specialized master's and M.B.A. programs—fell 5.8% compared with 2016.

University of Iowa's Tippie College of Business said last month, for instance, it would abandon its full-time M.B.A. program to focus on degrees like its part-time master's in business analytics. Enrollment in Tippie's two-year M.B.A. fell from 140 students in 2010 to fewer than 100 this year, according to a spokesman.

More convenient M.B.A. formats are being launched by schools in the U.S. and outside, which have had some success in attracting students world-wide. But only a third of U.S. schools received more applications to full-time M.B.A. programs in 2017 than in 2016, while 64% reported a drop from the prior year.

For the 2017 application cycle, 965 graduate management programs across the globe—ranging from the traditional two-year M.B.A. to master's in finance and accounting—received around 500,000 applications. While that is up from 872 programs that received 440,000 applications last year, the addition of new programs have also scattered applicants across a wider array of schools.

Especially vulnerable to the drop in demand were small programs that enroll 50 or fewer students, which make up the vast majority of all business degrees, but received just 11% of all applications.

The waning status of American business schools could be attributed to programs overseas becoming more competitive, and to concerns among foreign students about the fate of U.S. work-visa policies, which the Trump administration has said it would amend, said Sangeet Chowfla, GMAC's chief executive. This year's data suggest students around the world were more interested in studying closer to home, Mr. Chowfla added.

U.S. business schools received 3.2% fewer applications in this year's cycle.

Each of these factors, he said, contributed to an uptick in international applications to schools in Canada and Europe, such as INSEAD in France and the Rotman School of Management in Toronto, which both had an increase in applications from international students.

"The availability of jobs for international students and uncertainty surrounding changes to the H1B visa process are a concern for all of higher education," said Mr. Matychak, of Boston University's Questrom School of Business, which received 1,100 applications for its full-time M.B.A. this year, similar to 2016's application volume. At Questrom, international students make up around a third of the two-year M.B.A. class of 164, but around 95% of the school's specialized master's programs.

WILLIAM WEST/AGENCE FRANCE-PRESSE/GETTY IMAGES

Ten Network was placed into voluntary administration in June. Administrators last month recommended it be sold to CBS.

Murdoch Loses Bid to Halt Australia Deal

By Rob Taylor

CANBERRA, Australia—Television entrepreneur Bruce Gordon and Lachlan Murdoch, the son of media mogul Rupert Murdoch, have lost a legal bid to thwart the takeover of insolvent **Ten Network Holdings** Ltd. by U.S. broadcasting giant **CBS** Corp.

Messrs. Gordon and Murdoch had challenged in court the proposed buyout of Ten Network—valued at 201.1 million Australian dollars (US$161 million)—arguing their own bid to buy the company wasn't properly considered by insolvency specialists KordaMentha in deciding to favor CBS's bid last month.

On Monday, however, the Supreme Court in New South Wales state dismissed the challenge, clearing the way for a meeting of creditors on Ten Network's future Tuesday.

"I am not satisfied that the plaintiffs have established that any deficiencies...such as to warrant orders requiring that further information be provided to creditors or that the second creditors' meeting be restrained," judge Ashley Black said in his Monday determination.

Messrs. Gordon and Murdoch said they would appeal the decision.

Mr. Murdoch is co-chairman of News Corp, which owns The Wall Street Journal publisher Dow Jones, while Mr. Gordon controls a company that owns regional broadcasting licenses across Australia.

Ten Network was placed into voluntary administration in June, with administrators last month recommending the sale of the company to CBS. Messrs. Gordon and Murdoch—who is also executive chairman of 21st Century Fox—launched a fresh bid for Ten Network on Friday after Australia's Parliament passed laws easing ownership controls in the media sector.

At the meeting Tuesday, creditors will consider resolutions including selling Ten Network to CBS, while a KordaMentha spokesman said participants would likely also consider the "late bid" by Messrs. Gordon and Murdoch and possibly ask for an adjournment to allow more consideration. Resolutions require approval both from creditors and Ten's 750 employees.

Messrs. Gordon and Murdoch had sought a declaration from the court that KordaMentha's report to creditors on the proposed CBS tie-up didn't provide adequate information about their joint bid for Ten Network, which last year posted losses totaling A$157 million.

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Cisco's Chairman to Step Down

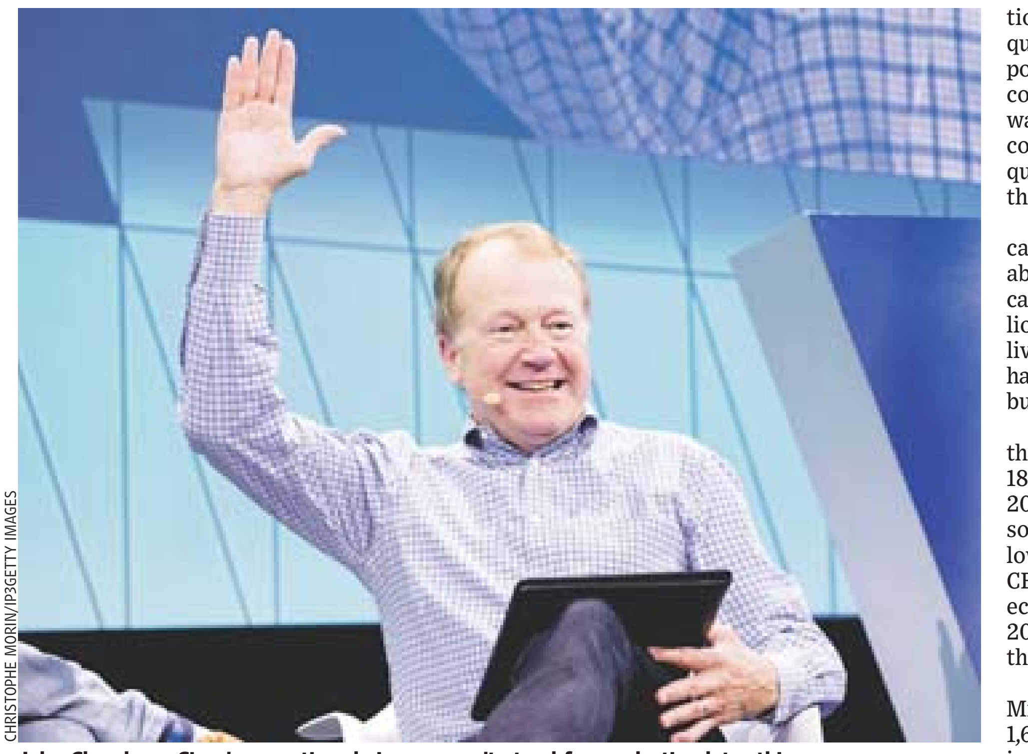
Chambers led supplier of network equipment for over two decades; CEO to fill the position

BY RACHAEL KING
AND CARA LOMBARDO

Cisco Systems Inc. said Monday that Executive Chairman John Chambers, who led the networking-equipment company for more than two decades and through two U.S. recessions, won't stand for re-election later this year.

Mr. Chambers has been chairman since 2006 and executive chairman since July 2015, when he gave up the role of chief executive to Chuck Robbins, a 17-year company veteran. Still, he remained a presence on the executive floor at Cisco's San Jose, Calif., headquarters.

While at the helm, Mr. Chambers built Cisco into the networking leader with a market value at one time exceeding $500 billion. In recent years, the company has grappled with layoffs as it faced increasing competition from upstart rivals such as **Arista Networks** Inc. and **Juniper Networks** Inc.



CHRISTOPHE MORIN/IP3/GETTY IMAGES

John Chambers, Cisco's executive chairman, won't stand for re-election later this year.

Mr. Chambers, 68 years old, began discussing a transition with Cisco's board the past few months, and notified members of his decision in an email Wednesday.

Cisco plans to appoint Mr. Robbins, 51, as chairman when Mr. Chambers's term expires at the annual shareholders meeting on Dec. 11.

"It is time for Cisco to move on to its next generation of leadership," Mr. Chambers said in his email to board members. "It is also time for me to move on to the next chapter of my life, on both a personal and business level."

Mr. Chambers joined Cisco in 1991, the year following the company's initial public offering, as senior vice president of world-wide sales and operations. The company grew quickly in the ensuing decade, powered by the unfolding dot-com era, as it sold the hardware that made it possible for companies to send data quickly over the internet and through corporate networks.

By March 2000, Cisco became the world's most valuable company with a market capitalization around $555 billion—a title that was short-lived as the company was hit hard when the dot-com bubble burst.

Mr. Chambers managed through the turmoil, shedding 18% of Cisco's staff in March 2001. He leaned on those lessons in the years that followed, being among the first CEOs to warn of impending economic problems in late 2007 and steering Cisco through the 2008 recession.

During his years as CEO, Mr. Chambers delivered a 1,600% return to shareholders, including dividends. Based mostly on shareholder return, Harvard Business Review in 2015 named Mr. Chambers the second-best-performing chief executive in the world out of 907 executives.

Neither Mr. Chambers nor Cisco shared details about his next plans.

Snap Agrees To Block Al Jazeera

BY DOUGLAS MACMILLAN

Snap Inc. said Sunday that it has followed a request from the Saudi Arabian government to block access to **Al Jazeera** news articles and videos on its Snapchat social-media app to residents in the country.

Al Jazeera's Arabic-language channel in Snapchat Discover, which had been available since May, was removed from the Saudi Arabian version of the app, a spokeswoman from Snap said. Al Jazeera articles remain open to Snapchat users in 14 other countries in the Middle East.

Snap's decision could inflame tensions between the Qatari broadcaster and the four neighboring countries that have imposed an economic blockade on Qatar.

In a written statement, a spokesman for Al Jazeera said Snap's move appears to be "an attempt to silence freedom of expression."

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NOTICE INVITING BID

Bid/Package no-AM-20/2017 Dated 18/08/2017

Subject:- RFP for Improvement of Roads in the Amravati District in Maharashtra State for Two laning road / Two Laning road with paved shoulders under MRIP Package AM-20 on Hybrid Annuity Mode

The Government of Maharashtra had entrusted to the Authority the development, maintenance and management of state highways and Major District Roads of State of Maharashtra. The Authority had resolved to augment the existing road from 1. AM-20(A) SHEGAON PANDHARPUR PALKHI MARG

Improvement to Shegaon Nagzari. Paras Nimkarda Gaigaon, Akola Goregaon Mazod Wadegaon Medhshi Dava, Risod Loni & Bibi Kingaon Jattu in Akola Washim & Buldana Dist (SH MDR ODR & VR Length 78.48 Km) 2. AM-20(B) Improvement to Kapshi Barshi Takali Pinjar Karanja Road to joining Akola Dist HQ To Washim Dist HQ (SH 274 &. 287 Length 43.00 km) in the state of Maharashtra by [Two Lanning and paved shoulders thereof] (the "Project") on design, build, operate and transfer (the "DBOT". "Hybrid Annuity") basis, and has decided to carry out the bidding process for selection of [a private entity) as the Bidder to whom the Project may be awarded.

Brief particulars of the Project are as follows:

Name of the State Highway / Major District Road	Length (in Km)	Estimated Project Cost (in Rs.Cr.)
1. AM-20(A) SHEGAON PANDHARPUR PALKHI MARG Improvement to Shegaoan Nagzari, Paras Nimkarda Gaigaon. Akola Goregaon Mazod Wadegaon Medhshi Dava, Risod Loni & Bibi Kingaon Jattu in Akola Washim & Buldana Dist (SH MDR ODR & VR Length 78.48 km) 2. AM-20 (B) Improvement to Kapshi Barshi Tikali Pinjar Karanja Road to joining Akola Dist HQ To Washim Dist HQ (SH 274 & 287 Length 43.00 km)	121.98	₹ 314.72

The complete BID document can be viewed / downloaded from e-procurement portal of [http://maharashtra.etenders.in] from Dt. 28.08.2017 to Dt. 31.10.2017 (up to 23.00 Hrs. IST)]. Bid must be submitted online only at [http://maharashtra.etenders.in] during the validity of registration with the [Maharashtra Government e-Tendering Portal], i.e. [https://mahatenders.gov.in] on or before Dt. 31.10.2017 (up to 23.00 hours IST). Technical submissions of the Bids received online shall be opened on Dt. 07.11.2017 at 12.30 Hrs to Dt. 13.11.2017 at. 18.00 Hrs, (IST)

Bid Submitted through any other mode shall be entertained. However, Bid Security, proof of online payment of cost of bid document, Power of Attorney and Joint Bidding Agreement etc. as specified in Clause 2.11.2 of the RFP Shall be submitted physically by the Bidder on or before Dt. 07.11.2017 (at 12.30 Hrs. IST). Please note that the Authourity reserves the right to accept or reject all or any of the BIDs without assigning any reason whatsoever.

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(Mithilesh Chauhan)
Executive Engineer,
Public Works Division, Akola

DGIPR 2017/2018/2832

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THE WALL STREET JOURNAL.
EUROPE

CARS

Continued from page B1

weapon for vehicle companies looking for a technological edge in an evolving industry. While patent disputes rarely make news in the car business, first-movers often enjoy benefits, such as revenue from licensing their creations to others.

Toyota, long the industry leader in patent filings, innovated several hybrid-vehicle technologies that rivals eventually needed when looking to compete in combo gas-electric cars. Technology from its groundbreaking Prius was licensed by Ford, for instance.

"We're not just a company that's looking at putting some nuts and bolts on a vehicle," said Fred Mau, Toyota's lead intellectual-property attorney in North America. "It's about being prepared for, 'What's the next big thing?' "

Toyota has sought to patent a digital necklace to help the blind sense their surroundings, an example of how the car maker is looking beyond the vehicle market to innovate.

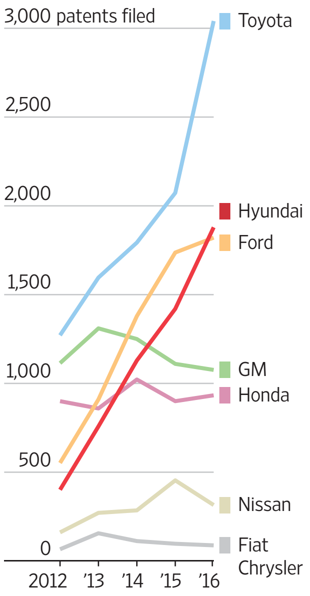
Auto executives feel the heat from tech companies, as richly funded startups and corporate heavyweights develop their own moonshot ideas.

For instance, Google parent **Alphabet** Inc.'s Waymo autonomous-car division in 2015 filed a patent application for a shape-shifting vehicle that would become flexible in a collision. **Amazon.com** Inc., which is following **Uber Technologies** Inc. and **Apple** Inc. in creating an in-house driverless-technology division, recently patented a system to help autonomous vehicles better navigate differing roadway configurations.

Juergen Reiner, a partner at Oliver Wyman, said car companies have an edge in creating automotive hardware, but will struggle to catch up on the software front. Unlike Silicon Valley companies, traditional vehicle

Big Ideas

Number of U.S. patent application filings by major car makers.



Source: Oliver Wyman
THE WALL STREET JOURNAL.

makers face huge overhead and capital requirements for their factories and product lines.

"It's not a well-balanced battle," Mr. Reiner said. "They need to develop cars and have other distractions."

Some car companies aren't moving as aggressively on the patent front, even if they are trying to lead the technology chase. **General Motors** Co., for instance, has bought or invested in Silicon Valley firms working on autonomous technology but narrowed its own patent filings to about 1,000 in the U.S. last year, down 3.4% from 2012.

GM said it trimmed its patent requests to focus more on emerging technologies, including advanced materials, and sensors and other things linked to connectivity.

Toyota's U.S. filings climbed to over 3,000 last year from 1,271 in 2012, and to 7,000 globally, from 9,950 in 2012. Ford submitted 5,000 globally, a fivefold increase over 2012, according to Oliver Wyman.

SHOP

Continued from page B1

vide more details at the time.

A Google spokesman couldn't immediately be reached for comment Monday.

"The [European] Commission can confirm that, as required by the commission decision, it has received information from Google on how the company intends to ensure compliance with the commission decision within the set deadline," a commission spokeswoman said Monday.

Should Google's proposed remedies fall short, the EU could hit it with penalties of up to 5% of average daily global revenue for the period it is deemed not to be complying.

The proposal is similar to one offered by Google several years ago as part of settlement talks with the previous EU antitrust chief, Joaquín Almunia. Those talks crumbled under pressure from complainants and politicians in France and Germany, paving the way for EU regulators to fine the company and demand changes.

Google's final binding offer in February 2014, which the EU made public, would have meant results pages that displayed Google shopping ads would also have included shopping results from rivals. Those results would have appeared in a shaded box next to Google's ads, according to screenshots the EU published at the time. Complainants objected that Google would make them bid for the space via an auction mechanism, essentially making money from the settlement.

Now, complainants are again objecting to Google's proposed remedies.

"While we have yet to see details of Google's proposal, it seems unlikely that Google could have devised an auction-based remedy that does not fall far short of the equal treatment standard stipulated by the [commission's] decision," said Shivaun Raff, chief executive of Foundem.co.uk, a comparison-shopping website that was the first company to file a formal antitrust complaint about Google to the EU.

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Google's New App: Mobile Pay in India

By Newley Purnell

NEW DELHI—**Alphabet** Inc.'s Google is aiming for a piece of India's booming—but increasingly crowded—mobile-payments business.

The Mountain View, Calif., tech giant on Monday launched its first-ever smartphone app that lets users transfer money to individuals and businesses in the country without the use of a credit or a debit card, a crucial factor since many here lack plastic.

Millions of Indian consumers have been ditching bills in favor of mobile-payments apps after the government's surprising move last year to take 86% of currency out of circulation in an effort to curb corruption and bring more people into the tax net. The move triggered a cash crunch.

"India will leapfrog markets like the U.S. and Europe" in terms of adoption of mobile payments, Caesar Sengupta, a Google vice president, told the media in New Delhi. Services such as **Apple** Inc.'s Apple Pay and **Samsung Electronics** Co.'s Samsung Pay are increasingly popular in some developed countries. But they face competition from widely used credit cards and haven't really taken hold in emerging markets.

Google's app, called Tez, lets Android and Apple users send money from their bank accounts or receive it via a simple interface that resembles a chat app and works in seven Indian languages.

The app's launch is Google's latest move to customize products for India's nascent internet economy, which analysts say it wants to tap to ramp up advertising revenue globally. The firm has joined with the Indian government to provide free Wi-Fi at railway stations and has released special apps for the market, such as a version of YouTube that works even with patchy internet connections.

"Google is late on this thing but they can easily scale it up," said Tarun Pathak, an analyst at research firm Counterpoint. Some 96% of smartphone users in India are on Google's Android mobile-operating system, he said, and the service could grow quickly if users flock to it.

While Google says it isn't charging users or merchants for the service, Mr. Pathak said Google could one day use it to collect data for advertising purposes. Google declined to say if it has plans to bring the app to additional emerging countries, like Indonesia and Brazil, but said it holds promise for such markets.

SAJJAD HUSSAIN/AGENCE FRANCE-PRESSE/GETTY IMAGES

Google's Caesar Sengupta says India is ready to grow in the area.

Google's new app faces some serious rivals. India's market leader, Paytm, boasts more than 225 million users and in May raised $1.4 billion from Japan's SoftBank Group Corp., which it is using to fuel its expansion.

India's biggest local messaging app, Hike, in June launched a mobile-payments feature, while Facebook Inc.'s WhatsApp—which has some 200 million users in India—is exploring adding digital payments in India.

"We see our primary competitor as cash," said Google Vice President Diana Layfield, stressing that the company views mobile payments as being in their infancy in India.

Mr. Sengupta said Tez, which means "fast" in Hindi, has already attracted about 50,000 users in recent days ahead of its official launch.

Countries Are Urged To Weigh Digital Currencies

By Steven Russolillo

Central banks should consider introducing their own cryptocurrencies to counter the risks from the explosive growth of bitcoin and other virtual currencies, the Bank for International Settlements said in a report.

The 16-page analysis, tucked into a broader quarterly review from the consortium of major central banks, based in Basel, Switzerland, comes as prices of digital currencies have skyrocketed until recently. They fell sharply last week after China started cracking down on domestic trading venues for bitcoin.

The surging popularity of trading in virtual currencies—of which bitcoin is the largest—is creating a dilemma for central banks, whose role is to manage their country's currency and money supply and maintain stability in the financial system.

Soaring cryptocurrency prices have sparked concerns about the pitfalls often associated with speculative trading and raised the specter of authorities potentially losing control over their monetary systems.

The BIS report, which highlighted what it called "a new taxonomy of money," discussed the pros and cons of central banks issuing their own digital currencies.

It noted the potential for digital currencies' underlying technology—used to process and record transfers—and the uncertainty related to possible unintended consequences.

"While it seems unlikely that bitcoin or its sisters will displace sovereign currencies, they have demonstrated the viability of the underlying blockchain or distributed-ledger technology," the BIS said.

Blockchain is the open-ledger technology that processes bitcoin transactions by recording them on a public ledger.

Some central banks, including the Bank of England and Bank of Canada, have experimented with ways to use blockchain technology, such as dealing in interbank payments. India's central bank, the Reserve Bank of India, is considering issuing its own digital currency and is looking for ways to use blockchain technology in the financial sector, according to a person familiar with the matter.

If central banks were to issue digital cash, it would mean that money could exist in digital wallets outside of bank accounts, allowing consumers and businesses to potentially bypass banks when making payments to one another.

The BIS says central banks should consider introducing their own virtual currencies.

The BIS report highlighted how central banks could issue a digital-cash substitute that would allow transactions for goods and services to be anonymous, just as they are with traditional cash.

"The prospect of central bank crypto- or digital currencies is attracting considerable attention," the BIS wrote in its report. "But making sense of all this is difficult."

The dollar price of each bitcoin, which peaked above $5,000 this month, currently trades about $3,900, according to research site CoinDesk.

—Manju Dalal contributed to this article.

Pine River Flagship Fund Will Shut Down

By Juliet Chung

Pine River Capital Management is closing its $1 billion flagship hedge fund after clients asked to withdraw more money than the firm was expecting, according to a person familiar with the matter.

The move will further shrink the Minnetonka, Minn.-based firm's assets under management to $7.5 billion, half the roughly $15 billion it managed in 2015. An expected Jan. 1 spinoff of a fund run by portfolio manager Renos Dimitriou into a stand-alone hedge fund would reduce that total further.

Pine River had asked clients in its flagship fund in recent weeks if it could segregate and sell off over time the multistrategy fund's illiquid assets after receiving by the end of August more redemption requests than expected. Given the amount of client defections, the fund at that point was expected to manage roughly $300 million in a year's time.

Clients approved the so-called side-pocket move, a controversial tactic some hedge-fund firms, though not Pine River, deployed during the financial crisis.

Side pockets helped prevent the withdrawal of billions of dollars.

But firm executives decided in recent days to close the fund entirely after receiving still more redemption requests from fund investors in the interim, the person said.

The deadline for year-end redemption requests for the fund was Friday.

Pine River, founded by Brian Taylor in 2002 and best known for profiting big after the rebound in government-backed mortgages following the crisis, was planning to tell clients of its decision on Monday morning.

The closure of its flagship fund adds to recent challenges for Pine River.

Aside from shrinking the size of the firm further, there has been turnover among its investment professionals, including the departure last year of key portfolio manager Steve Kuhn.

The firm has also closed some other funds, and some employees have been looking for other jobs, according to people familiar with the matter.

Pine River's flagship fund has made money the last two years but significantly lagged behind the S&P 500. Its annualized return was 9% since its 2002 inception through August, said a person familiar with the fund.

Investor frustration with hedge funds has deepened after years of disappointing performance. Returns on average have remained lackluster this year, investors say, though some funds that bet on and against stocks have been a bright spot, outpacing the S&P 500.

Swiss Puzzle: Cash Flushed Away

By Brian Blackstone

ZURICH—A recent report by **UBS Group** AG concluded that rich people were sitting on too much cash. Little did anyone know just how right they were.

Prosecutors in Geneva are trying to figure out why two women flushed roughly €100,000 ($119,000) in cut-up €500 bank notes down a toilet at a UBS branch in the Swiss city, as well as down toilets at three neighboring restaurants back in May.

Local authorities were alerted because of damage done to the toilets and plumbing, said Vincent Derouand, spokesman for the Geneva prosecutor's office. Using video surveillance, investigators were able to identify two women who they say stuffed the notes down the toilets.

Later, an attorney representing the women approached the restaurants to pay for the repairs, which amounted to several thousand francs.

The story was earlier reported last week by the Geneva daily Tribune de Genève. A UBS spokesman declined to comment.

It isn't a crime in Switzerland to destroy currency. But the prosecutor's office is still investigating to see whether the flushed cash resulted from criminal activities.

Adding to the intrigue, euros aren't even used in Switzerland, which isn't in the eurozone and still has the Swiss franc.

The European Central Bank will stop issuing €500 notes at the end of next year, though existing ones will remain legal tender.

The ECB cited "concerns that this bank note could facilitate illicit activities" when it made the announcement that it would stop issuing the bills in May 2016.

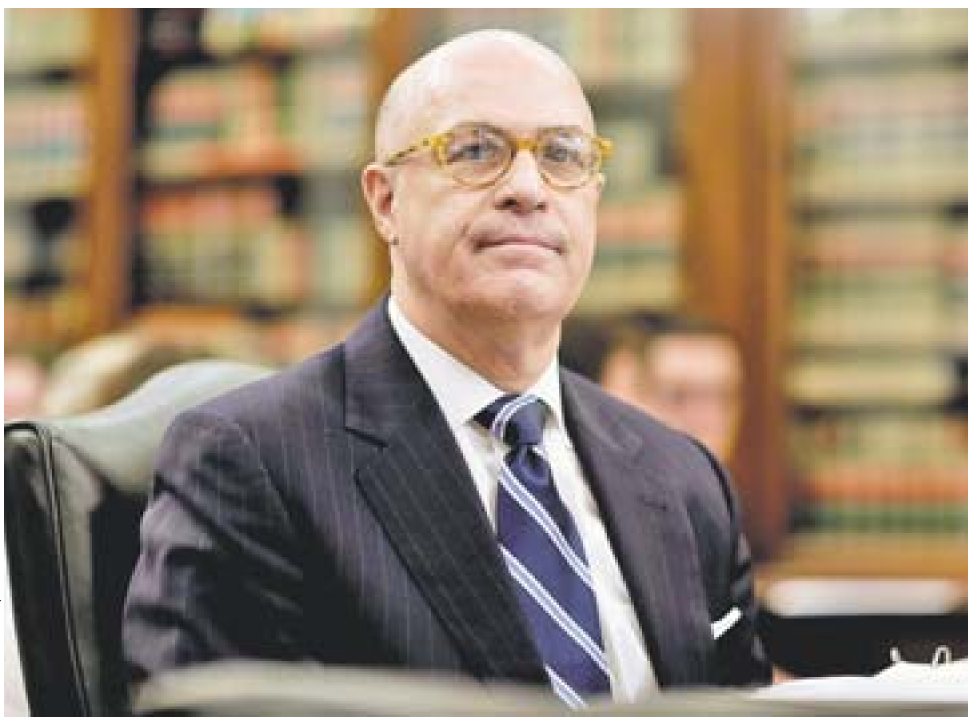
U.S. Vows Derivatives Rules Revamp

By Gabriel T. Rubin

WASHINGTON—Derivatives rules should be revised to reflect how markets are functioning nearly a decade after the financial crisis, senior Trump administration and regulatory officials told an industry gathering.

Policy makers should assess whether rules governing swaps trading, clearinghouses and international coordination have achieved their purpose, and change them where necessary, the officials said on Monday.

"Where...rules have been impractical, overly burdensome or out of step with congressional intent, I have not hesitated to say so," Commodity Futures Trading Commission Chairman J. Christopher Giancarlo said at a conference hosted by the International Swaps and Derivatives Association.



JOSHUA ROBERTS/REUTERS

CFTC Chairman J. Christopher Giancarlo has prioritized changing rules for executing swaps trades.

The remarks from Mr. Giancarlo, as well as those of senior Treasury Department official Craig Phillips and Vice President Mike Pence's economist, Mark Calabria, were intended to set up the release of a Treasury report on capital markets, expected to be made public in October.

The report, compiled with input from regulators and industry participants, will put forward the administration's stance on end-user definitions, margin requirements for uncleared swaps, cross-border regulatory issues and position limits, among other issues, Mr. Phillips said.

While the officials stressed that they weren't pushing for a significant rollback of post-crisis rules—instead stressing the need to "calibrate" or "harmonize" existing rules—they nonetheless charted a course that would loosen some trading restrictions imposed since the crisis.

In particular, Mr. Giancarlo has long made it his priority to change rules for the execution of swaps trades, which he says are too restrictive and put strains on market liquidity.

Mr. Phillips on Monday suggested the Treasury's approach would be in sync with Mr. Giancarlo's.

In addition, both Messrs. Phillips and Calabria both said the resolution mechanism for major derivatives clearinghouses must rely on an enhanced bankruptcy code rather than a government-financed arrangement like the Orderly Liquidation Authority, a resolution mechanism that has been in the crosshairs of congressional Republicans since its inclusion in the 2010 Dodd-Frank Act.

The CFTC's Mr. Calabria said he was "deeply concerned about the centralization of derivatives clearing" and said he couldn't tolerate a situation in which U.S. taxpayers would be asked to bail out a clearinghouse.

"A very high regulatory priority is having a predictable resolution mechanism without federal support," Mr. Phillips said.

He said the Treasury report would address clearinghouse resolution options other than Orderly Liquidation Authority, though it is unclear whether that will be in the coming capital markets report or in another report that specifically addresses it.

Credit Suisse Shuffles at Investment Bank

By Brian Blackstone in Zurich and Ben Dummett in London

Credit Suisse Group AG unveiled a raft of changes to the upper ranks of its investment bank, bringing in new co-heads for Europe, the Middle East and Africa as the Swiss banking giant revamps the division amid a broader strategic overhaul.

Mathew Cestar and Jens Welter, both Credit Suisse veterans, have been appointed co-heads of investment banking and capital markets for the region.

They succeed Marisa Drew and Mark Echlin, who have moved to other positions within the bank.

Monday's management shuffle comes as the Swiss banking giant undertakes a broad strategic shift to put greater emphasis on its more predictable wealth-management operations while scaling back investment banking, which can be highly profitable but also volatile.

While investment banking has recently proven to be attractive for Credit Suisse, with revenue and profit up sharply in the first half of 2017, the bank lags behind its U.S. rivals.

Credit Suisse ranked ninth in the first half of this year measured by investment-banking revenue for Europe, the Middle East and Africa, according to Dealogic.

The top four positions are dominated by U.S.-based banks. **J.P. Morgan Chase** & Co. holds the top position followed by **Citigroup** Inc., **Goldman Sachs Group** Inc. and **Bank of America Merrill Lynch. Deutsche Bank** AG is fifth.

To bolster its franchise, Credit Suisse has turned to Messrs. Cestar and Welter, who in addition to their new responsibilities, will retain their positions as chairman of the global credit products commitment committee and co-head of global consumer products and retail investment banking, respectively.

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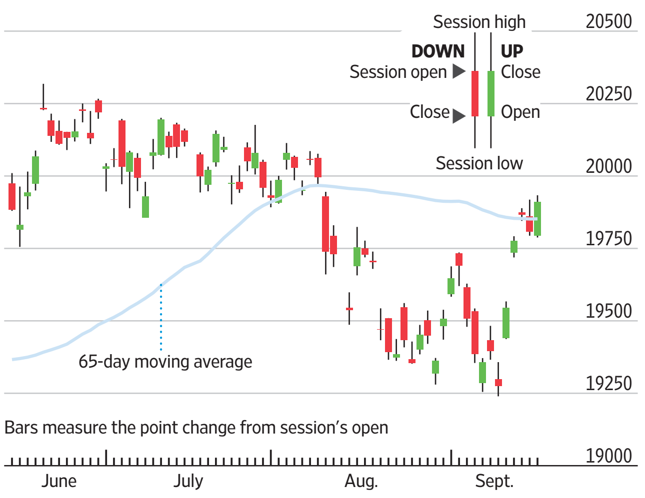
MARKETS DIGEST

Nikkei 225 Index

19909.50 Market Closed

High, low, open and close for each trading day of the past three months.

Year-to-date		▲ 4.16%
52-wk high/low	20230.41	16251.54
All-time high	38915.87	12/29/89



Bars measure the point change from session's open

STOXX 600 Index

381.95 ▲ 1.24, or 0.33%

High, low, open and close for each trading day of the past three months.

Year-to-date		▲ 5.68%
52-wk high/low	396.45	328.80
All-time high	414.06	4/15/15

S&P 500 Index

Data as of 4 p.m. New York time

2503.87 ▲ 3.64, or 0.15%

High, low, open and close for each trading day of the past three months.

	Last	Year ago
Trailing P/E ratio	24.11	24.47
P/E estimate *	19.10	18.25
Dividend yield	1.99	2.14
All-time high:	2503.87, 09/18/17	

Weekly P/E data based on as-reported earnings from Birinyi Associates Inc.

International Stock Indexes

Data as of 4 p.m. New York time

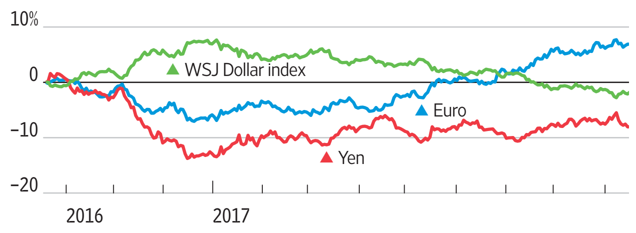
Region/Country	Index	Latest Close	Latest NetChg	Latest % chg	52-Week Range Low	52-Week Range High	YTD % chg
World	**The Global Dow**	2894.91	4.77	0.17	2386.93	2900.56	14.5
	MSCI EAFE	1965.14	0.84	0.04	1614.17	1970.23	14.5
	MSCI EM USD	1111.56	9.40	0.85	838.96	1102.26	40.0
Americas	**DJ Americas**	604.39	0.88	0.15	503.44	605.54	11.8
Brazil	**Sao Paulo Bovespa**	75950.99	194.48	0.26	56828.56	76403.58	26.1
Canada	**S&P/TSX Comp**	15244.75	71.72	0.47	14468.03	15943.09	-0.3
Mexico	**IPC All-Share**	50247.63	325.79	0.65	43998.98	51772.37	10.1
Chile	**Santiago IPSA**	3950.05	...	Closed	3120.87	3959.34	22.6
U.S.	**DJIA**	22331.35	63.01	0.28	17883.56	22355.62	13.0
	Nasdaq Composite	6454.64	6.17	0.10	5034.41	6477.77	19.9
	S&P 500	2503.87	3.64	0.15	2083.79	2508.32	11.8
	CBOE Volatility	10.12	-0.05	-0.49	8.84	23.01	-27.9
EMEA	**Stoxx Europe 600**	381.95	1.24	0.33	328.80	396.45	5.7
	Stoxx Europe 50	3109.99	8.15	0.26	2720.66	3279.71	3.3
Austria	**ATX**	3291.86	24.87	0.76	2319.98	3304.29	25.7
Belgium	**Bel-20**	3968.31	0.79	0.02	3384.68	4055.96	10.0
France	**CAC 40**	5229.32	15.41	0.30	4342.64	5442.10	7.5
Germany	**DAX**	12559.39	40.58	0.32	10174.92	12951.54	9.4
Greece	**ATG**	760.79	-15.41	-1.99	556.70	859.78	18.2
Hungary	**BUX**	38387.22	61.29	0.16	27466.59	38554.44	19.9
Israel	**Tel Aviv**	1424.96	9.86	0.70	1346.71	1490.23	-3.1
Italy	**FTSE MIB**	22364.74	135.25	0.61	15923.11	22390.96	16.3
Netherlands	**AEX**	529.31	2.53	0.48	436.28	537.84	9.5
Poland	**WIG**	64647.04	111.37	0.17	46674.28	65611.21	24.9
Russia	**RTS Index**	1119.14	-4.29	-0.38	956.36	1196.99	-2.9
Spain	**IBEX 35**	10338.40	21.00	0.20	8512.40	11184.40	10.5
Sweden	**SX All Share**	568.34	1.58	0.28	489.12	598.42	6.3
Switzerland	**Swiss Market**	9048.11	20.06	0.22	7585.56	9198.45	10.1
South Africa	**Johannesburg All Share**	56050.10	404.95	0.73	48935.90	56896.89	10.7
Turkey	**BIST 100**	106534.60	-1207.10	-1.12	71792.96	110530.75	36.3
U.K.	**FTSE 100**	7253.28	37.81	0.52	6676.56	7598.99	1.5
Asia-Pacific							
Australia	**S&P/ASX 200**	5720.60	25.60	0.45	5156.60	5956.50	1.0
China	**Shanghai Composite**	3362.86	9.24	0.28	2980.43	3385.39	8.4
Hong Kong	**Hang Seng**	28159.77	352.18	1.27	21574.76	28159.77	28.0
India	**S&P BSE Sensex**	32423.76	151.15	0.47	25765.14	32575.17	21.8
Japan	**Nikkei Stock Avg**	19909.50	...	Closed	16251.54	20230.41	4.2
Singapore	**Straits Times**	3241.85	32.29	1.01	2787.27	3354.71	12.5
South Korea	**Kospi**	2418.21	32.14	1.35	1958.38	2451.53	19.3
Taiwan	**Weighted**	10631.57	51.16	0.48	8931.03	10631.57	14.9

Source: SIX Financial Information; WSJ Market Data Group

Currencies

London close on Sept. 18

Yen, euro vs. dollar; dollar vs. major U.S. trading partners



Country/currency	Mon in US$	Mon per US$	US$ vs, YTD chg (%)
Americas			
Argentina peso-a	0.0585	17.0951	7.7
Brazil real	0.3196	3.1294	-3.9
Canada dollar	0.8168	1.2244	-8.9
Chile peso	0.001600	625.00	-6.7
Colombia peso	0.0003433	2912.94	-3.0
Ecuador US dollar-f	1	1	unch
Mexico peso-a	0.0563	17.7556	-14.4
Peru sol	0.3079	3.2479	-3.1
Uruguay peso-e	0.0347	28.860	-1.7
Venezuela bolivar	0.100060	9.99	-0.01
Asia-Pacific			
Australia dollar	0.7955	1.2571	-9.5
China yuan	0.1521	6.5742	-5.3
Hong Kong dollar	0.1279	7.8165	0.8
India rupee	0.0156	64.1603	-5.6
Indonesia rupiah	0.0000754	13266	-1.9
Japan yen	0.008969	111.49	-4.7
Kazakhstan tenge	0.002942	339.90	1.9
Macau pataca	0.1241	8.0589	1.8
Malaysia ringgit-c	0.2388	4.1880	-6.6
New Zealand dollar	0.7254	1.3785	-4.5
Pakistan rupee	0.0095	105.350	0.9
Philippines peso	0.0195	51.265	3.3
Singapore dollar	0.7412	1.3491	-6.8
South Korea won	0.0008856	1129.22	-6.5
Sri Lanka rupee	0.0065355	153.01	3.1
Taiwan dollar	0.03324	30.088	-7.3
Thailand baht	0.03021	33.100	-7.6
Europe			
Bulgaria lev	0.6112	1.6362	-12.0
Croatia kuna	0.1595	6.271	-12.6
Euro zone euro	1.1929	0.8383	-11.8
Czech Rep. koruna-b	0.0457	21.901	-14.7
Denmark krone	0.1603	6.2379	-11.8
Hungary forint	0.003853	259.51	-11.8
Iceland krona	0.009403	106.35	-5.9
Norway krone	0.1275	7.8428	-9.3
Poland zloty	0.2780	3.5975	-14.1
Russia ruble-d	0.01724	58.009	-5.3
Sweden krona	0.1253	7.9814	-12.4
Switzerland franc	1.0385	0.9629	-5.5
Turkey lira	0.2866	3.4886	-1.0
Ukraine hryvnia	0.0383	26.1350	-3.5
U.K. pound	1.3478	0.7419	-8.4
Middle East/Africa			
Bahrain dinar	2.6505	0.3773	0.03
Egypt pound-a	0.0566	17.6700	-2.6
Israel shekel	0.2834	3.5288	-8.3
Kuwait dinar	3.3181	0.3014	-1.4
Oman sul rial	2.5973	0.3850	0.01
Qatar rial	0.2741	3.649	0.2
Saudi Arabia riyal	0.2666	3.7506	-0.003
South Africa rand	0.0752	13.2917	-2.9

	Close	Net Chg	% Chg	YTD % Chg
WSJ Dollar Index	85.43	0.36	0.43	-8.07

Sources: Tullett Prebon, WSJ Market Data Group

Global government bonds

Latest, month-ago and year-ago yields and spreads over or under U.S. Treasurys on benchmark two-year and 10-year government bonds around the world. Data as of 3 p.m. ET

Coupon	Country/ Maturity, in years	Yield	Spread Latest	Spread Previous	Spread Month Ago	Spread Year ago	Yield Previous	Yield Month ago	Yield Year ago
2.750	**Australia** 2	1.990	59.3	56.8	49.3	80.6	1.949	1.807	1.576
2.750	10	2.807	57.8	54.5	43.0	42.2	2.749	2.627	2.114
3.000	**Belgium** 2	-0.531	-192.8	-191.2	-186.6	-135.5	-0.532	-0.552	-0.585
0.800	10	0.735	-149.4	-149.1	-147.6	-146.0	0.713	0.722	0.232
0.000	**France** 2	-0.470	-186.6	-186.2	-178.7	-137.0	-0.482	-0.473	-0.600
1.000	10	0.731	-149.8	-149.1	-148.4	-145.4	0.714	0.714	0.237
0.000	**Germany** 2	-0.688	-208.5	-207.9	-201.4	-141.6	-0.699	-0.700	-0.646
0.500	10	0.455	-177.4	-177.0	-178.1	-168.1	0.434	0.417	0.011
0.050	**Italy** 2	-0.090	-148.7	-145.2	-137.3	-83.4	-0.072	-0.059	-0.064
2.200	10	2.069	-16.0	-12.5	-16.9	-34.4	2.079	2.029	1.348
0.100	**Japan** 2	-0.136	-153.3	-152.5	-144.7	-103.6	-0.144	-0.134	-0.266
0.100	10	0.040	-218.9	-218.3	-215.6	-172.7	0.021	0.042	-0.035
4.000	**Netherlands** 2	-0.669	-206.6	-205.1	-196.0	-138.7	-0.671	-0.646	-0.617
0.750	10	0.582	-164.7	-164.6	-165.3	-158.0	0.559	0.545	0.112
4.750	**Portugal** 2	-0.059	-145.6	-139.5	-132.3	-22.2	-0.014	-0.009	0.548
4.125	10	2.416	18.8	57.8	54.6	173.6	2.782	2.743	3.427
2.750	**Spain** 2	-0.312	-170.9	-168.1	-168.7	-95.6	-0.301	-0.373	-0.185
1.450	10	1.580	-64.9	-60.1	-77.3	-62.8	1.603	1.424	1.064
4.250	**Sweden** 2	-0.688	-208.5	-205.8	-197.2	-140.7	-0.677	-0.658	-0.637
1.000	10	0.658	-157.1	-156.8	-156.9	-139.9	0.636	0.628	0.293
1.750	**U.K.** 2	0.424	-97.3	-94.4	-107.5	-61.7	0.436	0.239	0.153
4.250	10	1.304	-92.5	-89.5	-110.5	-91.6	1.309	1.092	0.776
1.250	**U.S.** 2	1.397	...	...	...	...	1.380	1.314	0.770
2.250	10	2.229	...	...	...	...	2.204	2.197	1.692

Commodities

Prices of futures contracts with the most open interest — 3:30 p.m. New York time

EXCHANGE LEGEND: CBOT: Chicago Board of Trade; **CME:** Chicago Mercantile Exchange; **ICE-US:** ICE Futures U.S.; **MDEX:** Bursa Malaysia Derivatives Berhad; **TCE:** Tokyo Commodity Exchange; **COMEX:** Commodity Exchange; **LME:** London Metal Exchange; **NYMEX:** New York Mercantile Exchange; **ICE-EU:** ICE Futures Europe. *Data as of 9/15/2017

Commodity	Exchange	Last price	One-Day Change Net	One-Day Change Percentage	Year high	Year low
Corn (cents/bu.)	CBOT	351.50	-3.25	-0.92%	417.25	344.25
Soybeans (cents/bu.)	CBOT	968.00	-0.75	-0.08	1,047.00	907.00
Wheat (cents/bu.)	CBOT	442.75	-6.25	-1.39	592.25	422.50
Live cattle (cents/lb.)	CME	113.125	0.300	0.27%	122.850	99.825
Cocoa ($/ton)	ICE-US	1,968	-41	-2.04	2,301	1,794
Coffee (cents/lb.)	ICE-US	140.25	-1.15	-0.81	166.75	119.10
Sugar (cents/lb.)	ICE-US	14.90	-0.27	-1.78	20.40	13.50
Cotton (cents/lb.)	ICE-US	69.40	0.33	0.48	75.75	66.15
Robusta coffee ($/ton)	ICE-EU	2008.00	16.00	0.80	2,272.00	1,892.00
Copper ($/lb.)	COMEX	2.9665	0.0175	0.59	3.1785	2.5025
Gold ($/troy oz.)	COMEX	1311.30	-13.90	-1.05	1,362.40	1,160.80
Silver ($/troy oz.)	COMEX	17.215	-0.486	-2.75	18.875	14.440
Aluminum ($/mt)*	LME	2,100.00	9.50	0.45	2,134.00	1,688.50
Tin ($/mt)*	LME	20,550.00	-5.00	-0.02	21,225.00	18,760.00
Copper ($/mt)*	LME	6,500.00	41.00	0.63	6,937.00	5,491.00
Lead ($/mt)*	LME	2,342.00	50.00	2.18	2,481.00	2,022.00
Zinc ($/mt)*	LME	3,039.00	49.00	1.64	3,195.00	2,450.50
Nickel ($/mt)*	LME	11,085.00	-265.00	-2.33	12,220.00	8,780.00
Rubber (Y.01/ton)	TCE	221.20	...	Closed	n.a.	n.a.
Palm oil (MYR/mt)	MDEX	2819.00	-42.00	-1.47	2950.00	2380.00
Crude oil ($/bbl.)	NYMEX	50.30	-0.14	-0.28	58.37	42.84
NY Harbor ULSD ($/gal.)	NYMEX	1.7703	-0.0205	-1.14	1.8206	1.3943
RBOB gasoline ($/gal.)	NYMEX	1.6149	-0.0065	-0.40	1.6689	1.2736
Natural gas ($/mmBtu)	NYMEX	3.198	0.113	3.66	3.5960	2.8860
Brent crude ($/bbl.)	ICE-EU	55.19	-0.23	-0.42	60.09	45.51
Gas oil ($/ton)	ICE-EU	528.25	-6.50	-1.22	536.25	408.25

Sources: SIX Financial Information; WSJ Market Data Group

Cross rates

London close on Sep 18

	USD	GBP	CHF	JPY	HKD	EUR	CDN	AUD
Australia	1.2571	1.6941	1.3057	0.0113	0.1608	1.4997	1.0267	...
Canada	1.2244	1.6499	1.2715	0.0110	0.1566	1.4605	...	0.9738
Euro	0.8383	1.1298	0.8707	0.0075	0.1072	...	0.6846	0.6668
Hong Kong	7.8165	10.5342	8.1176	0.0701	...	9.3254	6.3842	6.2180
Japan	111.4900	150.2400	115.7800	...	14.2640	133.0000	91.0500	88.6900
Switzerland	0.9629	1.2978	...	0.0086	0.1232	1.1486	0.7865	0.7659
U.K.	0.7419	...	0.7705	0.0067	0.0949	0.8851	0.6060	0.5903
U.S.	...	1.3478	1.0385	0.0090	0.1279	1.1929	0.8168	0.7955

Source: Tullett Prebon

Key Rates

	Latest	52 wks ago
Libor		
One month	1.23611%	0.53617%
Three month	1.32500	0.86067
Six month	1.47444	1.25656
One year	1.73983	1.55578
Euro Libor		
One month	-0.40357%	-0.37400%
Three month	-0.37800	-0.32086
Six month	-0.30429	-0.20829
One year	-0.22014	-0.07229
Euribor		
One month	-0.37300%	-0.37100%
Three month	-0.32900	-0.30100
Six month	-0.27100	-0.20200
One year	-0.17100	-0.05600
Yen Libor		
One month	-0.04150%	-0.08486%
Three month	-0.02807	-0.03571
Six month	0.00150	-0.01050
One year	0.10600	0.08929
	Offer	**Bid**
Eurodollars		
One month	1.3300%	1.2300%
Three month	1.4000	1.3000
Six month	1.5400	1.4400
One year	1.8100	1.7100
	Latest	**52 wks ago**
Prime rates		
U.S.	4.25%	3.50%
Canada	3.20	2.70
Japan	1.475	1.475
Hong Kong	5.00	5.00
Policy rates		
ECB	0.00%	0.00%
Britain	0.25	0.25
Switzerland	0.50	0.50
Australia	1.50	1.50
U.S. discount	1.75	1.00
Fed-funds target	1.00-1.25	0.25-0.50
Call money	3.00	2.25
Overnight repurchase rates		
U.S.	1.12%	0.41%
Euro zone	n.a.	n.a.

Sources: WSJ Market Data Group, SIX Financial Information, Tullett

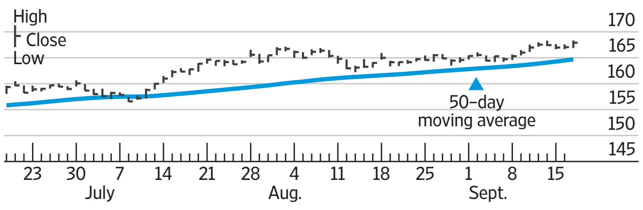
Top Stock Listings

4 p.m. New York time

Cur	Stock	Sym	Last	% Chg	YTD% Chg
Asia Titans					
HK$	AIAGroup	1299	60.35	2.29	37.94
AU$	AustNZBk	ANZ	30.18	1.00	-0.79
AU$	BHP	BHP	26.28	0.08	4.87
HK$	BankofChina	3988	4.00	0.25	16.28
HK$	CKHutchison	0001	101.10	0.40	15.02
AU$	CSL	CSL	131.46	0.38	30.92
¥	Canon	7751	3799.00	0.42	15.30
¥	CentralJapanRwy	9022	19020	-1.19	-1.09
HK$	ChinaConstructnBk	0939	6.69	0.90	12.06
HK$	ChinaLifeInsurance	2628	24.10	1.47	19.31
HK$	ChinaMobile	0941	81.10	-0.49	-1.34
HK$	ChinaPetro&Chem	0386	6.00	0.84	9.09
AU$	CmwlthBkAust	CBA	76.69	0.54	-6.94
¥	EastJapanRailway	9020	10090	-0.93	-0.10
¥	Fanuc	6954	22080	1.87	11.43
¥	Hitachi	6501	782.60	1.33	23.83
TW$	Hon Hai Precisn	2317	114.00	-0.87	35.39
¥	HondaMotor	7267	3245.00	0.90	-4.98
KRW	HyundaiMtr	005380	137000	0.37	-6.16
HK$	Ind&Comml	1398	5.80	1.22	24.73
$	Infosys	INFY	14.79	0.92	-0.30
¥	JapanTobacco	2914	3696.00	0.38	-3.85
¥	KDDI	9433	2936.00	-0.02	-0.79
¥	Mitsubishi	8058	2596.00	-0.02	4.26
¥	MitsubishiElectric	6503	1722.50	0.85	5.71
¥	MitsubishiUFJFin	8306	681.60	0.80	-5.36
¥	Mitsui	8031	1659.50	-0.06	3.27
¥	Mizuho Fin	8411	191.20	0.79	-8.87
¥	NTTDoCoMo	9437	2539.50	0.53	-4.64
AU$	NatAustBnk	NAB	31.20	1.10	1.73
¥	Nintendo	7974	38250	1.54	55.87
¥	NipponTeleg	9432	5127.00	-0.04	4.38
¥	NissanMotor	7201	1129.00	0.18	-3.96
¥	Panasonic	6752	1611.50	0.03	35.48
HK$	PingAnInsofChina	2318	62.85	1.53	61.98
$	RelianceIndsGDR	RIGD	52.20	0.19	65.45
KRW	SamsungElectronics	005930	2624000	4.13	45.62
¥	Seven&I Hldgs	3382	4310.00	0.51	-3.21
¥	SoftBankGroup	9984	8587.00	0.46	10.59
¥	Sony	6758	4241.00	0.26	29.50
¥	Sumitomo Mitsui	8316	4161.00	0.24	-6.70
HK$	SunHngKaiPrp	0016	134.60	-0.37	37.35
TW$	TaiwanSemiMfg	2330	219.50	0.46	20.94
¥	TakedaPharm	4502	6115.00	-0.39	26.47
HK$	TencentHoldings	0700	346.00	2.13	82.39
¥	TokioMarineHldg	8766	4415.00	0.73	-7.94
¥	ToyotaMtr	7203	6480.00	0.76	-5.79
AU$	Wesfarmers	WES	41.24	-0.46	-2.14
AU$	WestpacBanking	WBC	31.67	0.73	-2.85
AU$	Woolworths	WOW	25.29	-0.39	4.94
Stoxx 50					
CHF	ABB	ABBN	23.56	0.55	9.68
€	ASMLHolding	ASML	139.00	2.32	30.33
€	AXA	CS	24.66	0.47	2.84
€	AirLiquide	AI	106.35	0.42	0.66
€	Allianz	ALV	185.20	0.14	17.96
€	AB InBev	ABI	100.65	-0.54	0.10
£	AstraZeneca	AZN	4710.00	-0.20	6.14
€	BASF	BAS	87.46	1.46	-0.96
€	BNP Paribas	BNP	66.21	0.33	9.35
£	BT Group	BT.A	287.60	1.13	-21.61
€	BancoBilVizAr	BBVA	7.41	0.50	16.75
€	BancoSantander	SAN	5.63	0.70	13.45
£	Barclays	BARC	187.45	0.43	-16.11
€	Bayer	BAYN	110.50	0.23	11.47
£	BP	BP.	450.80	0.57	-11.54
£	BritishAmTob	BATS	4704.00	-0.78	1.79
€	Daimler	DAI	66.50	0.38	-5.97
€	DeutscheTelekom	DTE	15.09	0.53	-6.84
£	Diageo	DGE	2507.50	0.78	18.84
€	ENI	ENI	13.46	0.37	-12.99
£	GlaxoSmithKline	GSK	1457.00	0.21	-6.72
£	Glencore	GLEN	346.60	0.61	24.97
£	HSBC Hldgs	HSBA	718.70	1.51	9.41
€	INGGroep	INGA	15.15	0.26	13.35
£	ImperialBrands	IMB	3266.00	-1.85	-7.81
€	IntesaSanpaolo	ISP	2.93	0.62	20.86
€	LVMHMoetHennessy	MC	229.25	-0.33	26.38
£	LloydsBankingGroup	LLOY	65.30	-0.03	4.46
€	LOreal	OR	179.00	0.06	3.23
£	NationalGrid	NG.	947.50	-0.67	-8.73
CHF	Nestle	NESN	81.25	0.37	11.23
CHF	Novartis	NOVN	82.10	-0.36	10.80
DKK	NovoNordiskB	NOVO-B	302.00	0.50	18.57
£	Prudential	PRU	1760.50	1.12	8.17
£	ReckittBenckiser	RB.	6829.00	0.80	-0.83
£	RioTinto	RIO	3500.00	1.38	10.81
CHF	RocheHldgctf	ROG	243.70	0.21	4.77
£	RoyDtchShell A	RDSA	2112.50	0.48	-5.80
€	SAP	SAP	92.11	0.11	11.23
€	Sanofi	SAN	81.52	0.18	6.01
€	SchneiderElectric	SU	72.22	1.01	9.24
€	Siemens	SIE	116.85	0.47	0.04
€	Telefonica	TEF	9.16	0.74	3.84
€	Total	FP	44.95	0.04	-5.89
CHF	UBSGroup	UBSG	16.16	0.69	1.32
€	Unilever	UNA	50.77	0.28	29.80
£	Unilever	ULVR	4390.00	0.95	33.33
€	Vinci	DG	80.49	0.30	24.40
£	VodafoneGroup	VOD	209.05	1.26	4.60
CHF	ZurichInsurance	ZURN	286.40	-0.24	2.14
DJIA					
$	AmericanExpress	AXP	87.86	1.00	18.60
$	Apple	AAPL	158.67	-0.76	37.00
$	Boeing	BA	253.14	1.66	62.60
$	Caterpillar	CAT	123.83	2.03	33.52
$	Chevron	CVX	115.19	0.49	-2.13
$	CiscoSystems	CSCO	32.52	0.25	7.61
$	Coca-Cola	KO	46.13	-0.11	11.26
$	Disney	DIS	98.11	-0.42	-5.86
$	DowDuPont	DWDP	69.80	-0.09	3.90
$	ExxonMobil	XOM	80.11	0.05	-11.25
$	GeneralElec	GE	24.46	2.21	-22.59
$	GoldmanSachs	GS	227.64	1.07	-4.93
$	HomeDepot	HD	157.87	-0.33	17.74
$	Intel	INTC	37.00	...	2.01
$	IBM	IBM	144.58	-0.17	-12.90
$	JPMorganChase	JPM	92.92	1.42	7.68
$	J&J	JNJ	135.38	0.69	17.51
$	McDonalds	MCD	156.68	-0.15	28.72
$	Merck	MRK	66.00	-0.24	12.11
$	Microsoft	MSFT	75.16	-0.20	20.95
$	Nike	NKE	53.49	-0.71	5.23
$	Pfizer	PFE	35.54	0.51	9.42
$	Procter&Gamble	PG	93.19	-0.09	10.83
$	3M	MMM	213.84	0.23	19.75
$	Travelers	TRV	120.75	0.04	-1.36
$	UnitedTech	UTX	112.79	-0.26	2.89
$	UnitedHealth	UNH	198.12	-0.03	23.79
$	Visa	V	104.85	-0.43	34.39
$	Verizon	VZ	48.09	0.48	-9.91
$	Wal-Mart	WMT	79.99	-0.49	15.73

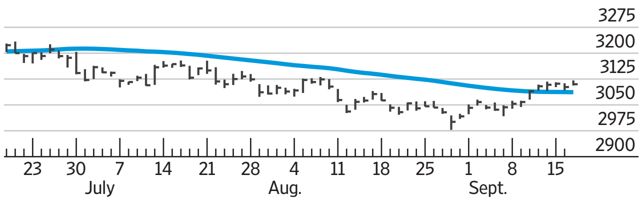
Asia Titans 50

Last: **167.89** ▲ 0.84, or 0.50% — YTD ▲ **19.1%**



Stoxx 50

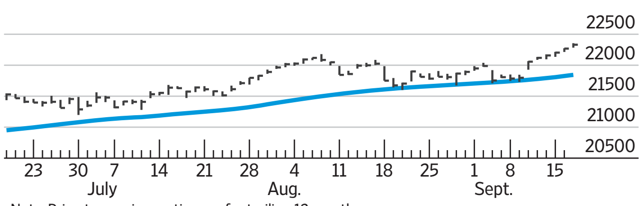
Last: **3109.99** ▲ 8.15, or 0.26% — YTD ▲ **3.3%**



Dow Jones Industrial Average

P/E: 20

Last: **22331.35** ▲ 63.01, or 0.28% — YTD ▲ **13.0%**



Note: Price-to-earnings ratios are for trailing 12 months
Sources: WSJ Market Data Group; Birinyi Associates

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Tycoon Seeks to Polish His Legacy

By David Benoit

VANCOUVER—Dennis Washington assembled a sprawling industrial empire based largely on instinct. The 83-year-old billionaire is now grappling with how to make sure it endures after him.

Mr. Washington started out in 1964 with a $30,000 loan and a single bulldozer. Today, the privately held **Washington Cos.** comprises six private companies, one public company and a joint venture, running mines and railroads, building ships and designing jet wings—and generating more than $2 billion a year in revenue.

Now it is set to close its biggest deal ever, a $1.2 billion purchase that will add diamond mining near the Arctic Circle to the mix.

The entrepreneur's improbable rise turned a boy who grew up poor—he used to shine shoes in Washington state alongside a young Quincy Jones—into a Montana tycoon worth $6 billion, according to Forbes.

Driving through his shipyards here, where the first vessel in an $8 billion contract with the Canadian government is nearing completion, Mr. Washington simplifies his collection of businesses: They all involve "big machines." They were strung together through a series of acquisitions that often launched him into lines of businesses he had no experience with, but poured off cash he could reinvest.

"I get some seeds in the ground, and I just keep plowing them," Mr. Washington says.

Like many family-run businesses and even some public companies—including that of his friend Warren Buffett's Berkshire Hathaway Inc.—his approach has created a difficult succession challenge: how to pass down Mr. Washington's intangible abilities. Mr. Washington says his goal is to ensure the group survives at least three generations.

Dennis Washington, shown at his Seaspan shipyard in North Vancouver, started with one bulldozer.

KAMIL BIALOUS FOR THE WALL STREET JOURNAL

Though his two grown sons are involved, they aren't interested in running the operations, Washington officials say. Instead, he has turned to three good friends, well-known businessmen themselves: David Batchelder, a pioneer activist investor; Stephen Hanks, who ran Mr. Washington's construction company; and David Sokol, once viewed as a potential successor to Mr. Buffett.

They oversee a trust that owns Washington Cos., an umbrella for the businesses. Independent chief executives answer to Larry Simkins, the CEO of Washington, and to their own boards.

"He's met a lot of multigenerational families, and he learned from their successes and mistakes," says Byron Trott, an adviser to wealthy families and companies, including Berkshire. "He doesn't take things off the shelf."

Mr. Simkins says each CEO is given wide latitude but held accountable for growth and return on invested capital. The trustees focus on how to invest cash the businesses generate.

They made their biggest move this year with the purchase of Dominion Diamond Corp. Mr. Batchelder, who had looked at Dominion when he was an activist, brought the idea to Mr. Washington and led the negotiations along with Mr. Simkins. The deal is expected to close in the fourth quarter.

The trustees also will pick the next group of leaders, and Mr. Washington is seeking to instill in them his way of thinking. He advocates long-term investment, like the Canadian contract to build non-combat vessels for the Coast Guard and Navy.

He credits spending on local communities and employees for saving him from union trouble. He has sought to avoid public markets because he wants to own his businesses "forever" and questions investors' willingness to back him consistently.

Mr. Washington has no title and sits silently at board meetings. Afterward, the others ask him what he would have done differently.

"We are practicing for the inevitable," Mr. Simkins says.

The day doesn't seem too close.

Neither Mr. Washington's age nor a bout with polio as a boy that still affects one leg slows him down much as he takes a reporter around his Vancouver properties. An avid tennis player, he is preparing for an annual tournament against a team led by another friend, Bill Gates.

Despite his high-profile connections and his success, Mr. Washington avoids attention, and keeps away from politics and stock investing. "Big shot" is a term he uses pejoratively.

Mr. Washington made his first real fortune buying a bankrupt copper mine in Butte, Mont., in 1985, and he got a lucky break when prices for copper soared. Washington expects to keep mining copper for about 45 more years.

He laments some missed deals—wishing he had done more in railroads—and the one big one he landed. Washington bought Raytheon Co.'s construction-machines business in 1999. A legal mess over contracts Raytheon hadn't finished led to a bankruptcy. Mr. Washington says he could have done a better job anticipating that risk.

Mr. Washington's one attention-grabbing habit has long been yachts. His largest, the Attessa IV, stretches 330 feet and has about 18,000 square feet of living space and an orange chandelier from famed glass sculptor Dale Chihuly. It is estimated to have cost more than $200 million.

Still, friends say he is frugal and gives away vast portions of his fortune. He will host movie stars—Vince Vaughn and Mel Gibson kept him up late recently on his smaller Attessa III yacht—but favors Kokanee Glacier beer, a locally brewed beverage.

And he hates losing any money frivolously. On Mr. Washington's private golf course, designed by Robert Trent Jones Jr., Mr. Hanks once had a short putt to win a minor wager. When he missed, Messrs. Hanks and Washington had to pay Mr. Batchelder $20.

Months later, waiting for a meeting with U.K. officials at 10 Downing St., Mr. Washington was still lamenting the miss, Mr. Hanks recalls.

FINANCE WATCH

ANZ

Bank Negotiates Sale of Wealth Arm

Australia & New Zealand Banking Group Ltd. said it is in talks with a number of suitors for its Australian wealth operations as it continues to work through options for the business.

ANZ formally kicked off the auction process for its local insurance, pension, investments and advice businesses in April. It has previously said they collectively have a book value of close to 4.5 billion Australian dollars (US$3.6 billion). The proposed sale comes amid a pullback by ANZ to focus on its better-returning operations and as several rivals have moved to exit their life-insurance businesses.

ANZ said its options include exploring capital-market solutions that would see the creation of a stand-alone business based around its wealth operations. *—Robb M. Stewart*

GOLDMAN SACHS

Banking Hire Has Oil-Pipeline Ties

Goldman Sachs Group Inc. is hiring a top **Citigroup** Inc. investment banker with ties to the oil-pipeline industry as it looks to fill gaps in its network.

Michael Casey, an 18-year veteran of Citigroup, will join Goldman's Houston office later this year as a managing director, according to people familiar with the matter. Citigroup didn't immediately comment.

Goldman's investment-banking division aims to add $500 million in revenue by 2020, about 7% of its current annual haul, according to a presentation by the firm last week. That is tough in investment banking, a mature business where any growth will likely come from taking market share from rivals.

Goldman has recently put senior bankers in cities such as Dallas and Atlanta to deepen ties to local companies, and is expanding its coverage of middle-market private-equity firms, which are constantly buying and selling businesses.

—Liz Hoffman

WSJ TALK / EXPERIENCE / OFFER / GETAWAY

In Their Words: In Conversation with Graeme Souness

Join WSJ's Joshua Robinson, sports editor, Europe, for a conversation with Graeme Souness, professional football player, manager and commentator. The in-depth discussion will cover his past experiences and the major dilemmas facing the game today, as documented in his new book, "Football: My Life, My Passion."

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MARKETS

China Tries to Curb Fintech Investment

By Chuin-Wei Yap

HONG KONG—China's regulators are ratcheting up pressure on the country's financial sector to slow the spread of investment products targeting small investors, aiming to curb risk from a new wave of technology-driven finance.

In recent weeks, Chinese central-bank officials and banking and securities regulators have tightened oversight of a range of investing and technology platforms used by individuals to trade virtual currencies, invest in online loans, and rapidly shift cash in and out of mutual funds.

A surge of Chinese investment—possibly more than $600 billion in the past two years—has gone into these so-called retail products, according to data from online platforms, financial-information aggregators and cryptocurrency research houses.

The new asset classes often woo investors with generous investment returns. Chinese money-market mutual funds, for example, boast seven-day annualized yields exceeding 4%, compared with the 3.6% yield on 10-year Chinese government bonds.

Regulators are trying to avoid a repeat of a series of financial implosions that took place several years ago following a similar Chinese retail fervor. During that period, roughly 2 million Chinese investors lost as much as $25 billion from retail-investment products that collapsed in value as companies struggled to repay loans that underpinned the products, amid a slowing Chinese economy. Those events sparked months of public protests by aggrieved investors.

Now, with a pivotal Communist Party gathering in October that will determine China's leadership succession, regulators are eager to show they are minding the interests of small investors and minimizing systemic risk in the financial system, analysts say.

"It's not just stability they want before the" party congress, said Iris Pang, Greater China economist for ING Bank NV. The goal is to demonstrate "that the central government has moved on reform."

The latest clampdown, however, also shows regulators are struggling to keep up with the rapid pace of financial-technology innovation. Banking regulators recently ramped up staffing of a department that focuses on fintech matters, say advisers who have spoken to government officials.

Some retail investors think the regulatory measures are too little and too late.

"The government is only now trying to come up with solutions, after investors came out on the streets," said Guo Bojin, a retired army officer in China's central Henan province who lost 800,000 yuan ($123,000) two years ago to collapsed wealth-management products. He is still waiting to receive the restitution he was promised for his losses.

With such small investors in mind, financial regulators are stepping up their rhetoric as they take steps to reduce risk.

"In recent years, the types of products in the banking and financial system have proliferated and become increasingly complicated and broader in scope," the China Banking Regulatory Commission said last month. Growth "has led in some cases to misleading and unauthorized sales of products, violating the rights and interest of consumers."

In August, regulators placed limits on the growth of mutual funds made wildly popular via China's mobile-payment platforms. They also ordered financial institutions to more closely record sales to small investors of high-yield retail investments marketed as "wealth-management products."

In early September, the central bank and regulators banned fundraising using cryptocurrencies such as bitcoin. It took aim at "initial coin offerings" that would have enabled more retail investors to buy and trade digital currencies.

Regulators in Hong Kong, which is administered separately from mainland China, said shortly afterward that such offerings are subject to its securities-investment laws and warned investors to be wary of related scams.

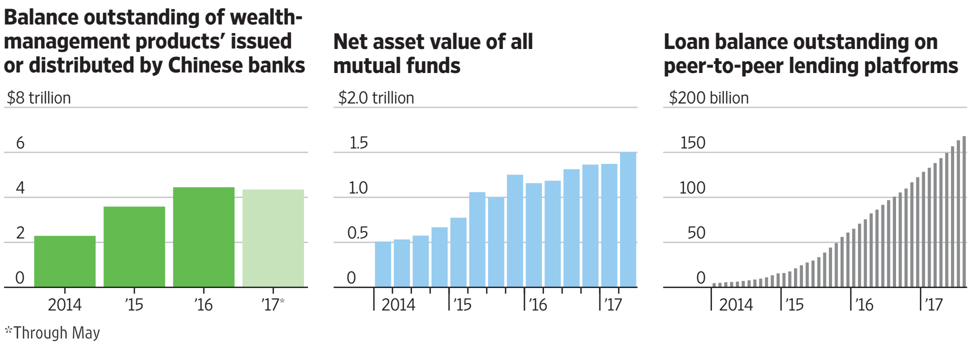
"The rampant offerings of unregulated assets through cryptocurrencies may pave the way for new high-tech-themed fraud," said Dixon Chen, managing director at a fintech-focused marketing platform and a one-time bitcoin investor. "The government needs to control it before it gets out of control."

Chinese authorities are also shutting down bitcoin exchanges in the country, The Wall Street Journal earlier reported. Largely powered by Chinese investors, bitcoin prices have risen over 400% since mid-2016.

Curbs on the virtual commodity came several weeks after China's securities regulator ordered money-market funds to limit their exposure to single investors and assets issued by the same financial institutions. The rulings also capped funds' holdings of investors that don't have top credit ratings.

Pulling the Punch Bowl

As retail-investment products surge in popularity, Chinese regulators have moved to prevent meltdowns.



*Through May

Sources: Moody's Investors Service (outstanding balance of wealth-management products); Wind Info (net asset value, outstanding loan balance)

THE WALL STREET JOURNAL.

U.S. Stocks Keep Rallying as Focus Turns to the Fed

By Akane Otani

The Dow Jones Industrial Average rose to its fifth consecutive record high, buoyed by gains in financial stocks.

MONDAY'S MARKETS

Stocks traded in a narrow range Monday, continuing a recent pattern of mostly quiet trading.

With the third-quarter earnings season yet to begin in earnest, and several potential risks—including a potential Republican tax-overhaul proposal and a Federal Reserve meeting—on the horizon, there are few reasons to make big moves, investors and analysts said.

Still, stocks should continue grinding higher as long as data suggests growth in the U.S. economy remains solid, analysts said.

The Dow industrials rose 63.01 points, or 0.3%, to 22331.35, notching its 40th closing record of the year. The S&P 500 edged up 0.1% to a fresh record, and the Nasdaq Composite added 0.1%.

In Europe, the Stoxx Europe 600 added 0.3% to 381.95, also led by gains in bank shares.

Shares of financial companies rose with bond yields on Monday, lifting major indexes. Higher rates tend to benefit banks by boosting their net-interest margins, a key measure of lending profitability.

Dow component J.P. Morgan rose 1.4%, while Goldman Sachs Group added 1%.

Utilities shares, considered bond-like by many investors because of their hefty dividends, fell 1.1% in the S&P 500 in late trading.

Meanwhile, government bonds and their stock-market proxies pulled back.

The yield on the benchmark 10-year U.S. Treasury note rose to 2.230% from 2.202% on Friday, notching its sixth consecutive session of advances.

Yields, which rise as bond prices fall, have climbed in recent sessions as investors' concerns over geopolitical tensions and damage from severe storms have waned.

Later this week, the Fed is widely expected to announce that it will leave interest rates unchanged and begin unwinding its $4.5 trillion balance sheet later this year.

While a string of muted inflation readings had made many investors skeptical the Fed would be able to raise rates for a third time in 2017, data Thursday showing a rebound in U.S. consumer prices pushed some to rethink their bets.

Federal-funds futures, used by investors to place bets on the Fed's rate-policy outlook, showed Monday afternoon a roughly 57% chance that the central bank will raise interest rates again by December, according to CME Group data, up from 41% a week ago.

The stock rally could stall if the Fed moves to normalize monetary policy faster than expected, investors say.

Still, at the moment, "we think it's unlikely they are going to be that aggressive," said Lucy Macdonald, chief investment officer for global equities at **Allianz Global Investors**, who pointed at the slow pace of the economic recovery.

HEARD ON THE STREET

Email: heard@wsj.com FINANCIAL ANALYSIS & COMMENTARY WSJ.com/Heard

The iPhone Is Making Memory

Little noticed amid the hype around the newest iPhones is the boon that the new wave of fancy phones means for the makers of memory chips inside.

Apple's new iPhone 8 and 8 Plus models hit stores on Friday. The iPhone X, with a bigger, sharper display and no home button, goes on sale in early November. That phone sets a record with a starting price tag of $999, while the other models sell for $200-$300 less. But all are offering a fairly sizable boost in memory and storage over previous iPhone iterations, a necessity given the demands of newer processors along with Apple's business need to sell more content and services per device.

On storage, Apple has effectively doubled up on the previous iPhone generation. The lowest configuration available on the new models is now 64GB compared with 32GB in the iPhone 7. The more spacious option has doubled to 256GB.

System memory is also getting a boost. The iPhone X and 8 Plus models both come with 3GB of DRAM, according to an estimate from Cowen & Co. That DRAM count was previously only available on the iPhone 7 Plus. Apple has been steadily raising the amount of DRAM per phone over the past few years, as the company's core central processors have become more robust. Two years ago, most iPhones had only 1GB of DRAM or less.

Other smartphone makers have been following the same track, some of which pack in far more memory in their phones than Apple. New top-of-the-line devices from Samsung Electronics and LG use 6GB of DRAM. That all adds up to good news for SK Hynix, Micron and Toshiba, along with Samsung's chip division.

Memory prices have been on a steady rise since last year, as demand continues to outstrip supply.

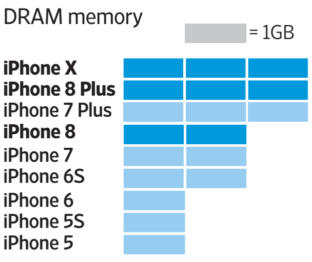
Spot prices for the most common type of DRAM in September were up more than 90% from the same point last year, with NAND Flash prices up 50% in that time, according to DRAMeXchange.

That explains in part why Apple, which needs to maintain its famously high margins, has boosted prices in this latest iPhone generation. That means the price increases are unlikely to raise the company's overall profits. A small bummer for shareholders, but Apple has little choice but to play the right chips to stay in the game.

—Dan Gallagher

Cache In

DRAM memory



Note: New models highlighted.
Source: Cowen & Co.

THE WALL STREET JOURNAL.

ECB Tapering Isn't So Frightening After All

For markets fretting about a world with less central-bank stimulus, Portugal has given a hint that it might not be that bad after all.

In a surprise move, Standard & Poor's upgraded Portugal, one of the countries hit hardest by the eurozone crisis, back into investment-grade territory Friday. The move to triple-B-minus was especially unexpected since S&P's rating outlook had been set at stable, rather than positive, before Friday's decision. What is significant about the timing is that S&P's upgrade comes despite the likely reduction in ECB bond purchases in coming months.

That marks a striking reversal. As recently as last year, the key question for Portugal was whether DBRS, another ratings firm, might be the last to remove its investment-grade rating on the country, making Portuguese bonds ineligible for ECB purchases. Fast forward, and In fact, the ECB has already been cutting back on Portuguese purchases, due to the limits of its purchase program, yet with no ill effect. In August, the central bank bought just €400 million ($478 million) of Portuguese debt, versus a peak of €1.4 billion in May 2016, S&P noted.

Meanwhile, Portugal's 10-year yield has been plummeting, and fell by another 0.3 percentage point Monday, a big decline, to 2.5%. It was above 4% as recently as March. Not including Monday's gains, Portuguese government bonds have returned 8.2% this year, according to Bank of America Merrill Lynch indexes.

Importantly, Portuguese bonds are benefiting from stronger economic data. Gross domestic product expanded 2.9% in the second quarter from a year earlier. Unemployment has fallen to 9.1%, back in line with the overall eurozone rate, from a peak of 17.5% in 2013.

It may be difficult to apply Portugal's experience to other eurozone countries. As a relatively high-yielding issuer, it has benefited from rising risk appetite this year, while other bigger markets have probably gained greater support from continued ECB purchases. But as a sign that the ECB might matter less than feared for bond-market performance, Portugal's path is an encouraging one.

—Richard Barley

Clariant Must Work to Get Out the Vote

Huntsman and **Clariant** are closing the details of their merger, but the gap between their stock prices remains wide open.

In one of the largest trans-Atlantic deals of the year, the U.S. and Swiss chemicals manufacturers announced in May that they would combine to create a $14.7 billion company. The shares of the two, however, are trading as if the deal might fall apart.

Huntsman stock has traded at a roughly 9% discount to its value under the merger's terms from the start of August until early September. While the gap has closed a bit this week, it is still at about 6%, leaving a big potential profit on the table if the deal gets done.

Standing in the way are two Clariant investors that have joined forces to oppose it. One of these investors is the family behind **Standard Industries**, a big U.S. building materials and chemicals company. The other is **Corvex**, an activist investment fund whose head, Keith Meister, has been a thorn in Huntsman's side before.

Huntsman CEO Peter Huntsman told a Swiss newspaper this week that when he had previously crossed swords with Mr. Meister over a different deal: "His ranting irritated me." He won't meet the investor now.

Last week, the companies' merger teams met at Huntsman's headquarters in Texas to begin planning their integration when the merger closes, which they say should be at the end of the year. Before then, it must pass shareholder votes at both companies, which are likely to take place in late November or early December.

The activists' best hope is to build enough support to block the Clariant vote. The two investors opposing the deal are expected to produce alternative proposals to boost Clariant's value before those votes. Together they own at least 10% of Clariant.

For Clariant, a challenge is ensuring enough shareholders turn out. One hurdle is passive index funds that don't vote.

Clariant needs two-thirds of votes cast to support its merger. If turnout is around the historic Swiss average of 60%, the activists only need 20% of all investors on their side, including themselves.

Clariant investors, whose stock is up 12% since the announcement, looks most exposed if the deal falls apart. The pressure is on to get out the vote.

—Paul J. Davies

Marriage Troubles

Gap between Huntsman stock price and its value under the all-stock merger with Clariant

Note: Final data as of Friday. Source: FactSet

THE WALL STREET JOURNAL.

OVERHEARD

Kmart is trying something new, but will it be fabulous?

The chain is renaming "plus size" clothing for women—generally anything above a size 12—as "fabulously sized," according to the publication Women's Wear Daily.

It certainly is a large demographic. A study says the average American woman is now a size 16 to 18.

While it is too soon to say if the move will work, something needs to stick.

Kmart parent **Sears Holdings** reported last month that its same-store sales plunged by 11.5% in the quarter through July 29 and that it would shut down 28 more Kmart locations on top of 150 Sears and Kmart stores already slated for closure.

All the stress has taken a toll.

Sears Holdings has shrunk from a size $30 billion to less than a size $1 billion in the past decade.